Section 1: LIVE ANIMALS; ANIMAL PRODUCTS

Section 1 Explanatory Notes

Notes.

1.- Any reference in this Section to a particular genus or species of an animal, except where the context otherwise requires, includes a reference to the young of that genus or species.

2.- Except where the context otherwise requires, throughout the Nomenclature any reference to "dried" products also covers products which have been dehydrated, evaporated or freeze-dried.

Chapter 1: Live animals

Chapter 1 Explanatory Notes.

1.- This Chapter covers all live animals except :

(a) Fish and crustaceans, molluscs and other aquatic invertebrates, of heading 03.01, 03.06, 03.07 or 03.08;

(b) Cultures of micro-organisms and other products of heading 30.02; and

(c) Animals of heading 95.08.

GENERAL

This Chapter covers all living creatures (for food or other purposes) **except** :

(1) Fish and crustaceans, molluscs and other aquatic invertebrates.

(2) Cultures of micro-organisms and other products of **heading 30.02**.

(3) Animals forming part of circuses, menageries or other similar travelling animal shows (**heading 95.08**).

Animals, including insects, which die during transport are classified in headings **02.01 to 02.05, 02.07, 02.08 or 04.10** if they are edible animals fit for human consumption. In other cases they are classified in **heading 05.11**.

Chapter 2 Explanatory Notes.

Meat and edible meat offal

Note.

1.- This Chapter does not cover :

(a) Products of the kinds described in headings 02.01 to 02.08 or 02.10, unfit or unsuitable for human consumption;

(b) Edible, non-living insects (heading 04.10);

(c) Guts, bladders or stomachs of animals (heading 05.04) or animal blood (heading 05.11 or 30.02); or

(d) Animal fat, other than products of heading 02.09 (Chapter 15).

GENERAL

This Chapter applies to meat in carcasses (i.e., the body of an animal with or without the head), half-carcasses (resulting from the lengthwise splitting of a carcass), quarters, pieces, etc., to meat offal, and to flours and meals of meat or meat offal, of all animals (**except** fish and crustaceans, molluscs and other aquatic invertebrates - **Chapter 3**), suitable for human consumption.

Meat and meat offal unsuitable or unfit for human consumption are **excluded** (**heading 05.11**). Flours, meals and pellets unfit for human consumption, obtained from meat or meat offal, are also **excluded** (**heading 23.01**).

Offal generally can be grouped in four categories :

(1) That which is mainly used for human consumption (e.g., heads and cuts thereof (including ears), feet, tails, hearts, tongues, thick skirts, thin skirts, cauls, throats, thymus glands).

(2) That which is used solely in the preparation of pharmaceutical products (e.g., gall bags, adrenal glands, placenta).

(3) That which can be used for human consumption or for the preparation of pharmaceutical products (e.g., livers, kidneys, lungs, brains, pancreas, spleens, spinal cords, ovaries, uteri, testes, udders, thyroid glands, pituitary glands).

(4) That, such as skins, which can be used for human consumption or for other purposes (e.g., manufacture of leather).

The offal referred to in paragraph (1), fresh, chilled, frozen, salted, in brine, dried or smoked, remains classified in this Chapter **unless** it is unfit for human consumption, in which case it is to be classified in **heading 05.11**.

The offal referred to in paragraph (2) falls in **heading 05.10** when fresh, chilled, frozen or otherwise provisionally preserved and in **heading 30.01** when dried.

The offal referred to in paragraph (3) is classified as follows :

(a) In **heading 05.10** when provisionally preserved for the preparation of pharmaceutical products (e.g., in glycerol, acetone, alcohol, formaldehyde, sodium borate).

(b) In **heading 30.01** when dried.

(c) In Chapter 2 when suitable for human consumption, but in **heading 05.11** if unfit for human consumption.

The offal referred to in paragraph (4) is classified in Chapter 2 when suitable for human consumption or generally in **heading 05.11** or **Chapter 41** if unfit for human consumption.

Guts, bladders and stomachs of animals (other than fish), whether or not edible, are classified in **heading 05.04**.

Animal fat presented separately is **excluded** (**Chapter 15**) (except in the case of pig fat, free of lean meat, and poultry fat, not rendered or otherwise extracted, which fall in heading 02.09 even if fit only for industrial use), but fat presented in the carcass or adhering to meat is treated as forming part of the meat.

Distinction between meat and meat offal of this Chapter and those of Chapter 16.

This Chapter covers meat and meat offal in the following states only, whether or not they have been previously scalded or similarly treated but not cooked :

(1) Fresh (including meat and meat offal, packed with salt as a temporary preservative during transport).

(2) Chilled, that is, reduced in temperature generally to around 0 °C, without being frozen.

(3) Frozen, that is, cooled to below the product's freezing point until it is frozen throughout.

(4) Salted, in brine, dried or smoked.

Meat and meat offal, slightly sprinkled with sugar or with an aqueous solution of sugar are also classified in this Chapter.

Meat and meat offal in the states referred to in Items (1) to (4) above remain classified in this Chapter whether or not they have undergone tenderising treatment with proteolytic enzymes (e.g., papain) or have been cut, chopped or minced (ground). In addition, mixtures or combinations of

products of different headings of the Chapter (e.g., poultry meat of heading 02.07 covered with pig fat of heading 02.09) remain classified in this Chapter.

Meat and meat offal not falling in any heading of this Chapter are classified in **Chapter 16**, e.g. :

(a) Sausages and similar products, whether or not cooked (**heading 16.01**).

(b) Meat and meat offal cooked in any way (boiled, steamed, grilled, fried or roasted), or otherwise prepared or preserved by any process not provided for in this Chapter, including those merely covered with batter or bread crumbs, truffled or seasoned (e.g., with pepper and salt), as well as liver pastes and patés (**heading 16.02**).

This Chapter also includes meat and meat offal suitable for human consumption, whether or not cooked, in the form of flour or meal.

It should be noted that meat and meat offal of this Chapter remain classified here even if put up in airtight packings (e.g., dried meat in cans). In most cases, however, products put up in these packings have been prepared or preserved otherwise than as provided for in the headings of this Chapter and, accordingly, are classified in **Chapter 16**.

Similarly, meat and meat offal of this Chapter remain classified here (e.g., fresh or chilled meat of bovine animals) when subjected to packaging by means of a Modified Atmospheric Packaging (MAP) process. In a MAP process the atmosphere surrounding the product is altered or controlled (e.g., by removing or reducing the oxygen content and replacing it with or increasing the nitrogen or carbon dioxide content).

Subheading Explanatory Note.

With bone in

The expression "with bone in" means meat with all bones intact, as well as meat where some or part of the bones have been removed (e.g., shankless and semi-boneless hams). This expression does not cover products where the bones have been removed and thereafter reinserted so that they are no longer connected to the meat tissues.

Chapter 3: Fish and crustaceans, molluscs and other aquatic invertebrates

Chapter 3 Explanatory Notes.

Notes.

1.- This Chapter does not cover :

(a) Mammals of heading 01.06;

(b) Meat of mammals of heading 01.06 (heading 02.08 or 02.10);

(c) Fish (including livers, roes and milt thereof) or crustaceans, molluscs or other aquatic invertebrates, dead and unfit or unsuitable for human consumption by reason of either their species or their condition (Chapter 5); flours, meals or pellets of fish or of crustaceans, molluscs or other aquatic invertebrates, unfit for human consumption (heading 23.01); or

(d) Caviar or caviar substitutes prepared from fish eggs (heading 16.04).

2.- In this Chapter the term "pellets" means products which have been agglomerated either directly by compression or by the addition of a small quantity of binder.

3.- Headings 03.05 to 03.08 do not cover flours, meals and pellets, fit for human consumption (heading 03.09).

GENERAL

This Chapter covers all fish and crustaceans, molluscs and other aquatic invertebrates, whether live or dead, presented for direct consumption, or for industrial purposes (canning, etc.), for spawning, for aquaria, etc., with the **exception** of dead fish (including livers and roes thereof), crustaceans, molluscs and other aquatic invertebrates which are unfit or unsuitable for human consumption by reason of either their species or their condition (**Chapter 5**).

The term "chilled" means that the temperature of a product has been reduced, generally to around 0 °C, without the product being frozen. The expression "frozen" means that the product has been cooled to below the product's freezing point until it is frozen throughout.

This Chapter also covers edible fish roes and milt, not prepared or preserved, or prepared or preserved only by processes provided for in this Chapter. Otherwise prepared or preserved edible roes and milt, or those suitable for immediate consumption as caviar or caviar substitutes are classified in **heading 16.04**.

Distinction between goods of this Chapter and those of Chapter 16.

This Chapter is limited to fish (including livers and roes thereof) and crustaceans, molluscs and other aquatic invertebrates in the states described in the headings. Subject to this proviso, they remain classified in the Chapter whether or not they have been cut, chopped, minced, ground, etc. In addition, mixtures or combinations of products of different headings of the Chapter (e.g., fish of **headings 03.02** to **03.04** combined with crustaceans of **heading 03.06**) remain classified in this Chapter.

On the other hand, fish and crustaceans, molluscs and other aquatic invertebrates are classified in **Chapter 16** if they have been cooked or otherwise prepared or preserved by processes not provided for in this Chapter (e.g., fish fillets merely covered with batter or bread crumbs, cooked fish). It should, however, be noted that smoked fish and smoked crustaceans, molluscs and other aquatic invertebrates, which may have undergone cooking during or before the smoking process, and crustaceans in their shells simply steamed or boiled in water, remain classified in **headings 03.05, 03.06, 03.07** and **03.08**, respectively. Molluscs that have been subjected only to scalding or other types of heat shock (which do not entail cooking as such), necessary to open the shell or stabilize the mollusc prior to transportation or freezing, also remain in this Chapter. Flours, meals and pellets obtained from cooked fish and cooked crustaceans, molluscs or other aquatic invertebrates remain classified in **heading 03.09**.

It should also be noted that fish and crustaceans, molluscs and other aquatic invertebrates of this Chapter remain classified here even if put up in airtight containers (e.g., smoked salmon in cans). In most cases, however, products put up in these packings have been prepared or preserved otherwise than as provided for in the headings of this Chapter, and accordingly fall to be classified in **Chapter 16**.

Similarly, fish and crustaceans, molluscs and other aquatic invertebrates of this Chapter remain classified here (e.g., fresh or chilled fish) when subjected to packaging by means of a Modified Atmospheric Packaging (MAP) process. In a MAP process the atmosphere surrounding the product is altered or controlled (e.g., by removing or reducing the oxygen content and replacing it with or increasing the nitrogen or carbon dioxide content).

In addition to the exclusions referred to above, the Chapter also **excludes** :

(a) Mammals of **heading 01.06**.

(b) Meat of mammals of heading 01.06 (**heading 02.08 or 02.10**).

(c) Fish waste and inedible roes (e.g., salted cod roes used as fishing bait) (**heading 05.11**).

(d) Flours, meals and pellets of fish or of crustaceans, molluscs or other aquatic invertebrates, unfit for human consumption (**heading 23.01**)

Chapter 4 Explanatory Notes

Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included

1.- The expression "milk " means full cream milk or partially or completely skimmed milk.

2.- For the purposes of heading 04.03, yogurt may be concentrated or flavoured and may contain added sugar or other sweetening matter, fruit, nuts, cocoa, chocolate, spices, coffee or coffee

extracts, plants, parts of plants, cereals or bakers' wares, provided that any added substance is not used for the purpose of replacing, in whole or in part, any milk constituent, and the product retains the essential character of yogurt.

3.- For the purposes of heading 04.05 :

(a) The term "butter" means natural butter, whey butter or recombined butter (fresh, salted or rancid, including canned butter) derived exclusively from milk, with a milkfat content of 80 % or more but not more than 95 % by weight, a maximum milk solids-not-fat content of 2 % by weight and a maximum water content of 16 % by weight. Butter does not contain added emulsifiers, but may contain sodium chloride, food colours, neutralising salts and cultures of harmless lactic-acid-producing bacteria.

(b) The expression "dairy spreads" means a spreadable emulsion of the water-in-oil type, containing milkfat as the only fat in the product, with a milkfat content of 39 % or more but less than 80 % by weight.

4.- Products obtained by the concentration of whey and with the addition of milk or milkfat are to be classified as cheese in heading 04.06 provided that they have the three following characteristics :

(a) a milkfat content, by weight of the dry matter, of 5 % or more;

(b) a dry matter content, by weight, of at least 70 % but not exceeding 85 %; and

(c) they are moulded or capable of being moulded.

5.- This Chapter does not cover :

(a) Non-living insects, unfit for human consumption (heading 05.11);

(b) Products obtained from whey, containing by weight more than 95 % lactose, expressed as anhydrous lactose, calculated on the dry matter (heading 17.02);

(c) Products obtained from milk by replacing one or more of its natural constituents (for example, butyric fats) by another substance (for example, oleic fats) (heading 19.01 or 21.06); or

(d) Albumins (including concentrates of two or more whey proteins, containing by weight more than 80 % whey proteins, calculated on the dry matter) (heading 35.02) or globulins (heading 35.04).

6.- For the purposes of heading 04.10, the term "insects" means edible non-living insects, whole or in parts, fresh, chilled, frozen, dried, smoked, salted or in brine, as well as flours and meals of insects, fit for human consumption. However, it does not cover edible non-living insects otherwise prepared or preserved (generally Section IV).

Subheading Notes.

1.- For the purposes of subheading 0404.10, the expression "modified whey" means products consisting of whey constituents, that is, whey from which all or part of the lactose, proteins or minerals have been removed, whey to which natural whey constituents have been added, and products obtained by mixing natural whey constituents.

2.- For the purposes of subheading 0405.10 the term "butter" does not include dehydrated butter or ghee (subheading 0405.90).

GENERAL

This Chapter covers :

(I) **Dairy products :**

(A) **Milk**, i.e., full cream milk and partially or completely skimmed milk.

(B) **Cream**.

(C) **Buttermilk, curdled milk and cream, yogurt, kephir and other fermented or acidified milk and cream**.

(D) **Whey**.

(E) **Products consisting of natural milk constituents, not elsewhere specified or included**.

(F) **Butter and other fats and oils derived from milk; dairy spreads**.

(G) **Cheese and curd**.

The products mentioned at Items (A) to (E) above may contain, in addition to natural milk constituents (e.g., milk enriched in vitamins or mineral salts), small quantities of stabilising agents which serve to maintain the natural consistency of the product during transport in liquid state (disodium phosphate, trisodium citrate and calcium chloride, for instance) as well as very small quantities of anti-oxidants or of vitamins not normally found in the product. Certain of these products may also contain small quantities of chemicals (e.g., sodium bicarbonate) necessary for their processing; products in the form of powder or granules may contain anticaking agents (for example, phospholipids, amorphous silicon dioxide).

For the purposes of Note 4 (b) to this Chapter the expression "butyric fats" means milk fats and the expression "oleic fats" means fats other than milk fats, in particular vegetable fats (e.g., olive oil).

On the other hand, the Chapter **excludes** products obtained from whey, containing by weight more than 95 % lactose, expressed as anhydrous lactose, calculated on the dry matter (**heading 17.02**).

For the purposes of calculating the percentage weight of lactose in a product the expression "dry matter" should be taken to exclude both free water and water of crystallisation.

The Chapter also **excludes**, *inter alia*, the following :

(a) Food preparations based on dairy products (in particular, **heading 19.01**).

(b) Products obtained from milk by replacing one or more of the natural constituents (e.g., butyric fats) by another substance (e.g., oleic fats) (**heading 19.01** or **21.06**).

(c) Ice cream and other edible ice (**heading 21.05**).

(d) Medicaments of **Chapter 30**.

(e) Casein (**heading 35.01**), milk albumin (**heading 35.02**) and hardened casein (**heading 39.13**).

(II) **Birds' eggs and egg yolks.**

(III) **Natural honey.**

(IV) **Insects and other edible products of animal origin, not elsewhere specified or included.**

Chapter 5 Explanatory Notes

Products of animal origin, not elsewhere specified or included

Notes.

1.- This Chapter does not cover :

(a) Edible products (other than guts, bladders and stomachs of animals , whole and pieces thereof, and animal blood, liquid or dried);

(b) Hides or skins (including furskins) other than goods of heading 05.05 and parings and similar waste of raw hides or skins of heading 05.11 (Chapter 41 or 43);

(c) Animal textile materials, other than horsehair and horsehair waste (Section XI); or

(d) Prepared knots or tufts for broom or brush making (heading 96.03).

2.- For the purposes of heading 05.01, the sorting of hair by length (provided the root ends and tip ends respectively are not arranged together) shall be deemed not to constitute working.

3.- Throughout the Nomenclature, elephant, hippopotamus, walrus, narwhal and wild boar tusks, rhinoceros horns and the teeth of all animals are regarded as "ivory".

4.- Throughout the Nomenclature, the expression "horsehair" means hair of the manes or tails of equine or bovine animals. Heading 05.11 covers, *inter alia*, horsehair and horsehair waste, whether or not put up as a layer with or without supporting material.

GENERAL

This Chapter covers a variety of materials of animal origin, unworked or having undergone a simple process of preparation, which are not normally used as food (**except** certain blood, guts, bladders and stomachs of animals) and which are not dealt with in other Chapters of the Nomenclature.

The following are **excluded** from this Chapter :

(a) Animal fats (**Chapter 2** or **15**).

(b) Uncooked edible skins of animals (**Chapter 2**) or of fish (**Chapter 3**). (When cooked, such skins are classified in **Chapter 16**.)

(c) Edible fish fins, heads, tails, maws (swim bladders) and other edible fish offal (**Chapter3**).

(d) Organo-therapeutic glands or other organs, dried, whether or not powdered (**Chapter 30**).

(e) Fertilisers of animal origin (**Chapter 31**).

(f) Raw hides and skins (**except** birdskins and parts of birdskins, with their feathers or down, unworked, cleaned, disinfected or treated for preservation, but not otherwise worked) (**Chapter 41**).

(g) Furskins (**Chapter 43**).

(h) Silk and wool and other textile raw materials of animal origin (**except** horsehair and horsehair waste) (**Section XI**).

(ij) Natural or cultured pearls (**Chapter 71**).

Section II: VEGETABLE PRODUCTS

Section II Explanatory Note.

1.- In this Section the term "pellets" means products which have been agglomerated either directly by compression or by the addition of a binder in a proportion not exceeding 3 % by weight.

Chapter 6: Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage

Chapter 6 Explanatory Notes.

1.- Subject to the second part of heading 06.01, this Chapter covers only live trees and goods (including seedling vegetables) of a kind commonly supplied by nursery gardeners or florists for planting or for ornamental use; nevertheless it does not include potatoes, onions, shallots, garlic or other products of Chapter 7.

2.- Any reference in heading 06.03 or 06.04 to goods of any kind shall be construed as including a reference to bouquets, floral baskets, wreaths and similar articles made wholly or partly of goods of that kind, account not being taken of accessories of other materials. However, these headings do not include collages or similar decorative plaques of heading 97.01.

GENERAL

This Chapter covers all living plants, of a kind supplied by nursery gardeners (including horticulturists) or florists, which are in a condition suitable for planting or ornamental purposes and also chicory plants and roots, **other than** roots of **heading 12.12**, even if they are not commonly supplied by nursery gardeners or florists. These range from trees, shrubs and bushes to seedling vegetables including, *inter alia*, plants for medicinal purposes. The Chapter **does not include** seeds and fruit, or certain tubers and bulbs (potatoes, onions, shallots and garlic) for which it is not possible to make a distinction between the kinds used as food and those for planting.

The Chapter also covers :

(1) Cut flowers and flower buds, foliage, branches and other parts of plants, fresh, dried, dyed, bleached, impregnated or otherwise prepared for ornamental purposes.

(2) Bouquets, wreaths, floral baskets and similar florists' wares.

Chapter 7: Edible vegetables and certain roots and tubers

Chapter 7 Explanatory Notes

Notes.

1.- This Chapter does not cover forage products of heading 12.14.

2.- In headings 07.09, 07.10, 07.11 and 07.12 the word "vegetables" includes edible mushrooms, truffles, olives, capers, marrows, pumpkins, aubergines, sweet corn (*Zea mays var. saccharata*),

fruits of the genus *Capsicum* or of the genus *Pimenta*, fennel, parsley, chervil, tarragon, cress and sweet marjoram (*Majorana hortensis* or*Origanum majorana*).

3.- Heading 07.12 covers all dried vegetables of the kinds falling in headings 07.01 to 07.11, other than :

(a) dried leguminous vegetables, shelled (heading 07.13);

(b) sweet corn in the forms specified in headings 11.02 to 11.04;

(c) flour, meal, powder, flakes, granules and pellets of potatoes (heading 11.05);

(d) flour, meal and powder of the dried leguminous vegetables of heading 07.13 (heading 11.06).

4.- However, dried or crushed or ground fruits of the genus *Capsicum* or of the genus *Pimenta* are excluded from this Chapter (heading 09.04).

5.- Heading 07.11 applies to vegetables which have been treated solely to ensure their provisional preservation during transport or storage prior to use (for example, by sulphur dioxide gas, in brine, in sulphur water or in other preservative solutions), provided they remain unsuitable for immediate consumption in that state.

GENERAL

This Chapter covers vegetables, including the products listed in Note 2 to the Chapter, whether fresh, chilled, frozen (uncooked or cooked by steaming or boiling in water), provisionally preserved or dried (including dehydrated, evaporated or freeze-dried). It should be noted that some of these products when dried and powdered are sometimes used as flavouring materials but nevertheless remain classified in heading 07.12.

The term "chilled" means that the temperature of a product has been reduced, generally to around 0 °C, without the product being frozen. However, some products, such as potatoes, may be considered to be chilled when their temperature has been reduced to and maintained at + 10 °C.

The expression "frozen" means that the product has been cooled to below the product's freezing point until it is frozen throughout.

Unless the context otherwise requires, vegetables of this Chapter may be whole, sliced, chopped, shredded, pulped, grated, peeled or shelled.

The Chapter also includes certain tubers and roots with a high starch or inulin content, fresh, chilled, frozen or dried, whether or not sliced or in the form of pellets.

Vegetables not presented in a state covered by any heading of this Chapter are classified in **Chapter 11** or **Section IV**. For example, flour, meal and powder of dried leguminous vegetables and flour,

meal, powder, flakes, granules and pellets of potatoes are classified in **Chapter 11**, and vegetables prepared or preserved by any process not provided for in this Chapter fall in **Chapter20**.

However, it should be noted that homogenisation, by itself, does not qualify a product of this Chapter for classification as a preparation of Chapter 20.

It should also be noted that vegetables of this Chapter remain classified here even if put up in airtight containers (e.g., onion flour in cans). In most cases, however, products put up in these packings have been prepared or preserved otherwise than as provided for in the headings of this Chapter, and are therefore **excluded** (**Chapter 20**).

Similarly, products of this Chapter remain classified here (e.g., fresh or chilled vegetables) when subjected to packaging by means of a Modified Atmospheric Packaging (MAP) process. In a MAP process the atmosphere surrounding the product is altered or controlled (e.g., by removing or reducing the oxygen content and replacing it with or increasing the nitrogen or carbon dioxide content).

Fresh or dried vegetables fall in this Chapter whether intended for use as food, for sowing or for planting (e.g., potatoes, onions, shallots, garlic, leguminous vegetables). However, the Chapter **does not cover** seedling vegetables in a condition for replanting (**heading 06.02**).

In addition to the exclusions mentioned above and in the Chapter Notes, this Chapter **does not include** :

(a) Chicory plants or chicory roots (**heading 06.01** or **12.12**).

(b) Certain vegetable products used as raw materials in the food industries e.g., cereals (**Chapter 10**) and sugar beet and sugar cane (**heading 12.12**).

(c) Flour, meal and powder of roots or tubers of heading 07.14 (**heading 11.06**).

(d) Certain plants and parts of plants, although sometimes used for culinary purposes, e.g., basil, borage, hyssop, all species of mint, rosemary, rue, sage and dried roots of burdock (*Arctium lappa*) (**heading 12.11**).

(e) Edible seaweeds and other algae (**heading 12.12**).

(f) Swedes, mangolds, fodder roots, hay, lucerne (alfalfa), clover, sainfoin, forage kale, lupines, vetches and similar forage products (**heading 12.14**).

(g) Beet or carrot tops (**heading 23.08**).

Chapter 8: Edible fruit and nuts; peel of citrus fruit or melons

Chapter 8 Explanatory Notes

Notes.

1.- This Chapter does not cover inedible nuts or fruits.

2.- Chilled fruits and nuts are to be classified in the same headings as the corresponding fresh fruits and nuts.

3.- Dried fruit or dried nuts of this Chapter may be partially rehydrated, or treated for the following purposes :

(a) For additional preservation or stabilisation (for example, by moderate heat treatment, sulphuring, the addition of sorbic acid or potassium sorbate),

(b) To improve or maintain their appearance (for example, by the addition of vegetable oil or small quantities of glucose syrup),

provided that they retain the character of dried fruit or dried nuts.

4.- Heading 08.12 applies to fruit and nuts which have been treated solely to ensure their provisional preservation during transport or storage prior to use (for example, by sulphur dioxide gas, in brine, in sulphur water or in other preservative solutions), provided they remain unsuitable for immediate consumption in that state.

GENERAL

This Chapter covers fruit, nuts and peel of citrus fruit or melons (including watermelons), generally intended for human consumption (whether as presented or after processing). They may be fresh (including chilled), frozen (whether or not previously cooked by steaming or boiling in water or containing added sweetening matter) or dried (including dehydrated, evaporated or freeze-dried); **provided** they are unsuitable for immediate consumption in that state, they may be provisionally preserved (e.g., by sulphur dioxide gas, in brine, in sulphur water or in other preservative solutions).

The term "chilled" means that the temperature of a product has been reduced, generally to around 0 °C, without the product being frozen. However, some products, such as melons and certain citrus fruit, may be considered to be chilled when their temperature has been reduced to and maintained at + 10 °C. The expression "frozen" means that the product has been cooled to below the product's freezing point until it is frozen throughout.

Fruit and nuts of this Chapter may be whole, sliced, chopped, shredded, stoned, pulped, grated, peeled or shelled.

It should be noted that homogenisation, by itself, does not qualify a product of this Chapter for classification as a preparation of Chapter 20.

The addition of small quantities of sugar does not affect the classification of fruit in this Chapter. The Chapter also includes dried fruit (e.g., dates and prunes), the exterior of which may be covered with a deposit of dried **natural** sugar thus giving the fruit an appearance somewhat similar to that of the crystallised fruit of heading 20.06.

However, this Chapter **does not cover** fruit preserved by osmotic dehydration. The expression "osmotic dehydration" refers to a process whereby pieces of fruit are subjected to prolonged soaking in a concentrated sugar syrup so that much of the water and the natural sugar of the fruit is replaced by sugar from the syrup. The fruit may subsequently be air-dried to further reduce the moisture content. Such fruit is classified in **Chapter 20 (heading 20.08)**.

This Chapter also **excludes** a number of vegetable products more specifically covered in other Chapters even though botanically some of them are fruits, e.g. :

(a) Olives, tomatoes, cucumbers, gherkins, marrows, pumpkins, aubergines (egg-plant), fruits of the genus *Capsicum* or of the genus *Pimenta* (**Chapter 7**).

(b) Coffee, vanilla, juniper berries and other products of **Chapter 9**.

(c) Ground-nuts and other oleaginous fruit, fruit used primarily in pharmacy or in perfumery, locust beans, kernels of apricots or of similar fruit (**Chapter 12**).

(d) Cocoa beans (**heading 18.01**).

The Chapter further **excludes** :

(i) Fruit flour, meal and powder (**heading 11.06**).

(ii) Edible fruit and nuts and peel of melons or citrus fruit, prepared or preserved otherwise than as described above (**Chapter 20**).

(iii) Roasted fruit and nuts (e.g., chestnuts, almonds and figs), whether or not ground, generally used as coffee substitutes (**heading 21.01**).

It should be noted that fruit and nuts of this Chapter remain classified here even if put up in airtight packings (e.g., dried prunes, dried nuts in cans). In most cases, however, products put up in these packings have been prepared or preserved otherwise than as provided for in the headings of this Chapter, and are therefore **excluded** (**Chapter 20**).

Products of this Chapter remain classified here (e.g., fresh strawberries) when subjected to packaging by means of a Modified Atmospheric Packaging (MAP) process. In a MAP process the atmosphere

surrounding the product is altered or controlled (e.g., by removing or reducing the oxygen content and replacing it with or increasing the nitrogen or carbon dioxide content).

Chapter 9: **Coffee, tea, maté and spices**

Chapter 9 Explanatory Notes

Notes.

1.- Mixtures of the products of headings 09.04 to 09.10 are to be classified as follows :

(a) Mixtures of two or more of the products of the same heading are to be classified in that heading;

(b) Mixtures of two or more of the products of different headings are to be classified in heading 09.10.

The addition of other substances to the products of headings 09.04 to 09.10 (or to the mixtures referred to in paragraph (a) or (b) above) shall not affect their classification provided the resulting mixtures retain the essential character of the goods of those headings. Otherwise such mixtures are not classified in this Chapter; those constituting mixed condiments or mixed seasonings are classified in heading 21.03.

2.- This Chapter does not cover Cubeb pepper *(Piper cubeba)* or other products of heading 12.11.

GENERAL

This Chapter covers :

(1) Coffee, tea and maté.

(2) Spices, i.e., a group of vegetable products (including seeds, etc.), rich in essential oils and aromatic principles, and which, because of their characteristic taste, are mainly used as condiments.

These products may be whole or in crushed or powdered form.

As regards the classification of mixtures of products of headings 09.04 to 09.10, see Note 1 to this Chapter. Under the provisions of this Note, the addition of other substances to the products of headings 09.04 to 09.10 (or to the mixtures referred to in paragraph (a) or (b) of the Note) shall not affect their classification **provided** the resulting mixtures retain the essential character of the goods falling in those headings.

This applies, in particular, to spices and mixed spices containing added :

(a) **Diluents** ("spreader" bases) added to facilitate measuring out of the spices and their distribution in the food preparation (cereal flour, ground rusk, dextrose, etc.).

(b) Food **colourings** (e.g., xanthophyll).

(c) Products added to intensify or enhance the flavour of the spices (**synergetics**), such as sodium glutamate.

(d) Substances such as **salt** or **chemical antioxidants** added, usually in small quantity, to preserve the products and prolong their flavouring powers.

Spices (including mixed spices) containing added substances of other Chapters, but themselves having flavouring or seasoning properties, remain in this Chapter **provided** the added quantity does not affect the essential character of the mixture as a spice.

This Chapter also includes mixtures consisting of plants, parts of plants, seeds or fruit (whole, cut, crushed, ground or powdered) of species falling in different Chapters (e.g., Chapters 7, 9, 11, 12), of a kind used either directly for flavouring beverages or for preparing extracts for the manufacture of beverages,

(i) if the essential character is given by one or more species of any single one of the headings 09.04 to 09.10 (headings 09.04 to 09.10 as the case may be);

(ii) if the essential character is given by a mixture of species of two or more of the headings 09.04 to 09.10 (heading 09.10).

This Chapter however **excludes** such mixtures if the essential character is not given by the species mentioned in (i) or by the mixtures referred to in (ii) above (**heading 21.06**).

This Chapter further **excludes** :

(a) Vegetables (e.g., parsley, chervil, tarragon, cress, sweet marjoram, coriander and dill) of **Chapter 7**.

(b) Mustard seed (**heading 12.07**); mustard flour, whether unprepared or prepared (**heading 21.03**).

(c) Hop cones (**heading 12.10**).

(d) Certain fruits, seeds and parts of plants which, although they can be used as spices, are more often employed in perfumery or in medicine (**heading 12.11**) (e.g., cassia pods, rosemary, wild marjoram, basil, borage, hyssop, all species of mint, rue and sage).

(e) Mixed condiments and mixed seasonings (**heading 21.03**).

Chapter 10: Cereals

Chapter 10 Explanatory Notes.

1.- (A) The products specified in the headings of this Chapter are to be classified in those headings only if grains are present, whether or not in the ear or on the stalk.

(B) The Chapter does not cover grains which have been hulled or otherwise worked. However, rice, husked, milled, polished, glazed, parboiled or broken remains classified in heading 10.06. Similarly, quinoa from which the pericarp has been wholly or partly removed in order to separate the saponin, but which has not undergone any other processes, remains classified in heading 10.08.

2.- Heading 10.05 does not cover sweet corn (Chapter 7).

Subheading Note.

1.- The term "durum wheat" means wheat of the *Triticum durum* species and the hybrids derived from the inter-specific crossing of *Triticum durum* which have the same number (28) of chromosomes as that species.

GENERAL

This Chapter covers cereal grains only, whether or not presented in sheaves or in the ear. Grain obtained from cereals cut before maturity and still complete with husks is classified with ordinary grain. Fresh cereals (**other than** sweet corn of **Chapter 7**), whether or not suitable for use as vegetables, remain classified in this Chapter.

Similarly, quinoa from which the pericarp has been wholly or partly removed in order to separate the saponin, but which has not undergone any other processes, remains classified in heading 10.08.

Chapter 11: Products of the milling industry; malt; starches; inulin; wheat gluten

Chapter 11 Explanatory Notes

1.- This Chapter does not cover :

(a) Roasted malt put up as coffee substitutes (heading 09.01 or 21.01);

(b) Prepared flours, groats, meals or starches of heading 19.01;

(c) Corn flakes or other products of heading 19.04;

(d) Vegetables, prepared or preserved, of heading 20.01, 20.04 or 20.05;

(e) Pharmaceutical products (Chapter 30); or

(f) Starches having the character of perfumery, cosmetic or toilet preparations (Chapter 33).

2.- (A) Products from the milling of the cereals listed in the table below fall in this Chapter if they have, by weight on the dry product :

(a) a starch content (determined by the modified Ewers polarimetric method) exceeding that indicated in Column (2); and

(b) an ash content (after deduction of any added minerals) not exceeding that indicated in Column (3).

Otherwise, they fall in heading 23.02. However, germ of cereals, whole, rolled, flaked or ground is always classified in heading 11.04.

(B) Products falling in this Chapter under the above provisions shall be classified in heading 11.01 or 11.02 if the percentage passing through a woven metal wire cloth sieve with the aperture indicated in Column (4) or (5) is not less, by weight, than that shown against the cereal concerned.

Otherwise, they fall in heading 11.03 or 11.04.

			Rate of passage through a sieve with an aperture of	
Cereal (1)	Startch Content (2)	Ash content (3)	315 micrometres (microns) (4)	500 micrometres (microns) (5)
Wheat and rye	45 %	2,5 %	80 %	-
Barley	45 %	3 %	80 %	-
Oats	45 %	5 %	80 %	-
Maize (corn) and grain sorghum	45 %	2 %	-	90 %

Rice	45 %	1,6 %	80 %	-
Buckwheat	45 %	4 %	80 %	-

3.- For the purposes of heading 11.03, the terms "groats" and "meal" mean products obtained by the fragmentation of cereal grains, of which :

(a) in the case of maize (corn) products, at least 95 % by weight passes through a woven metal wire cloth sieve with an aperture of 2 mm;

(b) in the case of other cereal products, at least 95 % by weight passes through a woven metal wire cloth sieve with an aperture of 1.25 mm.

GENERAL

This Chapter includes :

(1) Products from the milling of the cereals of Chapter 10 and of sweet corn of Chapter 7, **other than** milling residues of **heading 23.02**. In this context, the products from the milling of wheat, rye, barley, oats, maize (corn) (including whole cobs ground with or without their husks), grain sorghum, rice and buckwheat falling in this Chapter are to be distinguished from the residues of heading 23.02 in accordance with the criteria as to starch and ash content laid down in Chapter Note 2 (A).

Within the Chapter, as regards the cereals mentioned by name above, the flours of heading 11.01 or 11.02 are to be distinguished from the products of heading 11.03 or 11.04 in accordance with the criterion as to passage through a sieve laid down in Chapter Note 2 (B). At the same time, all cereal groats and meal of heading 11.03 must fulfil the relevant criterion as to passage through a sieve laid down in Chapter Note 3.

(2) Products also obtained from the cereals of Chapter 10 by submitting them to the processes provided for in the various headings of the Chapter, such as malting or the extraction of starch or wheat gluten.

(3) Products obtained by submitting raw materials of other Chapters (dried leguminous vegetables, potatoes, fruit, etc.) to processes similar to those indicated in paragraph (1) or (2) above.

This Chapter **excludes**, *inter alia* :

(a) Roasted malt put up as coffee substitutes (**heading 09.01** or **21.01**).

(b) Cereal husks (**heading 12.13**).

(c) Prepared flours, groats, meals or starches of **heading 19.01**.

(d) Tapioca (**heading 19.03**).

(e) Puffed rice, corn flakes and the like, obtained by swelling or roasting, and bulgur wheat in the form of worked grains (**heading 19.04**).

(f) Vegetables, prepared or preserved, of **headings 20.01**, **20.04** and **20.05**.

(g) Residues derived from the sifting, milling or other working of cereals or of leguminous plants (**heading 23.02**).

(h) Pharmaceutical products (**Chapter 30**).

(ij) Products of **Chapter 33** (see Notes 3 and 4 to Chapter 33).

Chapter 12:Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder

Chapter 12 Explanatory Notes

Notes.

1.- Heading 12.07 applies, *inter alia*, to palm nuts and kernels, cotton seeds, castor oil seeds, sesamum seeds, mustard seeds, safflower seeds, poppy seeds and shea nuts (karite nuts). It does not apply to products of heading 08.01 or 08.02 or to olives (Chapter 7 or Chapter 20).

2.- Heading 12.08 applies not only to non-defatted flours and meals but also to flours and meals which have been partially defatted or defatted and wholly or partially refatted with their original oils. It does not, however, apply to residues of headings 23.04 to 23.06.

3.- For the purposes of heading 12.09, beet seeds, grass and other herbage seeds, seeds of ornamental flowers, vegetable seeds, seeds of forest trees, seeds of fruit trees, seeds of vetches (other than those of the species *Vicia faba*) or of lupines are to be regarded as "seeds of a kind used for sowing".

Heading 12.09 does not, however, apply to the following even if for sowing :

(a) Leguminous vegetables or sweet corn (Chapter 7);

(b) Spices or other products of Chapter 9;

(c) Cereals (Chapter 10); or

(d) Products of headings 12.01 to 12.07 or 12.11.

4.- Heading 12.11 applies, *inter alia*, to the following plants or parts thereof : basil, borage, ginseng, hyssop, liquorice, all species of mint, rosemary, rue, sage and wormwood.

Heading 12.11 does not, however, apply to :

(a) Medicaments of Chapter 30;

(b) Perfumery, cosmetic or toilet preparations of Chapter 33; or

(c) Insecticides, fungicides, herbicides, disinfectants or similar products of heading 38.08.

5.- For the purposes of heading 12.12, the term "seaweeds and other algae" does not include :

(a) Dead single-cell micro-organisms of heading 21.02;

(b) Cultures of micro-organisms of heading 30.02; or

(c) Fertilisers of heading 31.01 or 31.05.

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Subheading Note.

1.- For the purposes of subheading 1205.10, the expression "low erucic acid rape or colza seeds" means rape or colza seeds yielding a fixed oil which has an erucic acid content of less than 2 % by weight and yielding a solid component which contains less than 30 micromoles of glucosinolates per gram.

GENERAL

Headings 12.01 to 12.07 cover seeds and fruits of a kind used for the extraction (by pressure or by solvents) of edible or industrial oils and fats, whether they are presented for that purpose, for sowing or for other purposes. These headings **do not**, however, **include** products of **heading 08.01** or **08.02**, olives (**Chapter 7** or **20**) or certain seeds and fruits from which oil may be extracted but which are primarily used for other purposes, e.g., apricot, peach or plum kernels (**heading 12.12**) and cocoa beans (**heading 18.01**).

The seeds and fruits covered by the heading may be whole, broken, crushed, husked or shelled. They may also have undergone heat treatment designed mainly to ensure better preservation (e.g., by inactivating the lipolytic enzymes and eliminating part of the moisture), for the purpose of de-bittering, for inactivating antinutritional factors or to facilitate their use. However, such

treatment is permitted **only if** it does not alter the character of the seeds and fruits as natural products and does not make them suitable for a specific use rather than for general use.

The headings **exclude** solid residues resulting from the extraction of vegetable oil from oil seeds or oleaginous fruits (including defatted flours and meals) (**heading 23.04**, **23.05** or **23.06**).

Chapter 13: Lac; gums, resins and other vegetable saps and extracts

Chapter 13 Explanatory Notes

1.- Heading 13.02 applies, *inter alia*, to liquorice extract and extract of pyrethrum, extract of hops, extract of aloes and opium.

The heading does not apply to :

(a) Liquorice extract containing more than 10 % by weight of sucrose or put up as confectionery (heading 17.04);

(b) Malt extract (heading 19.01);

(c) Extracts of coffee, tea or maté (heading 21.01);

(d) Vegetable saps or extracts constituting alcoholic beverages (Chapter 22);

(e) Camphor, glycyrrhizin or other products of heading 29.14 or 29.38;

(f) Concentrates of poppy straw containing not less than 50 % by weight of alkaloids (heading 29.39);

(g) Medicaments of heading 30.03 or 30.04 or blood-grouping reagents (heading 38.22);

(h) Tanning or dyeing extracts (heading 32.01 or 32.03);

(ij) Essential oils, concretes, absolutes, resinoids, extracted oleoresins, aqueous distillates or aqueous solutions of essential oils or preparations based on odoriferous substances of a kind used for the manufacture of beverages (Chapter 33); or

(k) Natural rubber, balata, gutta-percha, guayule, chicle or similar natural gums (heading 40.01).

Chapter 14: Vegetable plaiting materials; vegetable products not elsewhere specified or included

Chapter 14 Explanatory Notes.

1.- This Chapter does not cover the following products which are to be classified in Section XI : vegetable materials or fibres of vegetable materials of a kind used primarily in the manufacture of textiles, however prepared, or other vegetable materials which have undergone treatment so as to render them suitable for use only as textile materials.

2.- Heading 14.01 applies, *inter alia*, to bamboos (whether or not split, sawn lengthwise, cut to length, rounded at the ends, bleached, rendered non-inflammable, polished or dyed), split osier, reeds and the like, to rattan cores and to drawn or split rattans. The heading does not apply to chipwood (heading 44.04).

3.- Heading 14.04 does not apply to wood wool (heading 44.05) and prepared knots or tufts for broom or brush making (heading 96.03).

GENERAL

This Chapter covers :

(1) Vegetable materials, raw or simply worked, of a kind used primarily for plaiting, broom or brush making, or as stuffing or padding.

(2) Seeds, pips, hulls and nuts of a kind used for carving, for the manufacture of buttons and other small fancy-goods.

(3) Other vegetable products not elsewhere specified.

The Chapter **excludes** vegetable materials of a kind used primarily in the manufacture of textiles, however prepared, and other vegetable materials processed for use as textile materials (**Section XI**).

Section III
ANIMAL, VEGETABLE OR MICROBIAL FATS AND OILS AND THEIR CLEAVAGE PRODUCTS; PREPARED EDIBLE FATS; ANIMAL OR VEGETABLE WAXES

Chapter 15 Explanatory Notes

ANIMAL OR VEGETABLE FATS AND OILS AND THEIR CLEAVAGE PRODUCTS; PREPARED EDIBLE FATS; ANIMAL OR VEGETABLE WAXES

Section IV: PREPARED FOODSTUFFS; BEVERAGES, SPIRITS AND VINEGAR; TOBACCO AND MANUFACTURED TOBACCO SUBSTITUTES; PRODUCTS, WHETHER OR NOT CONTAINING NICOTINE, INTENDED FOR INHALATION WITHOUT COMBUSTION; OTHER NICOTINE CONTAINING PRODUCTS INTENDED FOR THE INTAKE OF NICOTINE INTO THE HUMAN BODY

Section IV Explanatory Notes

Note.

1.- In this Section the term "pellets" means products which have been agglomerated either directly by compression or by the addition of a binder in a proportion not exceeding 3 % by weight.

Chapter 16: Preparations of meat, of fish, of crustaceans, molluscs or other aquatic invertebrates, or of insects

Chapter 16 Explanatory Notes

Notes.

1.- This Chapter does not cover meat, meat offal, fish, crustaceans, molluscs or other aquatic invertebrates, as well as insects, prepared or preserved by the processes specified in Chapter 2 or 3, Note 6 to Chapter 4 or in heading 05.04.

2.- Food preparations fall in this Chapter provided that they contain more than 20 % by weight of sausage, meat, meat offal, blood, insects, fish or crustaceans, molluscs or other aquatic invertebrates, or any combination thereof. In cases where the preparation contains two or more of the products mentioned above, it is classified in the heading of Chapter 16 corresponding to the component or components which predominate by weight. These provisions do not apply to the stuffed products of heading 19.02 or to the preparations of heading 21.03 or 21.04.

Subheading Notes.

1.- For the purposes of subheading 1602.10, the expression "homogenised preparations" means preparations of meat, meat offal, blood or insects, finely homogenised, put up for retail sale as food suitable for infants or young children or for dietetic purposes, in containers of a net weight content not exceeding 250 g. For the application of this definition no account is to be taken of small quantities of any ingredients which may have been added to the preparation for seasoning, preservation or other purposes. These preparations may contain a small quantity of visible pieces of meat, meat offal or insects. This subheading takes precedence over all other subheadings of heading 16.02.

2.- The fish, crustaceans, molluscs and other aquatic invertebratesspecified in the subheadings of heading 16.04 or 16.05 under their common names only, are of the same species as those mentioned in Chapter 3 under the same name.

GENERAL

This Chapter covers prepared foodstuffs obtained by processing meat, meat offal (e.g., feet, skins, hearts, tongues, livers, guts, stomachs), blood, insects, fish (including skins thereof), crustaceans, molluscs or other aquatic invertebrates. The Chapter covers such products which have been prepared or preserved by processes not provided for in Chapter 2 or 3, Note 6 to Chapter 4 or in heading 05.04, for example, products which have been :

(1) Prepared as sausages or similar products.

(2) Boiled, steamed, grilled, fried, roasted or otherwise cooked, **except** smoked fish and smoked crustaceans, molluscs or other aquatic invertebrates, which may have been cooked before or during smoking (**headings 03.05, 03.06, 03.07 and 03.08**), crustaceans, in shell, cooked by steaming or boiling in water (**heading 03.06**), molluscs that have been subjected only to scalding or other types of heat shock (which do not entail cooking as such),necessary to open the shell or stabilize the mollusc prior to transportation or freezing (**heading 03.07**) and flours, meals and pellets, obtained from cooked fish and cooked crustaceans, molluscs or other aquatic invertebrates (**heading 03.09**).

(3) Prepared or preserved in the form of extracts, juices or marinades, prepared from fish eggs as caviar or caviar substitutes, merely covered with batter or bread crumbs, truffled, seasoned (e.g., with both pepper and salt), etc.

(4) Finely homogenised and based solely on products of this Chapter (i.e., prepared or preserved meat, meat offal, blood, insects, fish or crustaceans, molluscs or other aquatic invertebrates). These homogenised preparations may contain a small quantity of visible pieces of meat, fish, etc., as well as a small quantity of ingredients added for seasoning, preservation or other purposes. However, homogenisation, by itself, does not qualify a product for classification as a preparation in Chapter 16.

For the distinctions to be drawn between the products of Chapters 2 and 3 on the one hand and of Chapter 16 on the other, see the General Explanatory Notes to Chapters 2 and 3.

This Chapter also covers food preparations (including so-called "prepared meals") consisting, e.g., of sausage, meat, meat offal, blood, insects, fish or crustaceans, molluscs or other aquatic invertebrates together with vegetables, spaghetti, sauce, etc., **provided** they contain more than 20 % by weight of sausage, meat, meat offal, blood, insects, fish or crustaceans, molluscs or other aquatic invertebrates, or any combination thereof. In cases where the preparation contains two or more of the products mentioned above (e.g., both meat and fish), it is classified in the heading of Chapter 16 corresponding to the component or components which predominate by weight. In all cases the weight to be considered is the weight of meat, fish, etc., in the preparation at the time it is presented and not the weight of the same products before preparation. (It should, however, be noted that stuffed products of **heading 19.02**, sauces and preparations therefor, condiments and seasonings, of the kind described in **heading 21.03**, soups and broths and preparations therefor and

homogenised composite food preparations, of the kind described in **heading 21.04**, are always classified in those headings.)

The Chapter also **excludes** :

(a) Flours and meals, fit for human consumption, made from meat or meat offal (including products from marine mammals) (**heading 02.10**), from fish (**heading 03.09**) or from insects (**heading 04.10**).

(b) Flours, meals and pellets, unfit for human consumption, made from insects (**heading 05.11**), from meat (including products from marine mammals), from fish or from crustaceans, molluscs or other aquatic invertebrates (**heading 23.01**).

(c) Preparations based on meat, meat offal, fish, etc., for animal feeding (**heading 23.09**).

(d) Medicaments of **Chapter 30**.

Chapter 17: Sugars and sugar confectionery

Chapter 17 Explanatory Notes

Note.

1.- This Chapter does not cover :

(a) Sugar confectionery containing cocoa (heading 18.06);

(b) Chemically pure sugars (other than sucrose, lactose, maltose, glucose and fructose) or other products of heading 29.40; or

(c) Medicaments or other products of Chapter 30.

Subheading Notes.

1.- For the purposes of subheadings 1701.12, 1701.13 and 1701.14, "raw sugar" means sugar whose content of sucrose by weight, in the dry state, corresponds to a polarimeter reading of less than 99.5°.

2.- Subheading 1701.13 covers only cane sugar obtained without centrifugation, whose content of sucrose by weight, in the dry state, corresponds to a polarimeter reading of 69° or more but less than 93°. The product contains only natural anhedral microcrystals, of irregular shape, not visible to the naked eye, which are surrounded by residues of molasses and other constituents of sugar cane.

GENERAL

This Chapter covers not only sugars as such (e.g., sucrose, lactose, maltose, glucose and fructose), but also sugar syrups, artificial honey, caramel, molasses resulting from the extraction or refining of sugar and sugar confectionery. Solid sugar and molasses of this Chapter may contain added colouring matter, flavouring matter (e.g., citric acid or vanilla) or artificial sweeteners (e.g., aspartame or stevia), as long as they retain their original character as sugar or molasses.

The Chapter **does not include :**

(a) Sugar confectionery containing cocoa or chocolate (**other than** white chocolate) in any proportion, and sweetened cocoa powders (**heading 18.06**).

(b) Sweetened food preparations of **Chapter 19, 20, 21** or **22**.

(c) Sweetened forage (**heading 23.09**).

(d) Chemically pure sugars (other than sucrose, lactose, maltose, glucose and fructose), and aqueous solutions thereof (**heading 29.40**).

(e) Medicaments containing sugar (**Chapter 30**).

Chapter 18: **Cocoa and cocoa preparations**

Chapter 18 Explanatory Notes

1.- This Chapter does not cover :

(a) Food preparations containing more than 20 % by weight of sausage, meat, meat offal, blood, insects, fish or crustaceans, molluscs or other aquatic invertebrates, or any combination thereof (Chapter 16);

(b) Preparations of headings 04.03, 19.01, 19.02, 19.04, 19.05, 21.05, 22.02, 22.08, 30.03 or 30.04.

2.- Heading 18.06 includes sugar confectionery containing cocoa and, subject to Note 1 to this Chapter, other food preparations containing cocoa.

GENERAL

This Chapter covers cocoa (including cocoa beans) in all forms, cocoa butter, fat and oil and preparations containing cocoa (in any proportion), **except** :

(a) Yogurt and other products of **heading 04.03**.

(b) White chocolate (**heading 17.04**).

(c) Food preparations of flour, groats, meal, starch or malt extract, containing less than 40 % by weight of cocoa calculated on a totally defatted basis, and food preparations of goods of headings 04.01 to 04.04 containing less than 5 % by weight of cocoa calculated on a totally defatted basis, of **heading 19.01**.

(d) Swelled or roasted cereals containing not more than 6 % by weight of cocoa calculated on a totally defatted basis (**heading 19.04**).

(e) Pastry, cakes, biscuits and other bakers' wares, containing cocoa (**heading 19.05**).

(f) Ice cream and other edible ice, containing cocoa in any proportion (**heading 21.05**).

(g) Beverages, non-alcoholic or alcoholic (e.g., "*crème de cacao*"), containing cocoa and ready for consumption (**Chapter 22**).

(h) Medicaments (**heading 30.03** or **30.04**).

The Chapter also **excludes** theobromine, an alkaloid extracted from cocoa (**heading 29.39**).

Chapter 19: **Preparations of cereals, flour, starch or milk; pastrycooks' products**

Chapter 19 Explanatory Notes

Notes.

1.- This Chapter does not cover :

(a) Except in the case of stuffed products of heading 19.02, food preparations containing more than 20 % by weight of sausage, meat, meat offal, blood, insects, fish or crustaceans, molluscs or other aquatic invertebrates , or any combination thereof (Chapter 16);

(b) Biscuits or other articles made from flour or from starch, specially prepared for use in animal feeding (heading 23.09); or

(c) Medicaments or other products of Chapter 30.

2.- For the purposes of heading 19.01 :

(a) The term "groats" means cereal groats of Chapter 11;

(b) The terms "flour" and "meal" mean :

(1) Cereal flour and meal of Chapter 11, and

(2) Flour, meal and powder of vegetable origin of any Chapter, other than flour, meal or powder of dried vegetables (heading 07.12), of potatoes (heading 11.05) or of dried leguminous vegetables (heading 11.06).

3.- Heading 19.04 does not cover preparations containing more than 6 % by weight of cocoa calculated on a totally defatted basis or completely coated with chocolate or other food preparations containing cocoa of heading 18.06 (heading 18.06).

4.- For the purposes of heading 19.04, the expression "otherwise prepared" means prepared or processed to an extent beyond that provided for in the headings of or Notes to Chapter 10 or 11.

GENERAL

This Chapter covers a number of preparations, generally used for food, which are made either directly from the cereals of Chapter 10, from the products of Chapter 11 or from food flour, meal and powder of vegetable origin of other Chapters (cereal flour, groats and meal, starch, fruit or vegetable flour, meal and powder) or from the goods of headings 04.01 to 04.04. The Chapter also covers pastrycooks' products and biscuits, even when not containing flour, starch or other cereal products.

For the purposes of Note 3 to this Chapter and heading 19.01, the cocoa content of a product can normally be calculated by multiplying the combined theobromine and caffeine content by a factor of 31. It should be noted that the term "cocoa" covers cocoa in all forms, including paste and solid.

The Chapter **excludes** :

(a) Food preparations (other than stuffed products of **heading 19.02**) containing more than 20 % by weight of sausage, meat, meat offal, blood, insects, fish or crustaceans, molluscs or other aquatic invertebrates, or any combination thereof (**Chapter 16**).

(b) Food preparations of flour, groats, meal, starch or malt extract containing 40 % or more by weight of cocoa calculated on a totally defatted basis and food preparations of goods of headings 04.01 to 04.04 containing 5 % or more by weight of cocoa calculated on a totally defatted basis (**heading 18.06**).

(c) Roasted coffee substitutes containing coffee in any proportion (**heading 09.01**) and other roasted coffee substitutes (e.g., roasted barley) (**heading 21.01**).

(d) Powders for the manufacture of custards, desserts, ice cream or similar preparations but not being preparations based on flour, meal, starch, malt extract or goods of headings 04.01 to 04.04 (generally **heading 21.06**).

(e) Products made from flour or from starch, specially prepared for use in animal feeding (e.g., dog biscuits) (**heading 23.09**).

(f) Medicaments and other products of **Chapter 30**.

Chapter 20: **Preparations of vegetables, fruit, nuts or other parts of plants**

Chapter 20 Explanatory Notes

Notes.

1.- This Chapter does not cover :

(a) Vegetables, fruit or nuts, prepared or preserved by the processes specified in Chapter 7, 8 or 11;

(b) Vegetable fats and oils (Chapter 15);

(c) Food preparations containing more than 20 % by weight of sausage, meat, meat offal, blood, insects, fish or crustaceans, molluscs or other aquatic invertebrates, or any combination thereof (Chapter 16);

(d) Bakers' wares and other products of heading 19.05; or

(e) Homogenised composite food preparations of heading 21.04.

2.- Headings 20.07 and 20.08 do not apply to fruit jellies, fruit pastes, sugar-coated almonds or the like in the form of sugar confectionery (heading 17.04) or chocolate confectionery (heading 18.06).

3.- Headings 20.01, 20.04 and 20.05 cover, as the case may be, only those products of Chapter 7 or of heading 11.05 or 11.06 (other than flour, meal and powder of the products of Chapter 8) which have been prepared or preserved by processes other than those referred to in Note 1 (a).

4.- Tomato juice the dry weight content of which is 7 % or more is to be classified in heading 20.02.

5.- For the purposes of heading 20.07, the expression "obtained by cooking" means obtained by heat treatment at atmospheric pressure or under reduced pressure to increase the viscosity of a product through reduction of water content or other means.

6.- For the purposes of heading 20.09, the expression "juices, unfermented and not containing added spirit" means juices of an alcoholic strength by volume (see Note 2 to Chapter 22) not exceeding 0.5 % vol.

Subheading Notes.

1.- For the purposes of subheading 2005.10, the expression "homogenised vegetables" means preparations of vegetables, finely homogenised, put up for retail sale as food suitable for infants or young children or for dietetic purposes, in containers of a net weight content not exceeding 250 g. For the application of this definition no account is to be taken of small quantities of any ingredients which may have been added to the preparation for seasoning, preservation or other purposes. These preparations may contain a small quantity of visible pieces of vegetables. Subheading 2005.10 takes precedence over all other subheadings of heading 20.05.

2.- For the purposes of subheading 2007.10, the expression "homogenised preparations" means preparations of fruit, finely homogenised, put up for retail sale as food suitable for infants or young children or for dietetic purposes, in containers of a net weight content not exceeding 250 g. For the application of this definition no account is to be taken of small quantities of any ingredients which may have been added to the preparation for seasoning, preservation or other purposes. These preparations may contain a small quantity of visible pieces of fruit. Subheading 2007.10 takes precedence over all other subheadings of heading 20.07.

3.- For the purposes of subheadings 2009.12, 2009.21, 2009.31, 2009.41, 2009.61 and 2009.71, the expression "Brix value" means the direct reading of degrees Brix obtained from a Brix hydrometer or of refractive index expressed in terms of percentage sucrose content obtained from a refractometer, at a temperature of 20 °C or corrected for 20 °C if the reading is made at a different temperature.

GENERAL

This Chapter includes :

(1) Vegetables, fruit, nuts and other edible parts of plants prepared or preserved by vinegar or acetic acid.

(2) Vegetables, fruit, nuts, fruit-peel and other parts of plants preserved by sugar.

(3) Jams, fruit jellies, marmalades, fruit or nut purées, fruit or nut pastes, obtained by cooking.

(4) Homogenised prepared or preserved vegetables and fruit.

(5) Fruit or vegetable juices, neither fermented nor containing added alcohol, or of an alcoholic strength by volume not exceeding 0.5 % vol.

(6) Vegetables, fruit, nuts and other edible parts of plants prepared or preserved by other processes not provided for in Chapter 7, 8 or 11 or elsewhere in the Nomenclature.

(7) Products of heading 07.14, 11.05 or 11.06 (**other than** flour, meal and powder of the products of **Chapter 8**), which have been prepared or preserved by processes other than those specified in Chapter 7 or 11.

(8) Fruit preserved by osmotic dehydration.

These products may be whole, in pieces or crushed.

The Chapter **does not cover** :

(a) Food preparations containing more than 20 % by weight of sausage, meat, meat offal, blood, insects, fish or crustaceans, molluscs or other aquatic invertebrates, or any combination thereof (**Chapter 16**).

(b) Products such as fruit tarts, prepared with pastry (**heading 19.05**).

(c) Soups and broths and preparations therefor and homogenised composite food preparations of **heading 21.04**.

(d) Fruit or vegetable juices of an alcoholic strength by volume exceeding 0.5 % vol (**Chapter 22**).

Chapter 21: Miscellaneous edible preparations

Chapter 21 Explanatory Notes

1.- This Chapter does not cover :

(a) Mixed vegetables of heading 07.12;

(b) Roasted coffee substitutes containing coffee in any proportion (heading 09.01);

(c) Flavoured tea (heading 09.02);

(d) Spices or other products of headings 09.04 to 09.10;

(e) Food preparations, other than the products described in heading 21.03 or 21.04, containing more than 20 % by weight of sausage, meat, meat offal, blood, insects, fish or crustaceans, molluscs or other aquatic invertebrates , or any combination thereof (Chapter 16);

(f) Products of heading 24.04;

(g) Yeast put up as a medicament or other products of heading 30.03 or 30.04; or

(h) Prepared enzymes of heading 35.07.

2.- Extracts of the substitutes referred to in Note 1 (b) above are to be classified in heading 21.01.

3.- For the purposes of heading 21.04, the expression "homogenised composite food preparations" means preparations consisting of a finely homogenised mixture of two or more basic ingredients such as meat, fish, vegetables, fruit or nuts, put up for retail sale as food suitable for infants or young children or for dietetic purposes, in containers of a net weight content not exceeding 250 g. For the application of this definition, no account is to be taken of small quantities of any ingredients which may be added to the mixture for seasoning, preservation or other purposes. Such preparations may contain a small quantity of visible pieces of ingredients.

Chapter 22: **Beverages, spirits and vinegar**

Chapter 22 Explanatory Notes

Notes.

1.- This Chapter does not cover :

(a) Products of this Chapter (other than those of heading 22.09) prepared for culinary purposes and thereby rendered unsuitable for consumption as beverages (generally heading 21.03);

(b) Sea water (heading 25.01);

(c) Distilled or conductivity water or water of similar purity (heading 28.53);

(d) Acetic acid of a concentration exceeding 10 % by weight of acetic acid (heading 29.15);

(e) Medicaments of heading 30.03 or 30.04; or

(f) Perfumery or toilet preparations (Chapter 33).

2.- For the purposes of this Chapter and of Chapters 20 and 21, the "alcoholic strength by volume" shall be determined at a temperature of 20 °C.

3.- For the purposes of heading 22.02, the term "non-alcoholic beverages" means beverages of an alcoholic strength by volume not exceeding 0.5 % vol. Alcoholic beverages are classified in headings 22.03 to 22.06 or heading 22.08 as appropriate.

Subheading Note.

1.- For the purposes of subheading 2204.10, the expression "sparkling wine" means wine which, when kept at a temperature of 20 °C in closed containers, has an excess pressure of not less than 3 bars.

GENERAL

The products of this Chapter constitute a group quite distinct from the foodstuffs covered by the preceding Chapters of the Nomenclature.

They fall into four main groups :

(A) Water and other non-alcoholic beverages and ice.

(B) Fermented alcoholic beverages (beer, wine, cider, etc.).

(C) Distilled alcoholic liquids and beverages (liqueurs, spirits, etc.) and ethyl alcohol.

(D) Vinegar and substitutes for vinegar.

This Chapter **does not cover** :

(a) Liquid dairy products of **Chapter 4**.

(b) Products of this Chapter (**other than** those of **heading 22.09**) prepared for culinary purposes and thereby rendered unsuitable for consumption as beverages (e.g., cooking wines and cooking Cognac) (generally **heading 21.03**).

(c) Medicaments of **heading 30.03** or **30.04**.

(d) Perfumery or toilet preparations (**Chapter 33**).

Chapter 23: Residues and waste from the food industries; prepared animal fodder

Chapter 23 Explanatory Notes

1.- Heading 23.09 includes products of a kind used in animal feeding, not elsewhere specified or included, obtained by processing vegetable or animal materials to such an extent that they have lost the essential characteristics of the original material, other than vegetable waste, vegetable residues and by-products of such processing.

Subheading Note.

1.- For the purposes of subheading 2306.41, the expression "low erucic acid rape or colza seeds" means seeds as defined in Subheading Note 1 to Chapter 12.

GENERAL

This Chapter covers the various residues and wastes derived from vegetable materials used by food-preparing industries, and also certain products of animal origin. The main use of most of these products is as animal feeding stuffs, either alone or mixed with other materials, although some of them are fit for human consumption. Certain products (e.g., wine lees, argol, oil-cake) also have industrial uses.

References in this Chapter to "pellets" mean products which have been agglomerated either directly by compression or by the addition of a binder (molasses, starchy substances, etc.) in a proportion not exceeding 3 % by weight.

Chapter 24: Tobacco and manufactured tobacco substitutes; products, whether or not containing nicotine, intended for inhalation without combustion; other nicotine containing products intended for the intake of nicotine into the human body

Chapter 24 Explanatory Notes

1.- This Chapter does not cover medicinal cigarettes (Chapter 30).

2.- Any products classifiable in heading 24.04 and any other heading of the Chapter are to be classified in heading 24.04.

3.- For the purposes of heading 24.04, the expression "inhalation without combustion" means inhalation through heated delivery or other means, without combustion.

Subheading Note.

1.- For the purposes of subheading 2403.11, the expression "water pipe tobacco" means tobacco intended for smoking in a water pipe and which consists of a mixture of tobacco and glycerol, whether or not containing aromatic oils and extracts, molasses or sugar, and whether or not flavoured with fruit. However, tobacco-free products intended for smoking in a water pipe are excluded from this subheading.

GENERAL

Tobacco is obtained from various cultivated varieties of the genus *Nicotiana* of the *Solanaceae* family. The size and shape of the leaves differ from one variety to another.

The harvesting method and curing process depend on the variety (type) of tobacco. The plant may be cut whole, at average maturity (stalk cutting), or the leaves may be picked separately, according to their state of maturity (priming). Thus, tobacco may be cured either as whole plants (on the stalk) or as separate leaves.

The various methods of curing are sun curing (in the open air), air curing (in closed sheds with free circulation of air), flue curing (in hot air flues), or fire curing (with open fires).

Before packing for shipment, the dried leaves are treated in order to ensure their preservation. This may be done by controlled natural fermentation (Java, Sumatra, Havana, Brazil, Orient, etc.) or by artificial re-drying. This treatment, and the curing, affect the flavour and aroma of tobacco, which undergoes spontaneous ageing after packing.

Tobacco so treated is packed in bundles, bales (of various shapes), in hogsheads or in crates. When so packed, the leaves are either aligned (Orient) or tied in hands (several leaves tied together with a band or with another tobacco leaf), or simply left as loose leaves. They are always tightly compressed in order to ensure preservation.

In some cases, in addition to (or instead of) fermentation, flavouring or moistening substances are added (casing) in order to improve the aroma or keeping qualities.

This Chapter covers not only unmanufactured and manufactured tobacco but also manufactured tobacco substitutes which do not contain tobacco.

Section V: MINERAL PRODUCTS

Section V Explanatory Notes

Chapter 25: Salt; sulphur; earths and stone; plastering materials, lime and cement

Chapter 25 Explanatory Notes

1.- Except where their context or Note 4 to this Chapter otherwise requires, the headings of this Chapter cover only products which are in the crude state or which have been washed (even with chemical substances eliminating the impurities without changing the structure of the product), crushed, ground, powdered, levigated, sifted, screened, concentrated by flotation, magnetic separation or other mechanical or physical processes (except crystallisation), but not products which have been roasted, calcined, obtained by mixing or subjected to processing beyond that mentioned in each heading.

The products of this Chapter may contain an added anti-dusting agent, provided that such addition does not render the product particularly suitable for specific use rather than for general use.

2.- This Chapter does not cover :

(a) Sublimed sulphur, precipitated sulphur or colloidal sulphur (heading 28.02);

(b) Earth colours containing 70 % or more by weight of combined iron evaluated as Fe_2O_3 (heading 28.21);

(c) Medicaments or other products of Chapter 30;

(d) Perfumery, cosmetic or toilet preparations (Chapter 33);

(e) Dolomite ramming mix (heading 38.16);

(f) Setts, curbstones or flagstones (heading 68.01); mosaic cubes or the like (heading 68.02); roofing, facing or damp course slates (heading 68.03);

(g) Precious or semi-precious stones (heading 71.02 or 71.03);

(h) Cultured crystals (other than optical elements) weighing not less than 2.5 g each, of sodium chloride or of magnesium oxide, of heading 38.24; optical elements of sodium chloride or of magnesium oxide (heading 90.01);

(ij) Billiard chalks (heading 95.04); or

(k) Writing or drawing chalks or tailors' chalks (heading 96.09).

3.- Any products classifiable in heading 25.17 and any other heading of the Chapter are to be classified in heading 25.17.

4.- Heading 25.30 applies, *inter alia*, to : vermiculite, perlite and chlorites, unexpanded; earth colours, whether or not calcined or mixed together; natural micaceous iron oxides; meerschaum (whether or not in polished pieces); amber; agglomerated meerschaum and agglomerated amber, in plates, rods, sticks or similar forms, not worked after moulding; jet; strontianite (whether or not calcined), other than strontium oxide; broken pieces of pottery, brick or concrete.

GENERAL

As provided in Note 1, this Chapter covers, except where the context otherwise requires, mineral products **only** in the crude state or washed (including washing with chemical substances to eliminate impurities provided that the structure of the product itself is not changed), crushed, ground, powdered, levigated, sifted, screened or concentrated by flotation, magnetic separation or other mechanical or physical processes (not including crystallisation). The products of this Chapter may also be heated to remove moisture or impurities or for other purposes, provided that the heat treatment does not modify their chemical or crystalline structures. However, other heat treatments (e.g., roasting, fusion or calcination) are not allowed, unless specifically permitted by the heading text. Thus, for example, heat treatment which could entail a change in chemical or crystalline structure is allowed for products of headings 25.13 and 25.17, because the texts of these headings explicitly refer to heat treatment.

The products of this Chapter may contain an added anti-dusting agent, provided that such addition does not render the product particularly suitable for specific use rather than for general use. Minerals which have been **otherwise** processed (e.g., purified by re-crystallisation, obtained by mixing minerals falling in the same or different headings of this Chapter, made up into articles by shaping, carving, etc.) **generally fall in later Chapters** (for example, **Chapter 28** or **68**).

In certain cases, however, the headings :

(1) Refer to goods which by their nature must have been subjected to a process not provided for by Note 1 to this Chapter. Examples include pure sodium chloride (heading 25.01), certain forms of refined sulphur (heading 25.03), chamotte earth (heading 25.08), plasters (heading 25.20), quicklime (heading 25.22) and hydraulic cements (heading 25.23).

(2) Specify conditions or processes which are admissible in those cases in addition to those allowed generally under Note 1 to this Chapter. For example, witherite (heading 25.11), siliceous fossil meals and similar siliceous earths (heading 25.12) and dolomite (heading 25.18) may be calcined; magnesite and magnesia (heading 25.19) may be fused or calcined (dead-burned (sintered) or caustic-burned). In the case of dead-burned (sintered) magnesia, other oxides (e.g., iron oxide, chromium oxide) may have been added to facilitate sintering. Similarly the materials of headings 25.06, 25.14, 25.15, 25.16, 25.18 and 25.26 may be roughly trimmed or merely cut, by sawing or otherwise, into blocks or slabs of a rectangular (including square) shape.

When products are classifiable in heading 25.17 and any other heading of this Chapter, they are to be classified in heading 25.17.

The Chapter **excludes** precious or semi-precious stones of **Chapter 71**.

Chapter 26: Ores, slag and ash

Chapter 26 Explanatory Notes

Notes.

1.- This Chapter does not cover :

(a) Slag or similar industrial waste prepared as macadam (heading 25.17);

(b) Natural magnesium carbonate (magnesite), whether or not calcined (heading 25.19);

(c) Sludges from the storage tanks of petroleum oils consisting mainly of such oils (heading 27.10);

(d) Basic slag of Chapter 31;

(e) Slag wool, rock wool or similar mineral wools (heading 68.06);

(f) Waste or scrap of precious metal or of metal clad with precious metal; other waste or scrap containing precious metal or precious metal compounds, of a kind used principally for the recovery of precious metal (heading 71.12 or 85.49); or

(g) Copper, nickel or cobalt mattes produced by any process of smelting (Section XV).

2.- For the purposes of headings 26.01 to 26.17, the term "ores" means minerals of mineralogical species actually used in the metallurgical industry for the extraction of mercury, of the metals of heading 28.44 or of the metals of Section XIV or XV, even if they are intended for non-metallurgical purposes. Headings 26.01 to 26.17 do not, however, include minerals which have been submitted to processes not normal to the metallurgical industry.

3.- Heading 26.20 applies only to :

(a) Slag, ash and residues of a kind used in industry either for the extraction of metals or as a basis for the manufacture of chemical compounds of metals, excluding ash and residues from the incineration of municipal waste (heading 26.21); and

(b) Slag, ash and residues containing arsenic, whether or not containing metals, of a kind used either for the extraction of arsenic or metals or for the manufacture of their chemical compounds.

Subheading Notes.

1.- For the purposes of subheading 2620.21, "leaded gasoline sludges and leaded anti-knock compound sludges" mean sludges obtained from storage tanks of leaded gasoline and leaded anti-knock compounds (for example, tetraethyllead), and consisting essentially of lead, lead compounds and iron oxide.

2.- Slag, ash and residues containing arsenic, mercury, thallium or their mixtures, of a kind used for the extraction of arsenic or those metals or for the manufacture of their chemical compounds, are to be classified in subheading 2620.60.

GENERAL

Headings 26.01 to 26.17 are **limited** to metallic ores and concentrates which :

(A) Are of mineralogical species actually used in the metallurgical industry for the extraction of the metals of Section XIV or XV, of mercury or of the metals of heading 28.44, even if they are intended for non-metallurgical purposes, **and**

(B) Have not been submitted to processes not normal to the metallurgical industry.

The term "**ores**" applies to metalliferous minerals associated with the substances in which they occur and with which they are extracted from the mine; it also applies to native metals in their gangue (e.g., metalliferous sands).

Ores are seldom marketed before "preparation" for subsequent metallurgical operations. The most important preparatory processes are those aimed at concentrating the ores.

For the purposes of headings 26.01 to 26.17, the term "**concentrates**" applies to ores which have had part or all of the foreign matter removed by special treatments, either because such foreign matter might hamper subsequent metallurgical operations or with a view to economical transport.

Processes to which products of headings 26.01 to 26.17 may have been submitted include physical, physico-chemical or chemical operations, provided they are normal to the preparation of the ores for the extraction of metal. With the exception of changes resulting from calcination, roasting or firing (with or without agglomeration), such operations must not alter the chemical composition of the basic compound which furnishes the desired metal.

The physical or physico-chemical operations include crushing, grinding, magnetic separation, gravimetric separation, flotation, screening, grading, agglomeration of powders (e.g., by sintering or pelleting) into grains, balls or briquettes (whether or not with the addition of small quantities of binders), drying, calcination, roasting to oxidise, reduce or magnetise the ore, etc. (but not roasting for purposes of sulphating, chloridating, etc.).

The chemical processes are aimed at eliminating the unwanted matter (e.g., dissolution).

Concentrates of ores obtained by treatments, other than calcining or roasting, which alter the chemical composition or crystallographic structure of the basic ore are **excluded** (generally **Chapter 28**). Also **excluded** are more or less pure products obtained by repeated physical changes (fractional crystallisation, sublimation, etc.), even if there has been no change in the chemical composition of the basic ore.

The ores of headings 26.01 to 26.17 are used commercially to obtain :

(1) The precious metals as defined in Chapter 71 (viz., silver, gold, platinum, iridium, osmium, palladium, rhodium and ruthenium).

(2) The metallurgical base metals referred to in Section XV (viz., iron, copper, nickel, aluminium, lead, zinc, tin, tungsten (wolfram), molybdenum, tantalum, cobalt, bismuth, cadmium, titanium, zirconium, antimony, manganese, chromium, germanium, vanadium, beryllium, gallium, hafnium, indium, niobium (colombium), rhenium, thallium).

(3) Mercury of heading 28.05.

(4) Metals of heading 28.44.

In certain cases, the ores are used to obtain alloys such as ferro-manganese or ferro-chromium.

Except where the context otherwise requires, ores and concentrates comprising more than one mineralogical species are to be classified in headings 26.01 to 26.17 as appropriate by application of General Interpretative Rule 3 (b) or failing that by application of Rule 3 (c).

Headings 26.01 to 26.17 **do not cover** :

(a) Minerals containing the above metals if :

(i) They are specified in another heading, e.g., unroasted iron pyrites (**heading 25.02**), natural cryolite and natural chiolite (**heading 25.30**).

(ii) The metals are not extracted commercially, e.g., earth colours, alunite or alumstone (**heading 25.30**), precious or semi-precious stones (**Chapter 71**).

(b) The minerals which at present are used for the extraction of magnesium, i.e., dolomite (**heading 25.18**), magnesite or giobertite (**heading 25.19**) and carnallite (**heading 31.04**).

(c) Minerals of the alkaline or alkaline-earth metals of heading 28.05 (i.e., lithium, sodium, potassium, rubidium, caesium, calcium, strontium and barium); such minerals include salt (**heading 25.01**), barytes and witherite (**heading 25.11**), strontianite, celestite, Iceland spar and aragonite (**heading 25.30**).

(d) Native metals (e.g., nuggets or grains) and natural alloys separated from their gangues or matrices, such native metals and natural alloys being classified in **Section XIV** or **XV**.

(e) Ores of the rare earth metals of **heading 25.30**.

Chapter 27: Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes

Chapter 27 Explanatory Notes

1.- This Chapter does not cover :

(a) Separate chemically defined organic compounds, other than pure methane and propane which are to be classified in heading 27.11;

(b) Medicaments of heading 30.03 or 30.04; or

(c) Mixed unsaturated hydrocarbons of heading 33.01, 33.02 or 38.05.

2.- References in heading 27.10 to "petroleum oils and oils obtained from bituminous minerals" include not only petroleum oils and oils obtained from bituminous minerals but also similar oils, as well as those consisting mainly of mixed unsaturated hydrocarbons, obtained by any process, provided that the weight of the non-aromatic constituents exceeds that of the aromatic constituents.

However, the references do not include liquid synthetic polyolefins of which less than 60 % by volume distils at 300 °C, after conversion to 1,013 millibars when a reduced-pressure distillation method is used (Chapter 39).

3.- For the purposes of heading 27.10, "waste oils" means waste containing mainly petroleum oils and oils obtained from bituminous minerals (as described in Note 2 to this Chapter), whether or not mixed with water. These include :

(a) Such oils no longer fit for use as primary products (for example, used lubricating oils, used hydraulic oils and used transformer oils);

(b) Sludge oils from the storage tanks of petroleum oils, mainly containing such oils and a high concentration of additives (for example, chemicals) used in the manufacture of the primary products; and

(c) Such oils in the form of emulsions in water or mixtures with water, such as those resulting from oil spills or storage tank washings, or from the use of cutting oils for machining operations.

Subheading Notes.

1.- For the purposes of subheading 2701.11, "anthracite" means coal having a volatile matter limit (on a dry, mineral-matter-free basis) not exceeding 14 %.

2.- For the purposes of subheading 2701.12, "bituminous coal" means coal having a volatile matter limit (on a dry, mineral-matter-free basis) exceeding 14 % and a calorific value limit (on a moist, mineral-matter-free basis) equal to or greater than 5,833 kcal/kg.

3.- For the purposes of subheadings 2707.10, 2707.20, 2707.30 and 2707.40 the terms "benzol (benzene)", "toluol (toluene)", "xylol (xylenes)" and "naphthalene" apply to products which contain more than 50 % by weight of benzene, toluene, xylenes or naphthalene respectively.

4.- For the purposes of subheading 2710.12, "light oils and preparations" are those of which 90 % or more by volume (including losses) distil at 210 °C according to the ISO 3405 method (equivalent to the ASTM D 86 method).

5.- For the purposes of the subheadings of heading 27.10, the term "biodiesel" means mono-alkyl esters of fatty acids of a kind used as a fuel, derived from animal, vegetable or microbial fats and oils whether or not used.

GENERAL

The Chapter covers, in general, coal and other natural mineral fuels, petroleum oils and oils obtained from bituminous minerals, their distillation products, and products of a similar kind obtained by any other process. It also covers mineral waxes and natural bituminous substances. Goods of this Chapter may be crude or refined; however, with the exception of methane and propane, when they are separate chemically defined organic compounds in the pure or commercially pure state, they are to be classified in **Chapter 29**. For certain of these compounds (e.g., ethane, benzene, phenol, pyridine) there are specific purity criteria indicated in Explanatory Notes 29.01, 29.07 and 29.33. Methane and propane are classified in heading 27.11, even when pure.

The expression "aromatic constituents" as used in Note 2 to this Chapter and in heading 27.07 should be taken to refer to entire molecules with an aromatic part irrespective of the number and length of side-chains and not to the aromatic portions of such molecules only.

The Chapter **does not cover** :

(a) Medicaments of **heading 30.03** or **30.04**.

(b) Perfumery, cosmetic or toilet preparations (**headings 33.03 to 33.07**).

(c) Liquid or liquefied-gas fuels in containers of a kind used for filling or refilling cigarette or similar lighters and of a capacity not exceeding 300 cm^3 (**heading 36.06**).

Section VI: PRODUCTS OF THE CHEMICAL OR ALLIED INDUSTRIES

Section VI Explanatory Notes

Notes.

1.- (A) Goods (other than radioactive ores) answering to a description in heading 28.44 or 28.45 are to be classified in those headings and in no other heading of the Nomenclature.

(B) Subject to paragraph (A) above, goods answering to a description in heading 28.43, 28.46 or 28.52 are to be classified in those headings and in no other heading of this Section.

2.- Subject to Note 1 above, goods classifiable in heading 30.04, 30.05, 30.06, 32.12, 33.03, 33.04, 33.05, 33.06, 33.07, 35.06, 37.07 or 38.08 by reason of being put up in measured doses or for retail sale are to be classified in those headings and in no other heading of the Nomenclature.

3.- Goods put up in sets consisting of two or more separate constituents, some or all of which fall in this Section and are intended to be mixed together to obtain a product of Section VI or VII, are to be classified in the heading appropriate to that product, provided that the constituents are :

(a) having regard to the manner in which they are put up, clearly identifiable as being intended to be used together without first being repacked;

(b) presented together; and

(c) identifiable, whether by their nature or by the relative proportions in which they are present, as being complementary one to another.

4.- Where a product answers to a description in one or more of the headings in Section VI by virtue of being described by name or function and also to heading 38.27, then it is classifiable in a heading that references the product by name or function and not under heading 38.27.

GENERAL

Note 1.

Under the provisions of paragraph (A) of this Note, all radioactive chemical elements and radioactive isotopes, and compounds of such elements and isotopes (whether inorganic or organic, and whether or not chemically defined), are classified under heading 28.44, even though they could also fall under some other heading of the Nomenclature. Thus, for example, radioactive sodium chloride and radioactive glycerol fall in heading 28.44 and not in heading 25.01 or 29.05. Similarly, radioactive ethyl alcohol, radioactive gold and radioactive cobalt are in all circumstances classified in heading 28.44. It should be noted, however, that radioactive ores are classified in **Section V** of the Nomenclature.

In the case of non-radioactive isotopes and their compounds, the Note provides that these (whether inorganic or organic, and whether or not chemically defined) are classified in heading 28.45 and not elsewhere in the Nomenclature. Thus, the isotope of carbon is classified under heading 28.45 and not under heading 28.03.

Paragraph (B) of the Note provides that goods described in heading 28.43, 28.46 or 28.52 are to be classified under whichever of those headings is appropriate and under no other heading in Section VI, provided always they are not radioactive or in the form of isotopes (in which case they are classified in either heading 28.44 or heading 28.45). This paragraph of the Note provides, therefore, that, e.g., silver caseinate is classified in heading 28.43 and not in heading 35.01, and that silver nitrate, even when put up for retail sale ready for photographic use, is classified in heading 28.43 and not in heading 37.07.

It should be noted, however, that headings 28.43, 28.46 and 28.52 take precedence **only over the other headings in Section VI**. Where goods described in heading 28.43, 28.46 or 28.52 are also covered by headings in other Sections of the Nomenclature, the classification of such goods is dependent on the application of any relevant Section or Chapter Notes and of the General Rules for the interpretation of the Harmonized System. Thus gadolinite, a compound of rare-earth metals and

therefore covered by heading 28.46 is classified in heading 25.30 because Note 3 (a) to Chapter 28 **excludes** all mineral products of **Section V**.

Note 2.

Section Note 2 provides that goods (other than those described in heading 28.43 to 28.46 or 28.52) which are covered by heading 30.04, 30.05, 30.06, 32.12, 33.03, 33.04, 33.05, 33.06, 33.07, 35.06, 37.07 or 38.08 by reason of being put up in measured doses or for retail sale, are to be classified in those headings notwithstanding that they could also fall in some other heading of the Nomenclature. For example, sulphur put up for retail sale for therapeutic purposes is classified in**heading 30.04** and not in heading 25.03 or 28.02, and dextrin put up for retail sale as a glue is classified in **heading 35.06** and not in heading 35.05.

Note 3.

This Note deals with the classification of goods put up in sets consisting of two or more separate constituents, some or all of which fall in Section VI. The Note is, however, limited to sets of which the constituents are intended to be mixed together to obtain a product of Section VI or VII. Such sets are to be classified in the heading appropriate to that product **provided** that the constituents meet conditions (a) to (c) of the Note.

Examples of goods in such sets are dental cements and other dental fillings of heading 30.06 and certain varnishes and paints of headings 32.08 to 32.10 and mastics, etc., of heading 32.14. As regards the classification of goods put up without a necessary hardener, - see, in particular, General Explanatory Note to Chapter 32 and Explanatory Note to heading 32.14.

It should be noted that goods put up in sets consisting of two or more separate constituents, some or all of which fall in Section VI, intended to be used **successively without prior mixing**, are not covered by Note 3 to this Section. Such goods put up for retail sale are to be classified by application of the General Interpretative Rules (generally Rule 3 (b)); in the case of those not put up for retail sale the constituents are to be classified separately.

Note 4.

Section Note 4 provides that heading 38.27 **does not take precedence over other headings in Section VI** that reference goods by name or function. Thus, for example, goods that could fall under the first category of headings 38.14, as "organic composite solvents" and heading 38.27, are to be classified under heading 38.14, even though the texts of both the first category of heading 38.14 and heading 38.27 have the same phrase "not elsewhere specified or included". It should be noted, however, that heading 38.27 does take precedence over heading 38.24, as this heading does not reference such goods by name or function.

Chapter 28: Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes

Chapter 28 Explanatory Notes

Notes.

1.- Except where the context otherwise requires, the headings of this Chapter apply only to :

(a) Separate chemical elements and separate chemically defined compounds, whether or not containing impurities;

(b) The products mentioned in (a) above dissolved in water;

(c) The products mentioned in (a) above dissolved in other solvents provided that the solution constitutes a normal and necessary method of putting up these products adopted solely for reasons of safety or for transport and that the solvent does not render the product particularly suitable for specific use rather than for general use;

(d) The products mentioned in (a), (b) or (c) above with an added stabiliser (including an anti-caking agent) necessary for their preservation or transport;

(e) The products mentioned in (a), (b), (c) or (d) above with an added anti-dusting agent or a colouring substance added to facilitate their identification or for safety reasons, provided that the additions do not render the product particularly suitable for specific use rather than for general use.

2.- In addition to dithionites and sulphoxylates, stabilised with organic substances (heading 28.31), carbonates and peroxocarbonates of inorganic bases (heading 28.36), cyanides, cyanide oxides and complex cyanides of inorganic bases (heading 28.37), fulminates, cyanates and thiocyanates, of inorganic bases (heading 28.42), organic products included in heading 28.43 to 28.46 and 28.52 and carbides (heading 28.49), only the following compounds of carbon are to be classified in this Chapter :

(a) Oxides of carbon, hydrogen cyanide and fulminic, isocyanic, thiocyanic and other simple or complex cyanogen acids (heading 28.11);

(b) Halide oxides of carbon (heading 28.12);

(c) Carbon disulphide (heading 28.13);

(d) Thiocarbonates, selenocarbonates, tellurocarbonates, selenocyanates, tellurocyanates, tetrathio- cyanatodiamminochromates (reineckates) and other complex cyanates, of inorganic bases (heading 28.42);

(e) Hydrogen peroxide, solidified with urea (heading 28.47), carbon oxysulphide, thiocarbonyl halides, cyanogen, cyanogen halides and cyanamide and its metal derivatives (heading 28.53) other than calcium cyanamide, whether or not pure (Chapter 31).

3.- Subject to the provisions of Note 1 to Section VI, this Chapter does not cover :

(a) Sodium chloride or magnesium oxide, whether or not pure, or other products of Section V;

(b) Organo-inorganic compounds other than those mentioned in Note 2 above;

(c) Products mentioned in Note 2, 3, 4 or 5 to Chapter 31;

(d) Inorganic products of a kind used as luminophores, of heading 32.06; glass frit and other glass in the form of powder, granules or flakes, of heading 32.07;

(e) Artificial graphite (heading 38.01); products put up as charges for fire-extinguishers or put up in fire-extinguishing grenades, of heading 38.13; ink removers put up in packings for retail sale, of heading 38.24; cultured crystals (other than optical elements) weighing not less than 2.5 g each, of the halides of the alkali or alkaline-earth metals, of heading 38.24;

(f) Precious or semi-precious stones (natural, synthetic or reconstructed) or dust or powder of such stones (headings 71.02 to 71.05), or precious metals or precious metal alloys of Chapter 71;

(g) The metals, whether or not pure, metal alloys or cermets, including sintered metal carbides (metal carbides sintered with a metal), of Section XV; or

(h) Optical elements, for example, of the halides of the alkali or alkaline-earth metals (heading 90.01).

4.- Chemically defined complex acids consisting of a non-metal acid of sub-Chapter II and a metal acid of sub-Chapter IV are to be classified in heading 28.11.

5.- Headings 28.26 to 28.42 apply only to metal or ammonium salts or peroxysalts.

Except where the context otherwise requires, double or complex salts are to be classified in heading 28.42.

6.- Heading 28.44 applies only to :

(a) Technetium (atomic No. 43), promethium (atomic No. 61), polonium (atomic No. 84) and all elements with an atomic number greater than84;

(b) Natural or artificial radioactive isotopes (including those of the precious metals or of the base metals of Sections XIV and XV), whether or not mixed together;

(c) Compounds, inorganic or organic, of these elements or isotopes, whether or not chemically defined, whether or not mixed together;

(d) Alloys, dispersions (including cermets), ceramic products and mixtures containing these elements or isotopes or inorganic or organic compounds thereof and having a specific radioactivity exceeding 74 Bq/g (0.002 μCi/g);

(e) Spent (irradiated) fuel elements (cartridges) of nuclear reactors;

(f) Radioactive residues whether or not usable.

The term "isotopes", for the purposes of this Note and of the wording of headings 28.44 and 28.45, refers to :

- individual nuclides, excluding, however, those existing in nature in the monoisotopic state;

- mixtures of isotopes of one and the same element, enriched in one or several of the said isotopes, that is, elements of which the natural isotopic composition has been artificially modified.

7.- Heading 28.53 includes copper phosphide (phosphor copper) containing more than 15 % by weight of phosphorus.

8.- Chemical elements (for example, silicon and selenium) doped for use in electronics are to be classified in this Chapter, provided that they are in forms unworked as drawn, or in the form of cylinders or rods. When cut in the form of discs, wafers or similar forms, they fall in heading 38.18.

Subheading Note.

1.- For the purposes of subheading 2852.10, the expression "chemically defined" means all organic or inorganic compounds of mercury meeting the requirements of paragraphs (a) to (e) of Note 1 to Chapter 28 or paragraphs (a) to (h) of Note 1 to Chapter 29.

GENERAL

Unless the context otherwise requires, Chapter 28 is limited to separate chemical elements and separate chemically defined compounds.

A separate chemically defined compound is a substance which consists of one molecular species (e.g., covalent or ionic) whose composition is defined by a constant ratio of elements and can be represented by a definitive structural diagram. In a crystal lattice, the molecular species corresponds to the repeating unit cell.

The elements of a separate chemically defined compound combine in a specific characteristic proportion determined by the valency and the bonding requirements of the individual atoms. The proportion of each element is constant and specific to each compound and it is therefore said to be stoichiometric.

Small deviations in the stoichiometric ratios can occur because of gaps or insertions in the crystal lattice. These compounds are described as quasi-stoichiometric and are permitted as separate chemically defined compounds provided that the deviations have not been intentionally created.

(A) Chemically defined elements and compounds.

(Note 1)

Separate chemical elements and separate chemically defined compounds containing **impurities**, or **dissolved in water**, remain classified in Chapter 28.

The term "impurities" applies exclusively to substances whose presence in the single chemical compound results solely and directly from the manufacturing process (including purification). The substances may result from any of the factors involved in the process and are principally the following :

(a) Unconverted starting materials.

(b) Impurities present in the starting materials.

(c) Reagents used in the manufacturing process (including purification).

(d) By-products.

It should be noted, however, that such substances are **not** in all cases regarded as "impurities" permitted under Note 1 (a). When such substances are deliberately left in the product with a view to rendering it particularly suitable for specific use rather than for general use, they are **not** regarded as permissible impurities.

Such elements and compounds are **excluded** from Chapter 28 when they are dissolved in **solvents other than water**, unless the solution constitutes a normal and necessary method of putting up these products adopted solely for reasons of safety or for transport (in which case the solvent must not render the product particularly suitable for some types of use rather than for general use).

Thus, carbon chloride oxides dissolved in benzene, alcoholic solutions of ammonia and colloidal solutions of aluminium hydroxide are **excluded** from this Chapter and fall to be classified in **heading 38.24**. Generally speaking, colloidal dispersions fall in **heading 38.24**, **unless** covered by a more specific heading.

Separate chemically defined elements and compounds as described above, put up with an added **stabiliser** necessary for their preservation or transport, remain classified in this Chapter. For example, hydrogen peroxide stabilised by addition of boric acid remains classified in heading 28.47; but sodium peroxide mixed with catalysts (for production of hydrogen peroxide) is **excluded** from Chapter 28 and is classified in **heading 38.24**.

Products added to certain chemicals to keep them in their original physical state are also to be regarded as stabilisers, **provided** that the quantity added in no case exceeds that necessary to achieve the desired result and that the addition does not alter the character of the basic product and render it particularly suitable for specific use rather than for general use. By application of these provisions **anti-caking agents** may be added to the products of this Chapter. Such products with added **water-repellents** are, on the other hand, **excluded** since such agents modify the original characteristics of the products.

On the same condition that the additions do not render them particularly suitable for specific use rather than for general use, the products of this Chapter may also contain :

(a) Added anti-dusting agents (e.g., mineral oil added to certain poisonous chemicals to prevent dusting during handling).

(b) Colouring substances added to facilitate identification or added for safety reasons to dangerous or poisonous chemicals (e.g., lead arsenate of heading 28.42) as a "marker" or warning to those handling the products. Products to which colouring substances have been added for other reasons (e.g., silica gel with cobalt salts added for use as a humidity indicator (**heading 38.24**)) are, however, **excluded**.

(B) Distinction between the compounds of Chapter 28 and those of Chapter 29.

(Note 2)

The following is an exhaustive list of compounds containing carbon which are to be classified in Chapter 28, and of the headings in which they are to be classified :

Heading 28.11 - Oxides of carbon.

Hydrogen cyanide, hydrogen hexacyanoferrate (II) and hydrogen hexacyano-ferrate (III).

Isocyanic, fulminic, thiocyanic, cyanomolybdic and other simple or complex cyanogen acids.

Heading 28.12 - Halide oxides of carbon.

Heading 28.13 - Carbon disulphide.

Heading 28.31 – Dithionites and sulphoxylates, stabilised with organic substances.

Heading 28.36 – Carbonates and peroxocarbonates, of inorganic bases.

Heading 28.37 – Cyanides, cyanide oxides and complex cyanides (hexacyanoferrates (II), hexacyanoferrates (III), nitrosylpentacyanoferrates (II), nitrosylpentacyanoferrates (III), cyanomanganates, cyanocadmates, cyanochromates, cyanocobaltates, cyanoniccolates, cyanocuprates, etc.), of inorganic bases.

Heading 28.42 – Thiocarbonates, selenocarbonates, tellurocarbonates, selenocyanates, telluro-cyanates, tetrathiocyanatodiamminochromates (reineckates) and other double or complex cyanates, of inorganic bases.

Headings 28.43 – Inorganic and organic compounds of :

to (i) Precious metals.

28.46 (ii) Radioactive elements.

(iii) Isotopes.

(iv) Rare-earth metals, yttrium or scandium.

Heading 28.47 – Hydrogen peroxide, solidified with urea, whether or not stabilised.

Heading 28.49 – Carbides (binary carbides, borocarbides, carbonitrides, etc.), **other than** hydrogen carbides (hydrocarbons).

Heading 28.52 – Inorganic and organic compounds of mercury, whether or not chemically defined, excluding amalgams

Heading 28.53 – Carbon oxysulphide.

Thiocarbonyl halides.

Cyanogen and halogen compounds of cyanogen.

Cyanamide and its metal derivatives (**other than** calcium cyanamide, whether or not pure – see Chapter 31).

All other carbon compounds are excluded from Chapter 28.

(C) Products which remain classified in Chapter 28, even when they are not separate chemical elements nor separate chemically defined compounds.

There are certain exceptions to the rule that this Chapter is limited to separate chemical elements and separate chemically defined compounds. These exceptions include the following products :

Heading 28.02 - Colloidal sulphur.

Heading 28.03 - Carbon blacks.

Heading 28.07 - Oleum.

Heading 28.08 - Sulphonitric acids.

Heading 28.09 - Polyphosphoric acids.

Heading 28.13 - Phosphorus trisulphide.

Heading 28.18 - Artificial corundum.

Heading 28.21 - Earth colours containing 70 % or more by weight of combined iron evaluated as Fe_2O_3.

Heading 28.22 - Commercial cobalt oxides.

Heading 28.24 - Red lead and orange lead.

Heading 28.28 - Commercial calcium hypochlorite.

Heading 28.30 - Polysulphides.

Heading 28.31 - Dithionites and sulphoxylates, stabilised with organic substances.

Heading 28.35 - Polyphosphates.

Heading 28.36 - Commercial ammonium carbonate containing ammonium carbamate.

Heading 28.39 - Commercial alkali metal silicates.

Heading 28.42 - Aluminosilicates.

Heading 28.43 - Colloidal precious metals.

- Amalgams of precious metals.

- Inorganic or organic compounds of precious metals.

Heading 28.44 - Radioactive elements, radioactive isotopes, or compounds (inorganic or organic) and mixtures containing these substances.

Heading 28.45 - Other isotopes and their compounds (inorganic or organic).

Heading 28.46 - Compounds, inorganic or organic, of rare-earth metals, of yttrium or of scandium or of mixtures of these metals.

Heading 28.49 - Carbides.

Heading 28.50 - Hydrides, nitrides, azides, silicides and borides.

Heading 28.52 - Inorganic and organic compounds of mercury, excluding amalgams

Heading 28.53 - Phosphides, liquid air and compressed air.

Amalgams **other than** amalgams of precious metals - see under heading 28.43 above.

(D) Exclusion from Chapter 28 of certain separate chemical elements and of certain separate chemically defined inorganic compounds.

(Notes 3 and 8)

Certain separate chemical elements and certain separate chemically defined inorganic compounds are always excluded from Chapter 28, even when they are pure.

Examples are :

(1) Certain products of **Chapter 25** (i.e., sodium chloride and magnesium oxide).

(2) Certain inorganic salts of **Chapter 31** (viz : sodium nitrate, ammonium nitrate, double salts of ammonium sulphate and ammonium nitrate, ammonium sulphate, double salts of calcium nitrate and ammonium nitrate, double salts of calcium nitrate and magnesium nitrate, and ammonium dihydrogenorthophosphate and diammonium hydrogenorthophosphate (monoammonium or diammonium phosphates); also potassium chloride, though this may in certain cases fall in **heading 38.24** or **90.01**).

(3) Artificial graphite of **heading 38.01**.

(4) Precious or semi-precious stones (natural, synthetic or reconstructed), and dust or powder of such stones of **Chapter 71**.

(5) Precious metals and base metals, including alloys of such metals, of **Section XIV** or **XV**.

Certain other separate elements or separate chemically defined compounds, which would otherwise have been classified in Chapter 28, may be **excluded** when put up in certain forms, or if they have been subjected to certain treatments which leave their chemical composition unchanged (*).

Examples are :

(a) Products suitable for therapeutic or prophylactic uses, put up in measured doses or in forms or packings for retail sale (**heading 30.04**).

(b) Products of a kind used as luminophores (e.g., calcium tungstate) which have been treated to render them luminescent (**heading 32.06**).

(c) Perfumery, cosmetic or toilet preparations (e.g., alum), put up in packings of a kind sold by retail for such use (**headings 33.03** to **33.07**).

(d) Products suitable for use as glues or adhesives (e.g., sodium silicate dissolved in water), put up for retail sale as glues or adhesives in packages not exceeding a net weight of 1 kg (**heading 35.06**).

(e) Photographic products (e.g., sodium thiosulphate), put up in measured portions or put up for retail sale in a form ready for photographic use (**heading 37.07**).

(f) Insecticides, etc. (e.g., sodium tetraborate) put up as described in **heading 38.08**.

(g) Products (e.g., sulphuric acid) put up as charges for fire-extinguishers or put up in fire-extinguishing grenades (heading **38.13**).

(h) Chemical elements (for example, silicon and selenium) doped for use in electronics, in the form of discs, wafers or similar forms (**heading 38.18**).

(ij) Ink removers put up in packings for retail sale (**heading 38.24**).

(k) Halides of the alkali or of the alkaline-earth metals (e.g., lithium fluoride, calcium fluoride, potassium bromide, potassium bromoiodide, etc.), in the form of optical elements (**heading 90.01**) or of cultured crystals weighing not less than 2.5 g each (**heading 38.24**).

(E) Products potentially classifiable in two or more headings of Chapter 28.

Note 1 to Section VI deals with the problems of products potentially classifiable :

(a) In heading 28.44 or 28.45, and also in some other heading of Chapter 28.

(b) In heading 28.43, 28.46 or 28.52, and also in some other heading of Chapter 28 (other than heading 28.44 or 28.45).

Chemically defined complex acids consisting of a non-metal acid (of sub-Chapter II) and a metal acid (of sub-Chapter IV) are classified in heading 28.11 (see Note 4 to Chapter 28 and Explanatory Note to heading 28.11).

Except where the context otherwise requires, double or complex inorganic salts are to be classified in heading 28.42 (see Note 5 to Chapter 28 and Explanatory Note to heading 28.42).

(*) These exclusions do not affect the products classifiable in headings 28.43 to 28.46 and 28.52 (see Notes 1 and 2 to Section VI).

Sub-Chapter I

CHEMICAL ELEMENTS

GENERAL

Chemical elements can be divided into two classes, non-metals and metals. In general, this sub-Chapter includes all non-metals at least in some of their forms, whereas numerous metals are classified elsewhere : - precious metals (**Chapter 71** and **heading 28.43**), base metals (**Chapters 72 to 76** and **78 to 81**) and radioactive chemical elements and isotopes (**heading 28.44**) and stable isotopes (**heading 28.45**).

An alphabetical list of the various known elements, indicating the appropriate classification, is given below. Some elements, such as antimony, behave both as metals and as non-metals; attention is drawn to their classification in the Nomenclature.

Element	Symbol	Atomic Number	Classification
Actinium.....	Ac	89	Radioactive element (28.44).
Aluminium.....	Al	13	Base metal (Chapter 76).
Americium.....	Am	95	Radioactive element (28.44).
Antimony.....	Sb	51	Base metal (81.10).
Argon.....	Ar	18	Rare gas (28.04).
Arsenic.....	As	33	Non-metal (28.04).
Astatine.....	At	85	Radioactive element

			(28.44).
Barium.....	Ba	56	Alkaline-earth metal (28.05).
Berkelium.....	Bk	97	Radioactive element (28.44).
Beryllium.....	Be	4	Base metal (81.12).
Bismuth.....	Bi	83	Base metal (81.06).
Boron.....	B	5	Non-metal (28.04).
Bromine.....	Br	35	Non-metal (28.01).
Cadmium.....	Cd	48	Base metal (81.07).
Caesium.....	Cs	55	Alkali metal (28.05).
Calcium.....	Ca	20	Alkaline-earth metal (28.05).
Californium.....	Cf	98	Radioactive element (28.44).
Carbon.....	C	6	Non-metal (28.03). (But see 38.01 for artificial graphite.)
Cerium.....	Ce	58	Rare-earth metal (28.05).
Chlorine.....	Cl	17	Non-metal (28.01).
Chromium.....	Cr	24	Base metal (81.12).
Cobalt.....	Co	27	Base metal (81.05).
Copper.....	Cu	29	Base metal (Chapter 74).
Curium.....	Cm	96	Radioactive element (28.44).
Dysprosium.....	Dy	66	Rare-earth metal (28.05).

Einsteinium.....	Es	99	Radioactive element (28.44).
Erbium.....	Er	68	Rare-earth metal (28.05).
Europium.....	Eu	63	Rare-earth metal (28.05).
Fermium.....	Fm	100	Radioactive element (28.44).
Fluorine.....	F	9	Non-metal (28.01).
Francium.....	Fr	87	Radioactive element (28.44).
Gadolinium.....	Gd	64	Rare-earth metal (28.05).
Gallium.....	Ga	31	Base metal (81.12).
Germanium.....	Ge	32	Base metal (81.12).
Gold.....	Au	79	Precious metal (71.08).
Hafnium.....	Hf	72	Base metal (81.12).
Helium.....	He	2	Rare gas (28.04).
Holmium.....	Ho	67	Rare-earth metal (28.05).
Hydrogen.....	H	1	Non-metal (28.04).
Indium.....	In	49	Base metal (81.12)
Iodine.....	I	53	Non-metal (28.01).
Iridium.....	Ir	77	Precious metal (71.10).
Iron.....	Fe	26	Base metal (Chapter 72).
Krypton.....	Kr	36	Rare gas (28.04).
Lanthanum.....	La	57	Rare-earth metal (28.05).
Lawrencium.....	Lr	103	Radioactive element

			(28.44).
Lead.....	Pb	82	Base metal (Chapter 78).
Lithium.....	Li	3	Alkali metal (28.05).
Lutetium.....	Lu	71	Rare-earth metal (28.05).
Magnesium.....	Mg	12	Base metal (81.04).
Manganese.....	Mn	25	Base metal (81.11).
Mendelevium...	Md	101	Radioactive element (28.44).
Mercury.....	Hg	80	Metal (28.05).
Molybdenum...	Mo	42	Base metal (81.02).
Neodymium.....	Nd	60	Rare-earth metal (28.05).
Neon.....	Ne	10	Rare gas (28.04).
Neptunium.....	Np	93	Radioactive element (28.44).
Nickel.....	Ni	28	Base metal (Chapter 75).
Niobium.....	Nb	41	Base metal (81.12).
Nitrogen.....	N	7	Non- metal (28.04).
Nobelium.....	No	102	Radioactive element (28.44).
Osmium.....	Os	76	Precious metal (71.10).
Oxygen.....	O	8	Non-metal (28.04).
Palladium.....	Pd	46	Precious metal (71.10).
Phosphorus.....	P	15	Non-metal (28.04).
Platinum.....	Pt	78	Precious metal (71.10).

Plutonium.....	Pu	94	Radioactive element (28.44).
Polonium.....	Po	84	Radioactive element (28.44).
Potassium.....	K	19	Alkali metal (28.05).
Praseodymium.	Pr	59	Rare-earth metal (28.05).
Promethium.....	Pm	61	Radioactive element (28.44).
Protactinium.....	Pa	91	Radioactive element (28.44).
Radium.....	Ra	88	Radioactive element (28.44).
Radon.....	Rn	86	Radioactive element (28.44).
Rhenium.....	Re	75	Base metal (81.12).
Rhodium.....	Rh	45	Precious metal (71.10).
Rubidium.....	Rb	37	Alkali metal (28.05).
Ruthenium.....	Ru	44	Precious metal (71.10).
Samarium.....	Sm	62	Rare-earth metal (28.05).
Scandium.....	Sc	21	Classified with the rare-earth metals (28.05).
Selenium.....	Se	34	Non-metal (28.04).
Silicon.....	Si	14	Non-metal (28.04).
Silver.....	Ag	47	Precious metal (71.06).
Sodium.....	Na	11	Alkali metal (28.05).
Strontium.....	Sr	38	Alkaline-earth metal

			(28.05).
Sulphur.....	S	16	Non-metal (28.02). (But see 25.03 for crude sulphur).
Tantalum.....	Ta	73	Base metal (81.03).
Technetium.....	Tc	43	Radioactive element (28.44).
Tellurium.....	Te	52	Non-metal (28.04).
Terbium.....	Tb	65	Rare-earth metal (28.05).
Thallium.....	Tl	81	Base metal (81.12).
Thorium.....	Th	90	Radioactive element (28.44).
Thulium.....	Tm	69	Rare-earth metal (28.05).
Tin.....	Sn	50	Base metal (Chapter 80).
Titanium.....	Ti	22	Base metal (81.08).
Tungsten.....	W	74	Base metal (81.01).
Uranium.....	U	92	Radioactive element (28.44).
Vanadium.....	V	23	Base metal (81.12).
Xenon.....	Xe	54	Rare gas (28.04).
Ytterbium.....	Yb	70	Rare-earth metal (28.05).
Yttrium.....	Y	39	Classified with the rare-earth metals (28.05).
Zinc.....	Zn	30	Base metal (Chapter 79).
Zirconium.....	Zr	40	Base metal (81.09).

II.-INORGANIC ACIDS AND INORGANIC OXYGEN COMPOUNDS OF NON-METALS

Sub-Chapter II

INORGANIC ACIDS AND INORGANIC OXYGEN COMPOUNDS OF NON-METALS

GENERAL

Acids contain hydrogen which can be wholly or partly replaced by metals (or by ions with analogous properties, e.g., the ammonium ion (NH_4^+)) as a result salts are formed. Acids react with bases to form salts, and with alcohols to form esters. In the liquid state or in solution, they are electrolytes which produce hydrogen at the cathode. When one or more molecules of water are eliminated from those acids containing oxygen, anhydrides are obtained. Most oxides of non-metals are anhydrides.

This sub-Chapter covers **inorganic oxygen compounds of non-metals** (anhydrides and other), and also **inorganic acids, the anode radical of which is a non-metal**.

On the other hand it **excludes** anhydrides and acids formed, respectively, by metal oxides or hydroxides; these generally fall in **sub-Chapter IV** (e.g., metal oxides, hydroxides and peroxides, such as acids or anhydrides of chromium, molybdenum, tungsten and vanadium). In certain cases, however, they fall elsewhere, e.g., in **heading 28.43** (compounds of precious metals), **heading 28.44** or **28.45** (compounds of radioactive elements and isotopes) or **heading 28.46** (compounds of rare-earth metals, of scandium or yttrium).

Oxygen compounds of hydrogen are also **excluded** and are classified under **heading 22.01** (water), **heading 28.45** (heavy water), **heading 28.47** (hydrogen peroxide) or **heading 28.53** (distilled and conductivity water and water of similar purity, including water treated with ion-exchange media).

III.-HALOGEN OR SULPHUR COMPOUNDS OF NON-METALS

Sub-Chapter III

HALOGEN OR SULPHUR COMPOUNDS OF NON-METALS

GENERAL

This sub-Chapter covers products which, although known by names (chlorides, sulphides, etc.) similar to those of the metal salts of hydracids classified in sub-Chapter V, are actually **non-metal** combinations such as :

(1) A halogen with a non-metal other than oxygen or hydrogen (**halogen compounds**).

(2) The same compounds as under (1) above, combined with oxygen (**halide oxides**).

or (3) Sulphur with a non-metal other than oxygen or hydrogen (**sulphur compounds**).

Sulphide oxides of non-metals (sulphur + oxygen + non-metal) are **excluded** from this sub-Chapter; they fall in **heading 28.53**.

Halides, halide oxides, and sulphides of metals (see the General Explanatory Note to sub-Chapter I) or of the ammonium ion (NH_4^+) fall in sub-Chapter V except in the case of compounds of precious metals (**heading 28.43**) and the compounds of **heading 28.44, 28.45, 28.46** or **28.52**.

Sub-Chapter IV

INORGANIC BASES AND OXIDES, HYDROXIDES AND PEROXIDES OF METAL

GENERAL

Bases are compounds characterised by a hydroxyl radical (OH) and which react with acids to form salts. In the liquid state or in solution, they are electrolytes giving a metal or an analogous ion (ammonium (NH_4^+)) at the cathode.

Metal oxides are compounds of a metal with oxygen. Many can combine with one or more molecules of water to form hydroxides.

Most oxides are **basic** since their hydroxides act as bases. Certain oxides (anhydride oxides), however, react only with alkaline or other bases to form salts, while another more common class (amphoteric oxides) can behave both as anhydride oxides or as bases. These classes of oxides must be regarded as **anhydrides** of acids, real or hypothetical, corresponding to their hydroxides.

Certain oxides (**saline oxides**) may be regarded as resulting from the combination of a basic oxide with an anhydride oxide.

This sub-Chapter covers :

(1) Oxides, hydroxides and peroxides of metal, whether basic, acidic, amphoteric or saline.

(2) Other inorganic bases containing no oxygen, such as ammonia (heading 28.14), or hydrazine (heading 28.25), and those containing no metal, such as hydroxylamine (heading 28.25).

The sub-Chapter **excludes** :

(a) The oxides and hydroxides of **Chapter 25**, particularly magnesia (magnesium oxide), whether or not pure, and quicklime and slaked lime (crude calcium oxide and hydroxide).

(b) Oxides and hydroxides constituting ores (**headings 26.01** to **26.17**), scalings, ash, slag, dross, scum or other metalliferous residues (**headings 26.18** to **26.20**).

(c) Oxides, peroxides and hydroxides of precious metals (**heading 28.43**), of radioactive elements (**heading 28.44**), of rare-earth metals, of yttrium or of scandium or of mixtures of these metals (**heading 28.46**), or of mercury (**heading 28.52**).

(d) Oxygen compounds of hydrogen of **heading 22.01** (water), **heading 28.45** (heavy water), **heading 28.47** (hydrogen peroxide), or **heading 28.53** (distilled and conductivity water and water of similar purity, including water treated with ion-exchange media).

(e) Colouring matter with a basis of metal oxides (**heading 32.06**), prepared pigments, prepared opacifiers and prepared colours, vitrifiable enamels and glazes and similar products of the kind used in the ceramic, enamelling or glass industries (**heading 32.07**), and other preparations of **Chapter 32**, constituted by oxides, hydroxides or bases mixed with other products.

(f) Opacifying preparations for de-lustring man-made fibres (**heading 38.09**) and pickling preparations for metal surfaces (**heading 38.10**).

(g) Natural or synthetic precious or semi-precious stones (**headings 71.02** to **71.05**).

Sub-Chapter V

SALTS AND PEROXYSALTS, OF INORGANIC ACIDS AND METALS

GENERAL

Metal salts are obtained by replacing the hydrogen element in an acid by a metal or by the ammonium ion (NH_4^+). In the liquid state or in solution, they are electrolytes giving a metal (or a metal ion) at the cathode.

In **neutral** salts all the hydrogen atoms are replaced by the metal, but **acid** salts still contain part of the hydrogen replaceable by metal; **basic** salts contain a greater quantity of basic oxide than is necessary to neutralise the acid (e.g., basic sulphate of cadmium ($CdSO_4.CdO$)).

Sub-Chapter V covers metal salts of the acids classified in sub-Chapter II (acids derived from non-metals) or in sub-Chapter IV (acid-function metal hydroxides).

Double or complex salts.

Certain double or complex salts are specifically referred to in headings 28.26 to 28.41; for example, fluorosilicates, fluoroborates and other complex fluorine salts (heading 28.26), alums (heading

28.33), complex cyanides (heading 28.37). As regards double or complex salts not so specified, see the Explanatory Note to heading 28.42.

This sub-Chapter **excludes**, *inter alia* :

(a) Salts of **Chapter 25** (e.g., sodium chloride).

(b) Salts constituting ores or other products of **Chapter 26**.

(c) Compounds of precious metals (**heading 28.43**), of radioactive elements (**heading 28.44**), of rare-earth metals, of yttrium or of scandium or of mixtures of these metals (**heading 28.46**), or of mercury (**heading 28.52**).

(d) Phosphides, carbides, hydrides, nitrides, azides, silicides and borides (**headings 28.49, 28.50 and 28.53**) and ferrophosphorus (**Section XV**).

(e) Salts of **Chapter 31**.

(f) Pigments, colours, opacifiers, enamels and other preparations included in **Chapter 32**. This sub-Chapter covers **unmixed** metal salts (except luminophores), suitable for direct use as pigments; when mixed either together or with other products to form pigments, such salts fall in **Chapter 32**. Luminophores, mixed or not, fall in **heading 32.06**.

(g) Disinfectants, insecticides, fungicides, weed killers, etc., of **heading 38.08**.

(h) Fluxes and other auxiliary preparations for soldering, etc. (**heading 38.10**).

(ij) Cultured crystals (other than optical elements) weighing not less than 2.5 g each, of the halides of the alkali or alkaline-earth metals (**heading 38.24**); when they are in the form of optical elements they are classified in **heading 90.01**.

(k) Precious or semi-precious stones, natural or synthetic (**headings 71.02** to **71.05**).

Chapter 29

Organic chemicals

Notes.

1.- Except where the context otherwise requires, the headings of this Chapter apply only to :

(a) Separate chemically defined organic compounds, whether or not containing impurities;

(b) Mixtures of two or more isomers of the same organic compound (whether or not containing impurities), except mixtures of acyclic hydrocarbon isomers (other than stereoisomers), whether or not saturated (Chapter 27);

(c) The products of headings 29.36 to 29.39 or the sugar ethers, sugar acetals and sugar esters, and their salts, of heading 29.40, or the products of heading 29.41, whether or not chemically defined;

(d) The products mentioned in (a), (b) or (c) above dissolved in water;

(e) The products mentioned in (a), (b) or (c) above dissolved in other solvents provided that the solution constitutes a normal and necessary method of putting up these products adopted solely for reasons of safety or for transport and that the solvent does not render the product particularly suitable for specific use rather than for general use;

(f) The products mentioned in (a), (b), (c), (d) or (e) above with an added stabiliser (including an anti-caking agent) necessary for their preservation or transport;

(g) The products mentioned in (a), (b), (c), (d), (e) or (f) above with an added anti-dusting agent or a colouring or odoriferous substance or an emetic added to facilitate their identification or for safety reasons, provided that the additions do not render the product particularly suitable for specific use rather than for general use;

(h) The following products, diluted to standard strengths, for the production of azo dyes : diazonium salts, couplers used for these salts and diazotisable amines and their salts.

2.- This Chapter does not cover :

(a) Goods of heading 15.04 or crude glycerol of heading 15.20;

(b) Ethyl alcohol (heading 22.07 or 22.08);

(c) Methane or propane (heading 27.11);

(d) The compounds of carbon mentioned in Note 2 to Chapter 28;

(e) Immunological products of heading 30.02.

(f) Urea (heading 31.02 or 31.05);

(g) Colouring matter of vegetable or animal origin (heading 32.03), synthetic organic colouring matter, synthetic organic products of a kind used as fluorescent brightening agents or as luminophores (heading 32.04) or dyes or other colouring matter put up in forms or packings for retail sale (heading 32.12);

(h) Enzymes (heading 35.07);

(ij) Metaldehyde, hexamethylenetetramine or similar substances, put up in forms (for example, tablets, sticks or similar forms) for use as fuels, or liquid or liquefied-gas fuels in containers of a kind used for filling or refilling cigarette or similar lighters and of a capacity not exceeding 300 cm^3 (heading 36.06);

(k) Products put up as charges for fire-extinguishers or put up in fire-extinguishing grenades, of heading 38.13; ink removers put up in packings for retail sale, of heading 38.24; or

(l) Optical elements, for example, of ethylenediamine tartrate (heading 90.01).

3.- Goods which could be included in two or more of the headings of this Chapter are to be classified in that one of those headings which occurs last in numerical order.

4.- In headings 29.04 to 29.06, 29.08 to 29.11 and 29.13 to 29.20, any reference to halogenated, sulphonated, nitrated or nitrosated derivatives includes a reference to compound derivatives, such as sulphohalogenated, nitrohalogenated, nitrosulphonated or nitrosulphohalogenated derivatives.

Nitro or nitroso groups are not to be taken as "nitrogen-functions" for the purpose of heading 29.29.

For the purposes of headings 29.11, 29.12, 29.14, 29.18 and 29.22, "oxygen-function" the characteristic organic oxygen-containing group of those respective headings, is restricted to the oxygen-functions referred to in headings 29.05 to 29.20.

5.- (A) The esters of acid-function organic compounds of sub-Chapters I to VII with organic compounds of these sub-Chapters are to be classified with that compound which is classified in the heading which occurs last in numerical order in these sub-Chapters.

(B) Esters of ethyl alcohol with acid-function organic compounds of sub-Chapters I to VII are to be classified in the same heading as the corresponding acid-function compounds.

(C) Subject to Note 1 to Section VI and Note 2 to Chapter 28 :

(1) Inorganic salts of organic compounds such as acid-, phenol- or enol-function compounds or organic bases, of sub-Chapters I to X or heading 29.42, are to be classified in the heading appropriate to the organic compound;

(2) Salts formed between organic compounds of sub-Chapters I to X or heading 29.42 are to be classified in the heading appropriate to the base or to the acid (including phenol- or enol-function compounds) from which they are formed, whichever occurs last in numerical order in the Chapter; and

(3) Co-ordination compounds, other than products classifiable in sub-Chapter XI or heading 29.41, are to be classified in the heading which occurs last in numerical order in Chapter 29, among those appropriate to the fragments formed by "cleaving" of all metal bonds, other than metal-carbon bonds.

(D) Metal alcoholates are to be classified in the same heading as the corresponding alcohols except in the case of ethanol (heading 29.05).

(E) Halides of carboxylic acids are to be classified in the same heading as the corresponding acids.

6.- The compounds of headings 29.30 and 29.31 are organic compounds the molecules of which contain, in addition to atoms of hydrogen, oxygen or nitrogen, atoms of other non-metals or of metals (such as sulphur, arsenic or lead) directly linked to carbon atoms.

Heading 29.30 (organo-sulphur compounds) and heading 29.31 (other organo-inorganic compounds) do not include sulphonated or halogenated derivatives (including compound derivatives) which, apart from hydrogen, oxygen and nitrogen, only have directly linked to carbon the atoms of sulphur or of a halogen which give them their nature of sulphonated or halogenated derivatives (or compound derivatives).

7.- Headings 29.32, 29.33 and 29.34 do not include epoxides with a three-membered ring, ketone peroxides, cyclic polymers of aldehydes or of thioaldehydes, anhydrides of polybasic carboxylic acids, cyclic esters of polyhydric alcohols or phenols with polybasic acids, or imides of polybasic acids.

These provisions apply only when the ring-position hetero-atoms are those resulting solely from the cyclising function or functions here listed.

8.- For the purposes of heading 29.37 :

(a) the term "hormones" includes hormone-releasing or hormone-stimulating factors, hormone inhibitors and hormone antagonists (anti-hormones);

(b) the expression "used primarily as hormones" applies not only to hormone derivatives and structural analogues used primarily for their hormonal effect, but also to those derivatives and structural analogues used primarily as intermediates in the synthesis of products of this heading.

Subheading Notes.

1.- Within any one heading of this Chapter, derivatives of a chemical compound (or group of chemical compounds) are to be classified in the same subheading as that compound (or group of compounds) provided that they are not more specifically covered by any other subheading and that there is no residual subheading named "Other" in the series of subheadings concerned.

2.- Note 3 to Chapter 29 does not apply to the subheadings of this Chapter.

GENERAL

As a general rule, this Chapter is restricted to separate chemically defined compounds, subject to the provisions of Note 1 to the Chapter.

(A) Chemically defined compounds

(Chapter Note 1)

A separate chemically defined compound is a substance which consists of one molecular species (e.g., covalent or ionic) whose composition is defined by a constant ratio of elements and can be represented by a definitive structural diagram. In a crystal lattice, the molecular species corresponds to the repeating unit cell.

Separate chemically defined compounds containing other substances deliberately added during or after theirmanufacture (including purification) are excluded from this Chapter. Accordingly, a product consisting of saccharin mixed with lactose, for example, to render the product suitable for use as a sweetening agent is **excluded** (see Explanatory Note to heading 29.25).

The separate chemically defined compounds of this Chapter may contain impurities (Note 1 (a)). An exception to this rule is created by the wording of heading 29.40 which, with regard to sugars, restricts the scope of the heading to chemically pure sugars.

The term "impurities" applies exclusively to substances whose presence in the single chemical compound results solely and directly from the manufacturing process (including purification). These substances may result from any of the factors involved in the process and are principally the following :

(a) Unconverted starting materials.

(b) Impurities present in the starting materials.

(c) Reagents used in the manufacturing process (including purification).

(d) By-products.

It should be noted, however, that such substances are **not** in all cases regarded as "impurities" permitted under Note 1 (a). When such substances are deliberately left in the product with a view to rendering it particularly suitable for specific use rather than for general use, they are **not** regarded as permissible impurities. For example, a product consisting of methyl acetate with methanol deliberately left in with a view to improving its suitability as a solvent is **excluded** (**heading 38.14**).

For certain compounds (e.g., ethane, benzene, phenol, pyridine), there are specific purity criteria, indicated in Explanatory Notes to headings 29.01, 29.02, 29.07 and 29.33.

The separate chemically defined compounds of this Chapter may be **dissolved in water**. Subject to the samequalifications as those set out in the General Explanatory Note to Chapter 28, this Chapter also includes non-aqueous solutions and also compounds (or their solutions) with added stabilisers, antidusting agents or colouring substances. For example, styrene inhibited with tertiary butylcatechol remains classified in heading 29.02. The provisions in the General Explanatory Note to Chapter 28 concerning the addition of stabilisers, antidusting agents and colouring substances apply, *mutatis mutandis*, to the chemical compounds of this Chapter. **Subject** to the same qualifications as those made in respect of colouring substances, these compounds may also contain added odoriferous substances (e.g., bromomethane of heading 29.03 to which small quantities of chloropicrin have been added) or an emetic.

This Chapter further includes, whether or not they contain impurities, **mixtures of isomers** of the same organic compound. This provision applies **only** to mixtures of compounds having the same chemical function (or functions) and which either coexist in their natural form or are obtained simultaneously in the course of the same synthesis. Mixtures of acyclic hydrocarbon isomers (**other than** stereoisomers), whether or not saturated, are, however, **excluded** (**Chapter 27**).

(B) Distinction between the compounds of Chapter 28 and those of Chapter 29

Organic compounds of precious metals, radioactive elements, isotopes, rare-earth metals, yttrium and scandium, and the other compounds containing carbon listed in Part (B) of the General Explanatory Note to Chapter 28 are **excluded** from Chapter 29 (see Note 1 to Section VI and Note 2 to Chapter 28).

Organo-inorganic compounds, **other than** those listed in Note 2 to Chapter 28, fall in Chapter 29.

(C) Products which remain classified in Chapter 29, even when they are not separate chemically defined compounds

There are certain **exceptions** to the rule that Chapter 29 is limited to separate chemically defined compounds. These exceptions include the following products :

Heading 29.09 - Ketone peroxides.

Heading 29.12 - Cyclic polymers of aldehydes; paraformaldehyde.

Heading 29.19 - Lactophosphates.

Heading 29.23 - Lecithins and other phosphoaminolipids.

Heading 29.34 - Nucleic acids and their salts.

Heading 29.36 - Provitamins and vitamins (including concentrates and intermixtures), whether or not in a solvent.

Heading 29.37 - Hormones.

Heading 29.38 - Glycosides and their derivatives.

Heading 29.39 - Alkaloids and their derivatives.

Heading 29.40 - Sugar ethers, sugar acetals and sugar esters, and their salts.

Heading 29.41 - Antibiotics.

This Chapter also includes diazonium salts (see Part (A) of Explanatory Note to heading 29.27), couplers used for these salts and diazotisable amines and their salts, diluted with e.g., neutral salts to standard strengths. These are designed for the production of azo dyes. They may be solid or liquid.

This Chapter further includes pegylated (polyethylene glycol (or PEGs) polymers) derivatives of products of headings 29.36 to 29.39 and 29.41. For these products, a pegylated derivative remains classified in the same heading as its non-pegylated form. However, pegylated derivatives of products of all other headings of Chapter 29 are **excluded** (generally **heading 39.07**).

(D) Exclusion from Chapter 29 of certain separate chemically defined organic compounds

(Chapter Note 2)

(1) Certain separate chemically defined organic compounds are always **excluded** from Chapter 29, even when they are pure. In addition to those which fall in **Chapter 28** (see Part (B) of the General Explanatory Note to that Chapter), examples of compounds of this group are :

(a) Sucrose (**heading 17.01**); lactose, maltose, glucose and fructose (**heading 17.02**).

(b) Ethyl alcohol (**heading 22.07** or **22.08**).

(c) Methane and propane (**heading 27.11**).

(d) Immunological products (**heading 30.02**).

(e) Urea (**heading 31.02** or **31.05**).

(f) Colouring matter of animal or vegetable origin (e.g., chlorophyll) (**heading 32.03**).

(g) Synthetic organic colouring matter (including pigments), and synthetic organic products of a kind used as fluorescent brightening agents (e.g., certain stilbene derivatives) (**heading 32.04**).

(2) Certain other separate chemically defined organic products, which would otherwise have been classified in Chapter 29, may be **excluded** when put up in certain forms, or if they have been subjected to certain treatments which leave their chemical composition unchanged. Examples are :

(a) Products for therapeutic or prophylactic uses, put up in measured doses or in forms or in packings for retail sale (**heading 30.04**).

(b) Products of a kind used as luminophores (e.g., salicylaldazine) which have been treated to render them luminescent (**heading 32.04**).

(c) Dyes and other colouring matter put up in forms or packings for retail sale (**heading 32.12**).

(d) Perfumery, cosmetic or toilet preparations (e.g., acetone), put up in packings for retail sale for such use (**headings 33.03 to 33.07**).

(e) Products suitable for use as glues or adhesives, put up for retail sale as glues or adhesives, not exceeding a net weight of 1 kg (**heading 35.06**).

(f) Solid fuels (e.g., metaldehyde, hexamethylenetetramine) put up in forms for use as fuels, and liquid or liquefied fuels (e.g., liquid butane) in containers of a kind used for filling or refilling cigarette or similar lighters and of a capacity not exceeding 300 cm^3 (**heading 36.06**).

(g) Hydroquinone and other unmixed products for photographic uses, put up in measured portions or put up for retail sale in a form ready for photographic use (**heading 37.07**).

(h) Disinfectants, insecticides, etc., put up as described **in heading 38.08**.

(ij) Products (e.g., carbon tetrachloride) put up as charges for fire-extinguishers or put up in fire-extinguishing grenades (**heading 38.13**).

(k) Ink removers (e.g., chloramines of heading 29.35 dissolved in water) put up in packings for retail sale (**heading 38.24**).

(l) Optical elements (e.g., ethylenediamine tartrate) (**heading 90.01**).

(E) Products potentially classifiable in two or more headings of Chapter 29

(Chapter Note 3)

Such products are to be classified in the heading placed last in numerical order amongst those which could be applied. For example, ascorbic acid could be regarded as a lactone (heading 29.32) or as a vitamin (heading 29.36); it should therefore be classified in heading 29.36. For the same reason, allylestrenol which is a cyclic alcohol (heading 29.06) but also a steroid with unmodified gonane structure, used primarily for its hormone function (heading 29.37), should fall in heading 29.37.

It should, however, be noted that the last phrase of the text of heading 29.40 specifically excludes the products of headings 29.37, 29.38 and 29.39.

(F) Halogenated, sulphonated, nitrated or nitrosated derivatives and combinations thereof; the "oxygen function" referred to in headings 29.11, 29.12, 29.14, 29.18 and 29.22

(Chapter Note 4)

Certain headings of Chapter 29 include references to halogenated, sulphonated, nitrated or nitrosated derivatives. Such references include compound derivatives, for example, sulphohalogenated, nitrohalogenated, nitrosulphonated, nitrosulphohalogenated, etc., derivatives.

Nitro and nitroso groups are not to be taken as nitrogen-functions for the purpose of heading 29.29.

The halogenated, sulphonated, nitrated and nitrosated derivatives are formed by substitution of one or more hydrogen atoms in the parent compound by one or more halogens, sulpho ($-SO_3H$), nitro ($-NO_2$) or nitroso ($-NO$) groups or by any combination thereof. Any functional group (e.g., aldehyde, carboxylic acid, amine) taken into consideration for classification should remain intact in such derivatives.

For the purposes of the last paragraph of Note 4 and headings 29.11, 29.12, 29.14, 29.18 and 29.22, the "oxygen function" referred to in the texts of these headings should be the characteristic organic oxygen containing group referred to in headings 29.05 to 29.20. In this connection, the oxygen functional groups taken into consideration for classification of products in headings 29.11, 29.12, 29.14 and 29.18 should remain intact.

(G) Classification of esters, salts, co-ordination compounds and certain halides (Chapter Note 5)

(1) **Esters.**

The esters of acid-function organic compounds of sub-Chapters I to VII with organic compounds of these sub-Chapters are to be classified with that compound which is classified in the heading which occurs last in numerical order in these sub-Chapters.

Examples :

(a) Diethylene glycol acetate (ester formed by the reaction of acetic acid of heading 29.15 with diethylene glycol of heading 29.09)*..... Heading 29.15

(b) Methyl benzenesulphonate (ester formed by the reaction of benzene-sulphonic acid of heading 29.04 with methyl alcohol of heading 29.05)*..... Heading 29.05

(c) Butyl hydrogenphthalate (ester of a polycarboxylic acid where the hydrogen of only one (COOH) group has been substituted)*..... Heading 29.17

(d) Butyl phthalyl butyl glycollate (ester formed by the reaction of phthalic acid of heading 29.17 and glycollic acid of heading 29.18 with butyl alcohol of heading 29.05)* Heading 29.18

This rule cannot be applied to the esters of such acid-function compounds with ethyl alcohol since this compound is not classified in Chapter 29. Such esters are to be classified with the acid-function compounds from which they are derived*.

Example :

Ethyl acetate (ester formed by the reaction of acetic acid of heading 29.15 with ethyl alcohol) Heading 29.15

It should further be noted that sugar esters and their salts are classified in heading 29.40.

(2) **Salts.**

Subject to Note1 to Section VI and Note 2 to Chapter 28 :

(a) Inorganic salts of organic compounds such as acid-, phenol- or enol-function compounds or organic bases, of sub-Chapters I to X or heading 29.42, are to be classified in the heading appropriate to the organic compound.

These salts may be formed by the reaction of :

(i) Acid-, phenol- or enol-function organic compounds with inorganic bases.

Example :

Sodium methoxybenzoate (salt formed by the reaction of methoxy-benzoic acid of heading 29.18 with sodium hydroxide)*..... Heading 29.18

Salts of this category may also be formed by the reaction of acid esters of the type referred to above with inorganic bases.

Example :

n-Butyl copper phthalate (salt formed by the reaction of butyl hydrogen phthalate of heading 29.17 with copper hydroxide)*..... ...Heading 29.17

or (ii) Organic bases with inorganic acids.

Example :

Diethylamine hydrochloride (salt formed by the reaction of diethylamine of heading 29.21 with hydrochloric acid of heading 28.06)*. ...Heading 29.21

(b) Salts formed between organic compounds of sub-Chapters I to X or heading 29.42 are to be classified in the heading appropriate to the base or to the acid (including phenol- or enol-function compounds) from which they are formed, whichever occurs last in numerical order in the Chapter.

Examples :

(i) Aniline acetate (salt formed by the reaction of acetic acid of heading 29.15 with aniline of heading 29.21)*..... Heading 29.21

(ii) Methylamine phenoxyacetate (salt formed by the reaction of methylamine of heading 29.21 with phenoxyacetic acid of heading 29.18)*..... Heading 29.21

(3) **Co-ordination compounds.**

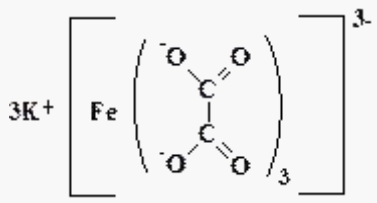
Metal co-ordination compounds generally include all the types, whether or not charged, in which a metal is bound to several atoms (generally 2 to 9 atoms) made available by one or more ligands. The skeletal geometry formed by the metal and the atoms which are bound to it as well as the number of metal links are generally characteristic for a given metal.

Co-ordination compounds, other than products classifiable in sub-Chapter XI or in heading 29.41, should be considered as being fragmented by "cleaving" of all metal bonds, apart from metal-carbon bonds, and should be classified according to the fragment (regarded as a real compound for classification purposes) falling in Chapter 29, in the heading occurring last in numerical order.

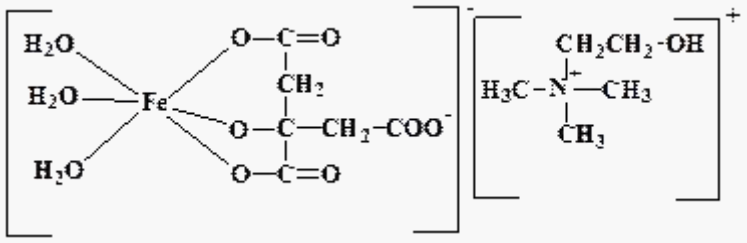
For the purposes of Note 5 (C) (3) to this Chapter, the term "fragments" covers the ligands and the part(s) containing the metal-carbon bond that have resulted from the cleavage.

Examples are shown below :

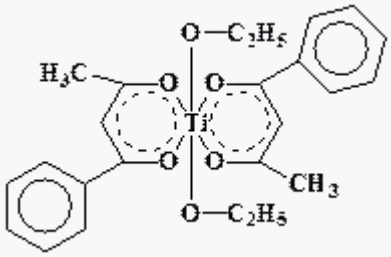
Potassium trioxalatoferrate (III) is classifiable in the heading in which the oxalic acid falls (heading 29.17), corresponding to the fragment obtained after cleaving of the metal bonds.



Ferrocholinate (INN) is classifiable in the heading covering choline (heading 29.23), which is classified in the heading occuring last in numerical order, rather than in the heading for citric acid corresponding to the other fragment that can be taken into account for classification purposes.



Budotitane (INN) : After cleaving of the metal bonds, two fragments are obtained, one corresponding to ethanol (Chapter 22), the other to benzoylacetone (and its enol-function) classified in heading 29.14. Budotitane (INN) should therefore be classified in heading 29.14.



(4) **Halides of carboxylic acids*.**

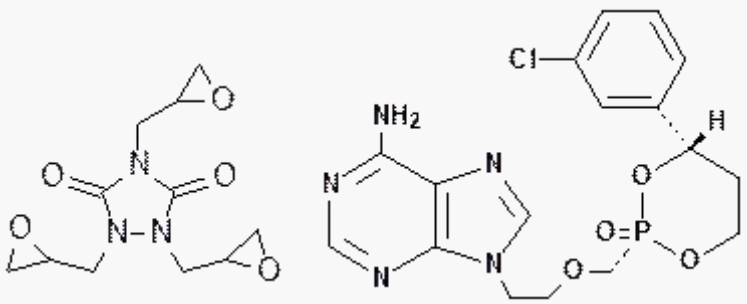
Such halides are classified in the same heading as the corresponding acids. For example, isobutyryl chloride is classified (like the isobutyric acid to which it corresponds) in heading 29.15.

(H) Classification in headings 29.32, 29.33 and 29.34

(Chapter Note 7)

Headings 29.32, 29.33 and 29.34 do not include epoxides with a three-membered ring, ketone peroxides, cyclic polymers of aldehydes or of thioaldehydes, anhydrides of polybasic carboxylic acids, cyclic esters of polyhydric alcohols or phenols with polybasic acids, or imides of polybasic acids, if the ring-position hetero-atoms are those resulting solely from the cyclising function or functions here listed.

If, in addition to functions listed in the first sentence of Note 7 to Chapter 29, there are other ring-position hetero-atoms present in the structure, the classification should be carried out with reference to all the cyclising functions present. Thus, for example, anaxirone (INN) and pradefovir (INN) should be classified in heading 29.34 as heterocyclic compounds with two or more different hetero-atoms and **not** in heading 29.33 as heterocyclic compounds with nitrogen hetero-atoms only.



Anaxirone (INN) *Pradefovir (INN)*

(IJ) Classification of derivatives

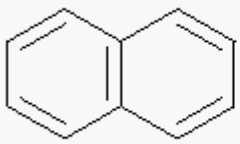
The classification of derivatives of chemical compounds at heading level is to be determined by application of the General Interpretative Rules. Note 3 to this Chapter applies when a derivative is potentially classifiable in two or more headings.

Within any one heading of this Chapter, derivatives are to be classified by application of Subheading Note 1.

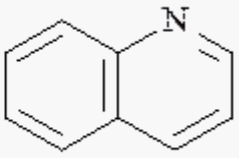
(K) Fused ring systems

A fused ring system is one in which there are at least two rings which have one, and only one, common bond and have two, **and** only two, atoms in common.

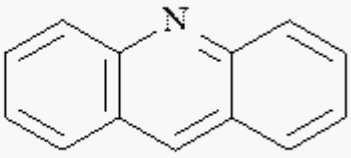
Fused ring systems appear in the molecules of polycyclic compounds (e.g., polycyclic hydrocarbons, heterocyclic compounds) in which two cyclic rings are joined by a common side involving two adjacent atoms. Examples are shown below :



Naphthalene

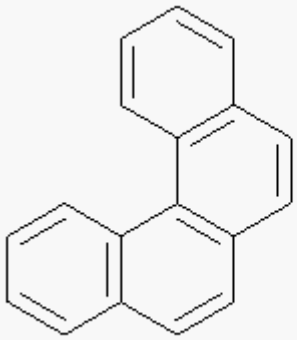


Quinoline

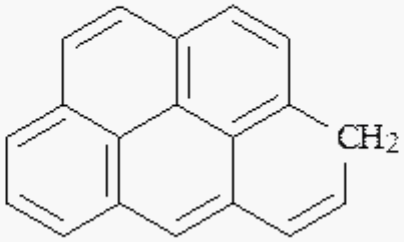


Fused quinoline

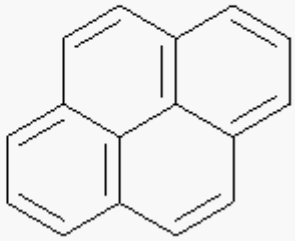
In complex ring systems, fusion can take place to more than one side of any particular ring. Polycyclic compounds in which two rings have two, and only two, atoms in common are said to be "ortho-fused". On the other hand, polycyclic compounds in which one ring contains two, and only two, atoms in common with each of the two or more rings of a contiguous series of rings are said to be "ortho- and peri-fused". These two different types of fused ring systems are illustrated by the following examples :



3 common faces



7 common faces



5 common faces

6 common atoms

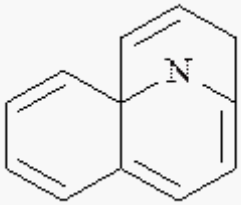
8 common atoms

6 common atoms

"Ortho-fused" system

"Ortho- and peri-fused" systems

On the other hand, the following is an example of a bridged (**not fused**) quinoline :



Bridged quinoline.

For the purposes of the body of the Explanatory Notes to this Chapter, an asterisk "*" following a chemical formulae means that its chemical structure can be consulted in the Annex to the Explanatory Notes to Chapter 29.

LIST

OF NARCOTIC DRUGS AND PSYCHOTROPIC SUBSTANCES ARRANGED IN ALPHABETICAL ORDER BY TYPE OF DRUG

I. **Narcotic drugs subject to control under the Single Convention on Narcotic Drugs, 1961, as amended by the 1972 Protocol**

Name	HS	CAS No.	Convention

	subheading		Schedule No
Acetorphine (INN)	2939.19	25333-77-1	4
Acetorphine hydrochloride	2939.19	25333-78-2	4
Acetyldihydrocodeine	2939.19	3861-72-1	2
Acetyldihydrocodeine hydrochloride	2939.19		2
Acetylfentanyl	2933.34	3258-84-2	1
Acetylmethadol (INN)	2922.19	509-74-0	1
Acetyl-a-methylfentanyl	2933.34	101860-00-8	1
Acetylmorphine	2939.19		1
3-Acetylmorphine	2939.19		1
6-Acetylmorphine	2939.19	2784-73-8	1
Acryloylfentanyl	2933.34	82003-75-6	1
AH-7921	2924.29		1
Alfentanil (INN)	2933.33	71195-58-9	1

Alfentanil hydrochloride	2933.33	69049-06-5	1
Allylprodine (INN)	2933.39	25384-17-2	1
Allylprodine hydrochloride	2933.39		1
Alphacetylmethadol (INN)	2922.19	17199-58-5	1
L-Alphacetylmethadol	2922.19		
Alphacetylmethadol hydrochloride	2922.19		1
Alphameprodine (INN)	2933.39	468-51-9	1
Alphamethadol (INN)	2922.19	17199-54-1	1
Alphaprodine (INN)	2933.39	77-20-3	1
Alphaprodine hydrochloride	2933.39	561-78-4	1
Anileridine (INN)	2933.33	144-14-9	1
Anileridine dihydrochloride	2933.33	126-12-5	1
Anileridine phosphate	2933.39	4268-37-5	1
Benzethidine (INN)	2933.39	3691-78-9	1

Benzethidine hydrobromide	2933.39		1
Benzethidine hydrochloride	2933.39		1
Benzoylmorphine	2939.19		1
Benzylmorphine	2939.19	14297-87-1	1
Benzylmorphine hydrochloride	2939.19	630-86-4	1
Benzylmorphine mesilate	2939.19		1
Betacetylmethadol (INN)	2922.19	17199-59-6	1
Betameprodine (INN)	2933.39	468-50-8	1
Betamethadol (INN)	2922.19	17199-55-2	1
Betaprodine (INN)	2933.39	468-59-7	1
Betaprodine hydrochloride	2933.39		1
Bezitramide (INN)	2933.33	15301-48-1	1
Bezitramide hydrochloride	2933.33		1
Butyrfentanyl	2933.34	1169-70-6	1

Cannabis	1211.90		4
Cannabis extracts and tinctures	1302.19		
Cannabis oil	1302.19		
Cannabis resin	1301.90		
Carfentanil (INN)	2933.33	59708-52-0	1
Clonitazene (INN)	2933.99	3861-76-5	1
Clonitazene hydrochloride	2933.99		1
Clonitazene mesilate	2933.99		1
Coca leaf	1211.30		
Cocaine	2939.72	50-36-2	1
d-Cocaine	2939.72	478-73-9	1
Cocaine benzoate	2939.72		1
Cocaine borate	2939.72		1
Cocaine citrate	2939.72		1
Cocaine formate	2939.72		1
Cocaine hydriodide	2939.72		1
Cocaine hydrobromide	2939.72		1

I. Narcotic drugs subject to control under the Single Convention on Narcotic Drugs, 1961, as amended by the 1972 Protocol (contd.)

Name	HS subheading	CAS No.	Convention Schedule No.
Cocaine hydrochloride	2939.72	53-21-4	1
Cocaine lactate	2939.72		1
Cocaine nitrate	2939.72	5913-62-2	1
Cocaine salicylate	2939.72	5913-64-4	1
Cocaine sulfate	2939.72		1
Cocaine tartrate	2939.72		1
Codeine	2939.11	76-57-3	2
Codeine acetate	2939.11		2
Codeine allobarbiturate	2939.11		2
Codeine barbiturate	2939.11		2
Codeine camphosulfonate	2939.11		2
Codeine citrate	2939.11	5913-73-5	2
Codeine cyclobarbiturate	2939.11		2

Codeine cyclopentobarbiturate	2939.11		2
Codeine 6-glucuronide	2939.19		2
Codeine hydrobromide	2939.11	125-25-7	2
Codeine hydrochloride	2939.11	1422-07-7	2
Codeine hydroiodide	2939.11	125-26-8	2
Codeine methylbromide	2939.19	125-27-9	2
Codeine phenobarbiturate	2939.11		2
Codeine phosphate	2939.11	52-28-8	2
Codeine resinate	3003.49		2
Codeine salicylate	2939.11		2
Codeine sulfate	2939.11	1420-53-7	2
Codeine-N-oxide	2939.19	3688-65-1	
Codeine-N-oxide hydrochloride	2939.19		
Codoxime (INN)	2939.19	7125-76-0	1
Concentrate of poppy straw	1302.11		1

	2939.11		
Cyclopropylfentanyl	2933.34	1169-68-2	1
Desomorphine (INN)	2939.19	427-00-9	4
Desomorphine hydrobromide	2939.19		4
Desomorphine hydrochloride	2939.19		4
Desomorphine sulfate	2939.19		4
Dextromoramide (INN)	2934.91	357-56-2	1
Dextromoramide dihydrochloride	2934.91		1
Dextromoramide hydrochloride	2934.91		1
Dextromoramide hydrogen tartrate (bitartrate)	2934.99	2922-44-3	1
Dextropropoxyphene (INN)	2922.14	469-62-5	2
Dextropropoxyphene hydrochloride	2922.14	1639-60-7	2
Napsilate	2922.19	17140-78-2	2
Dextropropoxyphene resinate	3003.90		2
Diampromide (INN)	2924.29	552-25-	1

		0	
Diampromide sulfate	2924.29		1
Diethylthiambutene (INN)	2934.99	86-14-6	1

I. Narcotic drugs subject to control under the Single Convention on Narcotic Drugs, 1961, as amended by the 1972 Protocol (contd.)

Name	HS subheading	CAS No.	Convention Schedule No.
Diethylthiambutene hydrochloride	2934.99	132-19-4	1
Difenoxin (INN)	2933.33	28782-42-5	1
Difenoxin hydrochloride	2933.33	35607-36-4	1
Dihydrocodeine (INN)	2939.11	125-28-0	2
Dihydrocodeine hydrochloride	2939.11		2
Dihydrocodeine hydrogen tartrate (bitartrate)	2939.11	5965-13-9	2
Dihydrocodeine phosphate	2939.11	24204-13-5	2
Dihydrocodeine resinate	3003.49		2
Dihydrocodeine thiocyanate	2939.11		2

Dihydroisomorphin	2939.19		
Dihydroisomorphin 6-glucuronide	2939.19		
Dihydromorphine	2939.19	509-60-4	2
Dihydromorphine hydriodide	2939.19		2
Dihydromorphine hydrochloride	2939.19	1421-28-9	2
Dihydromorphine picrate	2939.19		2
Dimenoxadol (INN)	2922.19	509-78-4	1
Dimenoxadol hydrochloride	2922.19	242-75-1	1
Dimepheptanol (INN)	2922.19	545-90-4	1
Dimepheptanol hydrochloride	2922.19		1
Dimethylthiambutene (INN)	2934.99	524-84-5	1
Dimethylthiambutene hydrochloride	2934.99		1
Dioxaphetyl butyrate (INN)	2934.99	467-86-7	1
Dioxaphetyl butyrate hydrochloride	2934.99		1
Diphenoxylate (INN)	2933.33	915-	1

		30-0	
Diphenoxylate hydrochloride	2933.33	3810-80-8	1
Dipipanone (INN)	2933.33	467-83-4	1
Dipipanone hydrobromide	2933.33		1
Dipipanone hydrochloride	2933.33	75783-06-1	1
Drotebanol (INN)	2933.49	3176-03-2	1
Ecgonine, its esters and derivatives which are convertible to ecgonine and cocaine	2939.72	481-37-8	1
Ecgonine benzoylethyl ester	2939.72		1
Ecgonine benzoylpropyl ester	2939.72		1
Ecgonine cinnamoylmethyl ester	2939.72		1
Ecgonine 2,6-dimethyl-benzoylmethyl ester	2939.72		1
Ecgonine hydrochloride	2939.72		1
Ecgonine m-hydroxybenzoylester	2939.72		1
Ecgonine methyl ester	2939.72		1
Ecgonine methyl ester hydrochloride	2939.72		1

Ecgonine phenylacetyl-methyl ester	2939.72		1
Ethylmethylthiambutene (INN)	2934.99	441-61-2	1
Ethylmethylthiambutene hydrochloride	2934.99		1
Ethylmorphine	2939.11	76-58-4	2
Ethylmorphine camphosulfonate	2939.11		2
Ethylmorphine hydrobromide	2939.11		2
Ethylmorphine hydrochloride	2939.11	125-30-4	2
Ethylmorphine methyliodide	2939.19		2
Ethylmorphine phenobarbiturate	2939.11		2
Etonitazene (INN)	2933.99	911-65-9	1
Etonitazene hydrochloride	2933.99		1
Etorphine (INN)	2939.11	14521-96-1	4

I. Narcotic drugs subject to control under the Single Convention on Narcotic Drugs, 1961, as amended by the 1972 Protocol (contd.)

Name	HS subheading	CAS No.	Convention Schedule No.

Etorphine hydrochloride	2939.11	13764-49-3	4
Etorphine 3-methyl ether	2939.19		4
Etoxeridine (INN)	2933.39	469-82-9	1
Etoxeridine hydrochloride	2933.39		1
Fentanyl (INN)	2933.33	437-38-7	1
Fentanyl citrate	2933.33	990-73-8	1
p-Fluorobutyrylfentanyl	2933.34	244195-31-1	1
o-Fluorofentanyl	2933.34	910616-29-4	1
p-Fluorofentanyl	2933.34		4
p-Fluorofentanyl hydrochloride	2933.34		4
4-Fluoroisobutyrfentanyl	2933.34	244195-32-2	1
Furanylfentanyl	2934.92	101345-66-8	1
Furethidine (INN)	2934.99	2385-81-1	1
Furethidine hydrobromide	2934.99		1

Furethidine methyliodide	2934.99		1
Furethidine picrate	2934.99		1
Heroin	2939.11	561-27-3	4
Heroin hydrochloride	2939.11	1502-95-0	4
Heroin methyliodide	2939.19		4
Hydrocodone (INN)	2939.11	125-29-1	1
Hydrocodone citrate	2939.11		1
Hydrocodone hydriodide	2939.11		1
Hydrocodone hydrochloride	2939.11	25968-91-6	1
Hydrocodone hydrogen tartrate (bitartrate)	2939.11	143-71-5	1
Hydrocodone methyliodide	2939.19		1
Hydrocodone phosphate	2939.11	34366-67-1	1
Hydrocodone resinate	3003.49		1
Hydrocodone terephthalate	2939.11		1
Hydromorphinol (INN)	2939.19	2183-56-4	1

Hydromorphinol hydrochloride	2939.19		1
Hydromorphinol hydrogen tartrate (bitartrate)	2939.19		1
Hydromorphone (INN)	2939.11	466-99-9	1
Hydromorphone hydrochloride	2939.11	71-68-1	1
Hydromorphone sulfate	2939.11		1
Hydromorphone terephthalate	2939.11		1
ß-Hydroxyfentanyl	2933.34		4
ß-Hydroxyfentanyl hydrochloride	2933.34		4
(+)-cis-ß-Hydroxy-3-m-methylfentanyl	2933.34		
ß-Hydroxy-3-methylfentanyl	2933.34		4
ß-Hydroxy-3-methylfentanyl hydrochloride	2933.34		4
Hydroxypethidine (INN)	2933.39	468-56-4	1
Hydroxypethidine hydrochloride	2933.39		1
Isomethadone (INN)	2922.39	466-40-0	1
d-Isomethadone	2922.39		

/-Isomethadone	2922.39		
Isomethadone hydrobromide	2922.39		1
Isomethadone hydrochloride	2922.39		1
Ketobemidone (INN)	2933.33	469-79-4	4
Ketobemidone hydrochloride	2933.33	5965-49-1	4
Levacetylmethadol (INN)	2922.19	34433-66-4	1
Levomethorphan (INN)(*)	2933.49	125-70-2	1
Levomethorphan hydrobromide	2933.49		1
Levomethorphan hydrogen tartrate (bitartrate)	2933.49		1
Levomoramide (INN)	2934.99	5666-11-5	1
Levomoramide dihydrochloride	2934.99		1
Levophenacylmorphan (INN)	2933.49	10061-32-2	1
Levophenacylmorphan hydrochloride	2933.49		1
Levophenacylmorphan methylsulfonate	2933.49		1

Levopropoxyphene (INN)	2922.19	2338-37-6	
Levorphanol (INN)(**)	2933.41	77-07-6	1

I. Narcotic drugs subject to control under the Single Convention on Narcotic Drugs, 1961, as amended by the 1972 Protocol (contd.)

Name	HS subheading	CAS No.	Convention Schedule No.
Levorphanol hydrogen tartrate (bitartrate)	2933.41	125-72-4	1
Levorphanol hydrochloride	2933.41		1
Metazocine (INN)	2933.39	3734-52-9	1
Metazocine hydrobromide	2933.39		1
Metazocine hydrochloride	2933.39		1
l-Methadol	2922.19		
Methadone (INN)	2922.31	76-99-3	1
d-Methadone	2922.31		
l-Methadone	2922.31		1
Methadone hydrobromide	2922.31		1
Methadone hydrochloride	2922.31	1095-90-5	1

Methadone hydrogen tartrate (bitartrate)	2922.31		1
d-Methadone hydrochloride	2922.31		
l-Methadone hydrochloride	2922.31		
l-Methadone hydrogen tartrate (bitartrate)	2922.31		1
Methadone (INN) intermediate4-cyano-2-dimethylamino-4,4-diphenylbutane or 2-dimethylamino-4,4-diphenyl-4-cyanobutane	2926.30		1
Methoxyacetylfentanyl	2933.34	101345-67-9	1
Methyldesorphine (INN)	2939.19	16008-36-9	1
Methyldesorphine hydrochloride	2939.19		1
Methyldihydromorphine (INN)	2939.19	509-56-8	1
3-Methylfentanyl	2933.34		4
3-Methylfentanyl hydrochloride	2933.34		4
α-Methylfentanyl	2933.34		4
α-Methylfentanyl hydrochloride	2933.34		4
α-Methylthiofentanyl	2934.92		1

α-Methylthiofentanyl hydrochloride	2934.92		1
3-Methylthiofentanyl	2934.92		4
3-Methylthiofentanyl hydrochloride	2934.92		4
(+)-*cis*-3-Methylthiofentanyl	2934.92		4
(+)-*cis*-3-Methylthioentanyl-hydrochloride	2934.92		
Metopon (INN)	2939.19	143-52-2	1
Metopon hydrochloride	2939.19		1
Moramide intermediate	2934.99		1
Morpheridine (INN)	2934.99	469-81-8	1
Morpheridine dihydrochloride	2934.99		1
Morpheridine picrate	2934.99		1
Morphine	2939.11	57-27-2	1
Morphine acetate	2939.11	596-15-6	1
Morphine citrate	2939.11		1
Morphine 3,6-diglucuronide	2939.19		1
Morphine dimethyl ether	2939.19		

Morphine gluconate	2939.19		1
Morphine 3-glucuronide	2939.19		1
Morphine 3-glucuronide	2939.19		1
Morphine 6-glucuronide	2939.19		1
Morphine 3-β-D-glucuronide	2939.19		1
Morphine 6-β-D-glucuronide	2939.19		1
Morphine hydriodide	2939.11		1
Morphine hydrobromide	2939.11	630-81-9	1
Morphine hydrochloride	2939.11	52-26-6	1
Morphine hypophosphite	2939.11		1
Morphine isobutyrate	2939.11		1
Morphine lactate	2939.11		1
Morphine meconate	2939.11		1
Morphine methobromide	2939.19		1
Morphine methylbromide	2939.19		1
Morphine methylchoride	2939.19		1
Morphine methyliodide	2939.19		1

Morphine methylsulfonate	2939.11		1

I. Narcotic drugs subject to control under the Single Convention on Narcotic Drugs, 1961, as amended by the 1972 Protocol (contd.)

Name	HS subheading	CAS No.	Convention Schedule No.
Morphine mucate	2939.11		1
Morphine nitrate	2939.11	596-16-7	1
Morphine phenylpropionate	2939.11		1
Morphine phosphate	2939.11		1
Morphine phthalate	2939.11		1
Morphine stearate	2939.11		1
Morphine sulfate	2939.11	64-31-3	1
Morphine tartrate	2939.11	302-31-8	1
Morphine valerate	2939.11		1
Morphine-N-oxide	2939.19	639-46-3	1
Morphine-N-oxide quinate	2939.19		1
MPPP	2933.39		4

MPPP hydrochloride	2933.39		4
MT-45	2933.59		1
Myrophine (INN)	2939.19	467-18-5	1
Myrophine hydrochloride	2939.19		1
Nicocodine (INN)	2939.19	3688-66-2	2
Nicocodine hydrochloride	2939.19		2
Nicodicodine (INN)	2939.19	808-24-2	2
Nicomorphine (INN)	2939.11	639-48-5	1
Nicomorphine hydrochloride	2939.11		1
Noracymethadol (INN)	2922.19	1477-39-0	1
Noracymethadol gluconate	2922.19		1
Noracymethadol hydrochloride	2922.19		1
Norcodeine (INN)	2939.19	467-15-2	2
Norcodeine acetate	2939.19		2
Norcodeine hydriodide	2939.19		2

Norcodeine hydrochloride	2939.19	14648-14-7	2
Norcodeine nitrate	2939.19		2
Norcodeine platinichloride	2843.90		2
Norcodeine sulfate	2939.19		2
Norlevorphanol (INN)	2933.49	1531-12-0	1
Norlevorphanol hydrobromide	2933.49		1
Norlevorphanol hydrochloride	2933.49		1
Normethadone (INN)	2922.31	467-85-6	1
Normethadone 2,6-di-tert-butylnaphthalenedisulfonate	2922.31		1
Normethadone hydrobromide	2922.31		1
Normethadone hydrochloride	2922.31	847-84-7	1
Normethadone methyliodide	2922.39		1
Normethadone oxalate	2922.31		1
Normethadone picrate	2922.31		1
Normethadone (INN) intermediate	2926.90		
Normorphine (INN)	2939.19	466-97-	1

		7	
Normorphine hydrochloride	2939.19		1
Norpipanone (INN)	2933.39	561-48-8	1
Norpipanone hydrobromide	2933.39		1
Norpipanone hydrochloride	2933.39		1
Ocfentanil (INN)	2933.34	101343-69-5	1
Opium	1302.11		1

I. Narcotic drugs subject to control under the Single Convention on Narcotic Drugs, 1961, as amended by the 1972 Protocol (contd.)

Name	HS subheading	CAS No.	Convention Schedule No.
Opium, mixed alkaloids of	1302.11(*)		
	2939.11(**)		
Opium, prepared	1302.19		
	2939.11		
Oripavine	2939.19		1
Oripavine hydrochloride	2939.19		1

Oxycodone (INN)	2939.11	76-42-6	1
Oxycodone camphosulfonate	2939.11		1
Oxycodone hydrochloride	2939.11	124-90-3	1
Oxycodone hydrogen tartrate (bitartrate)	2939.11		1
Oxycodone pectinate	2939.11		1
Oxycodone phenylpropionate	2939.11		1
Oxycodone phosphate	2939.11		1
Oxycodone terephthalate	2939.11		1
Oxymorphone (INN)	2939.11	76-41-5	1
Oxymorphone hydrochloride	2939.11	357-07-3	1
Papaver bracteatum	1211.90		
PEPAP	2933.39		4
PEPAP hydrochloride	2933.39		4
Pethidine (INN)	2933.33	57-42-1	1
Pethidine hydrochloride	2933.33	50-13-5	1
Pethidine (INN) intermediate A	2933.33		1
Pethidine (INN) intermediate B	2933.39		1

Pethidine intermediate B hydrobromide	2933.39		1
Pethidine intermediate B hydrochloride	2933.39		1
Pethidine (INN) intermediate C	2933.39		1
Phenadoxone (INN)	2934.99	467-84-5	1
Phenadoxone hydrochloride	2934.99	545-91-5	1
Phenampromide (INN)	2933.39	129-83-9	1
Phenampromide hydrochloride	2933.39		1
Phenazocine (INN)	2933.39	127-35-5	1
Phenazocine hydrobromide	2933.39		1
Phenazocine hydrochloride	2933.39	7303-75-5	1
Phenazocine mesilate	2933.39		1
Phenomorphan (INN)	2933.49	468-07-5	1
Phenomorphan hydrobromide	2933.49		1
Phenomorphan hydrogen tartrate (bitartrate)	2933.49		1

Phenomorphan methylbromide	2933.49		1
Phenoperidine (INN)	2933.33	562-26-5	1
Phenoperidine hydrochloride	2933.33	3627-49-4	1
Pholcodine (INN)	2939.11	509-67-1	2
Pholcodine hydrogen tartrate (bitartrate)	2939.11		2
Pholcodine citrate	2939.11		2
Pholcodine guaiacolsulfonate	2939.11		2
Pholcodine hydrochloride	2939.11		2
Pholcodine phenylacetate	2939.11		2

I. Narcotic drugs subject to control under the Single Convention on Narcotic Drugs, 1961, as amended by the 1972 Protocol (contd.)

Name	HS subheading	CAS No.	Convention Schedule No.
Pholcodine phosphate	2939.11		2
Pholcodine sulfonate	2939.11		2
Pholcodine tartrate	2939.11	7369-11-1	2

Piminodine (INN)	2933.39	13495-09-5	1
Piminodine dihydrochloride	2933.39		1
Piminodine esilate	2933.39	7081-52-9	1
Piritramide (INN)	2933.33	302-41-0	1
Poppy straw	1211.40		
Proheptazine (INN)	2933.99	77-14-5	1
Proheptazine citrate	2933.99		1
Proheptazine hydrobromide	2933.99		1
Proheptazine hydrochloride	2933.99		1
Properidine (INN)	2933.39	561-76-2	1
Properidine hydrochloride	2933.39		1
Propiram (INN)	2933.33	15686-91-6	2
Propiram fumarate	2933.33		2
Racemethorphan (INN)	2933.49	510-53-2	1
Racemethorphan hydrobromide	2933.49		1

Racemethorphan hydrogen tartrate (bitartrate)	2933.49		1
Racemoramide (INN)	2934.99	545-59-5	1
Racemoramide dihydrochloride	2934.99		1
Racemoramide hydrogen tartrate (bitartrate)	2934.99		1
Racemoramide tartrate	2934.99		1
Racemorphan (INN)	2933.49	297-90-5	1
Racemorphan hydrobromide	2933.49		1
Racemorphan hydrochloride	2933.49		1
Racemorphan hydrogen tartrate (bitartrate)	2933.49		1
Remifentanil (INN)	2933.33	132875-61-7	1
Remifentanil hydrochloride	2933.33		1
Sufentanil (INN)	2934.91	56030-54-7	1
Sufentanil citrate	2934.91		1
Thebacon (INN)	2939.11	466-90-0	1

Thebacon hydrochloride	2939.11	20236-82-2	1
Thebaine hydrochloride	2939.11		1
Thebaine hydrogen tartrate (bitartrate)	2939.11		1
Thebaine oxalate	2939.11		1
Thebaine salicylate	2939.11		1
Tetrahydrofuranylfentanyl	2934.92		1
Thiofentanyl	2934.92	1165-22-6	4
Thiofentanyl acetate	2934.92		1
Thiofentanyl hydrochloride	2934.92		4
Tilidine (INN)	2922.44	20380-58-9	1
Tilidine hydrochloride	2922.44	27107-79-5	1
Trimeperidine (INN)	2933.33	64-39-1	1
Trimeperidine hydrochloride	2933.33	125-80-4	1
U-47700	2924.29		1

II. Psychotropic substances subject to control under the 1971 Convention on Psychotropic Substances

Name	HS subheading	CAS No.	Convention Schedule No.
AB-CHMINACA	2933.99		2
AB-PINACA	2933.99		2
Allobarbital (INN)	2933.53	52-43-7	4
Allobarbital aminophenazone	2933.54		4
Alprazolam (INN)	2933.91	28981-97-7	4

II. Psychotropic substances subject to control under the 1971 Convention on Psychotropic Substances (contd.)

Name	HS subheading	CAS No.	Convention Schedule No.
AM-2201; JWH-2201	2933.99		2
Amfepramone (INN)	2922.31	90-84-6	4
Amfepramone glutamate	2922.42		4
Amfepramone hydrochloride	2922.31	134-80-5	4
Amfepramone resinate	3003.90		4

Amfetamine (INN)	2921.46	300-62-9	2
Amfetamine acetylsalicylate	2921.46		2
Amfetamine adipate	2921.46		2
Amfetamine p-aminophenylacetate	2922.49		2
Amfetamine aspartate	2922.49		2
Amfetamine p-chloro- phenoxyacetate	2921.46		2
Amfetamine hydrochloride	2921.46		2
Amfetamine hydrogen tartrate (bitartrate)	2921.46		2
Amfetamine pentobarbiturate	2933.54		2
Amfetamine phosphate	2921.46	139-10-6	2
Amfetamine resinate	3003.90		2
Amfetamine sulfate	2921.46	60-13-9	2
Amfetamine tannate	3201.90		2
Amfetamine tartrate	2921.46		2
Amineptine (INN)	2922.49		2
Amineptine hydrochloride	2922.49		2
Aminorex (INN)	2934.91	2207-	4

		50-3	
Aminorex fumarate	2934.91		4
Aminorex hydrochloride	2934.91		4
Amobarbital (INN)	2933.53	57-43-2	3
Amobarbital resinate	3003.90		3
Amobarbital sodium	2933.53	64-43-7	3
Barbital (INN)	2933.53	57-44-3	4
Barbital calcium	2933.53		4
Barbital magnesium	2933.53		4
Barbital sodium	2933.53	144-02-5	4
Benzfetamine (INN)	2921.46	156-08-1	4
Benzfetamine hydrochloride	2921.46	5411-22-3	4
N-Benzylpiperazine; Benzylpiperazine; BZP	2933.59		2
N-Benzylpiperazine dihydrochloride	2933.59		2
N-Benzylpiperazine hydrochloride	2933.59		2
25B-NBOMe; 2C-B-NBOMe	2922.29		1

25B-NBOMe hydrochloride	2922.29		1
Brolamfetamine (INN) (DOB)	2922.29	64638-07-9	1
Brolamfetamine (DOB) hydrochloride	2922.29		1
Bromazepam (INN)	2933.33	1812-30-2	4
Brotizolam (INN)	2934.91	57801-81-7	4
Buprenorphine (INN)	2939.11	52485-79-7	3
Buprenorphine hydrochloride	2939.11	53152-21-9	3
Buprenorphine hydrogen tartrate (bitartrate)	2939.11		3
Buprenorphine sulfate	2939.11		3
Butalbital (INN)	2933.53	77-26-9	3
Butobarbital	2933.53	77-28-1	4
Camazepam (INN)	2933.91	36104-80-0	4
Cathine (INN)	2939.43	492-39-7	3
Cathine hydrochloride	2939.43	2153-98-2	3

Cathine phenobarbiturate	2939.43		3
Cathine resinate	3003.49		3
Cathine sulfate	2939.43		3
Cathinone (INN)	2939.79	71031-15-7	1
Cathinone hydrochloride	2939.79		1
2C-B	2922.29		2
2C-B hydrochloride	2922.29		2
Chlordiazepoxide (INN)	2933.91	58-25-3	4
Chlordiazepoxide dibunate	2933.91		4
Chlordiazepoxide hydrochloride	2933.91	438-41-5	4
Clobazam (INN)	2933.72	22316-47-8	4
Clonazepam (INN)	2933.91	1622-61-3	4
Clorazepate	2933.91		4
Clorazepate dipotassium	2933.91	57109-90-7	4
Clorazepate monopotassium	2933.91	5991-71-9	4

Clotiazepam (INN)	2934.91	33671-46-4	4
Cloxazolam (INN)	2934.91	24166-13-0	4
Cyclobarbital (INN)	2933.53	52-31-3	3

II. Psychotropic substances subject to control under the 1971 Convention on Psychotropic Substances (contd.)

Name	HS subheading	CAS No.	Convention Schedule No.
Cyclobarbital calcium	2933.53	5897-20-1	3
Delorazepam (INN)	2933.91	2894-67-9	4
DET	2939.79	61-51-8	1
DET hydrochloride	2939.79		1
Dexamfetamine (INN)	2921.46	51-64-9	2
Dexamfetamine adipate	2921.46		2
Dexamfetamine carboxy-methylcellulose	3912.31		2
Dexamfetamine hydrochloride	2921.46	405-	2

		41-4	
Dexamfetamine hydrogen tartrate (bitartrate)	2921.46		2
Dexamfetamine pento- barbiturate	2933.54		2
Dexamfetamine phosphate	2921.46	7528-00-9	2
Dexamfetamine resinate	3003.90		2
Dexamfetamine saccharate	2921.49		2
Dexamfetamine sulfate	2921.46	51-63-8	2
Dexamfetamine tannate	3201.90		2
Diazepam (INN)	2933.91	439-14-5	4
DMA	2922.29		1
DMA hydrochloride	2922.29		1
DMHP	2932.99		1
DMT	2939.79	61-50-7	1
DMT hydrochloride	2939.79		1
DMT methyliodide	2939.79		1
DOET	2922.29		1

DOET hydrochloride	2922.29		1
Estazolam (INN)	2933.91	29975-16-4	4
Ethchlorvynol (INN)	2905.51	113-18-8	4
Ethinamate (INN)	2924.24	126-52-3	4
Ethyl loflazepate (INN)	2933.91	29177-84-2	4
N-Ethyl MDA	2932.99		1
N-Ethyl MDA hydrochloride	2932.99		1
Eticyclidine (PCE) (INN)	2921.49	2201-15-2	1
Eticyclidine (PCE) hydrochloride	2921.49		1
Etilamfetamine (INN)	2921.46	457-87-4	4
Etilamfetamine hydrochloride	2921.46		4
Etryptamine (INN)	2939.79		1
Etryptamine acetate	2939.79		1
Etryptamine hydrochloride	2939.79		1
5F-ADB; 5F-MDMB-PINACA	2933.99		2

5F-APINACA; 5F-AKB-48	2933.99		2
5F-PB-22	2933.49		2
Fencamfamin (INN)	2921.46	1209-98-9	4
Fencamfamin hydrochloride	2921.46	2240-14-4	4
Fenetylline (INN)	2939.51	3736-08-1	2
Fenetylline hydrochloride	2939.51	1892-80-4	2
Fenproporex (INN)	2926.30	15686-61-0	4
Fenproporex diphenylacetate	2926.30		4
Fenproporex hydrochloride	2926.30	18305-29-8	4
Fenproporex resinate	3003.90		4
Fludiazepam (INN)	2933.91	3900-31-0	4
Flunitrazepam (INN)	2933.91	1622-62-4	4
Flurazepam (INN)	2933.91	17617-23-1	4
Flurazepam dihydrochloride	2933.91	1172-18-5	4

Flurazepam hydrochloride	2933.91	36105-20-1	4
Glutethimide (INN)	2925.12	77-21-4	3
Halazepam (INN)	2933.91	23092-17-3	4
Haloxazolam (INN)	2934.91	59128-97-1	4
N-Hydroxy MDA	2932.99		1
N-Hydroxy MDA hydrochloride	2932.99		1
Ketazolam (INN)	2934.91	27223-35-4	4
Lefetamine (INN)	2921.46	7262-75-1	4
Lefetamine hydrochloride	2921.46	14148-99-3	4
Levamfetamine (INN)	2921.46	156-34-3	2

II. Psychotropic substances subject to control under the 1971 Convention on Psychotropic Substances (contd.)

Name	HS subheading	CAS No.	Convention Schedule No.
Levamfetamine alginate	3913.10		2

Levamfetamine succinate	2921.49	5634-40-2	2
Levamfetamine sulfate	2921.49		2
Levometamfetamine	2939.45		2
Levometamfetamine hydrochloride	2939.45		2
Loprazolam (INN)	2933.55	61197-73-7	4
Loprazolam mesilate	2933.55		4
Lorazepam (INN)	2933.91	846-49-1	4
Lorazepam acetate	2933.91		4
Lorazepam mesilate	2933.91		4
Lorazepam pivalate	2933.91		4
Lormetazepam (INN)	2933.91	848-75-9	4
Lysergide (INN), LSD, LSD-25	2939.69	50-37-3	1
(+)-Lysergide tartrate	2939.69		1
Mazindol (INN)	2933.91	22232-71-9	4
MDMA	2932.99		1

MDMA hydrochloride	2932.99		1
Mecloqualone (INN)	2933.55	340-57-8	2
Mecloqualone hydrochloride	2933.55		2
Medazepam (INN)	2933.91	2898-12-6	4
Medazepam dibunate	2933.91		4
Medazepam hydrochloride	2933.91		4
Mefenorex (INN)	2921.46	17243-57-1	4
Mefenorex hydrochloride	2921.46		4
Meprobamate (INN)	2924.11	57-53-4	4
Mescaline	2939.79	54-04-6	1
Mescaline aurichloride	2843.30		1
Mescaline hydrochloride	2939.79	832-92-8	1
Mescaline picrate	2939.79		1
Mescaline platinichloride	2843.90		1
Mescaline sulfate	2939.79	1152-76-7	1

Mesocarb (INN)	2934.71	34262-84-5	4
Metamfetamine (INN)	2939.45	537-46-2	2
Metamfetamine hydrochloride	2939.45	51-57-0	2
Metamfetamine hydrogen tartrate (bitartrate)	2939.45		2
Metamfetamine racemate	2939.45	7632-10-2	2
Metamfetamine racemate hydrochloride	2939.45		2
Metamfetamine sulfate	2939.45		2
Methaqualone (INN)	2933.55	72-44-6	2
Methaqualone hydrochloride	2933.55	340-56-7	2
Methaqualone resinate	3003.90		2
Methylaminorex	2934.99		1
Methylaminorex hydrochloride	2934.99		1
Methylphenidate (INN)	2933.33	113-45-1	2
Methylphenidate hydrochloride	2933.33	298-59-9	2

Methylphenobarbital (INN)	2933.53	115-38-8	4
Methylphenobarbital sodium	2933.53		4
Methyprylon (INN)	2933.72	125-64-4	4
Midazolam (INN)	2933.91	59467-70-8	4
Midazolam hydrochloride	2933.91		4
Midazolam maleate	2933.91		4
MMDA	2932.99		1
MMDA hydrochloride	2932.99		1
Nimetazepam (INN)	2933.91	2011-67-8	4
Nitrazepam (INN)	2933.91	146-22-5	4
Nordazepam (INN)	2933.91	1088-11-5	4
Oxazepam (INN)	2933.91	604-75-1	4
Oxazepam acetate	2933.91		4
Oxazepam hemisuccinate	2933.91		4

II. **Psychotropic substances subject to control under the 1971 Convention on Psychotropic Substances** (contd.)

Name	HS subheading	CAS No.	Convention Schedule No.
Oxazepam succinate	2933.91		4
Oxazepam valproate	2933.91		4
Oxazolam (INN)	2934.91	24143-17-7	4
Parahexyl	2932.99		1
Pemoline (INN)	2934.91	2152-34-3	4
Pemoline copper	2934.91		4
Pemoline iron	2934.91		4
Pemoline magnesium	2934.91		4
Pemoline nickel	2934.91		4
Pentazocine (INN)	2933.33	359-83-1	3
Pentazocine hydrochloride	2933.33		3
Pentazocine lactate	2933.33	17146-95-1	3
Pentobarbital (INN)	2933.53	76-74-4	3

Pentobarbital calcium	2933.53	7563-42-0	3
Pentobarbital sodium	2933.53	57-33-0	3
Phencyclidine (INN) (PCP)	2933.33	77-10-1	2
Phencyclidine hydrobromide	2933.33		2
Phencyclidine hydrochloride	2933.33	956-90-1	2
Phendimetrazine (INN)	2934.91	634-03-7	4
Phendimetrazine hydrochloride	2934.91		4
Phendimetrazine hydrogen tartrate (bitartrate)	2934.91	50-58-8	4
Phendimetrazine pamoate	2934.91		4
Phenmetrazine (INN)	2934.91	134-49-6	2
Phenmetrazine hydrochloride	2934.91	1707-14-8	2
Phenmetrazine hydrogen tartrate (bitartrate)	2934.91		2
Phenmetrazine sulfate	2934.91		2
Phenmetrazine teoclate	2939.59	13931-75-4	2

Phenobarbital (INN)	2933.53	50-06-6	4
Phenobarbital ammonium	2933.53		4
Phenobarbital calcium	2933.53	58766-25-9	4
Phenobarbital diethylamine	2933.53		4
Phenobarbital diethylaminoethanol	2933.53		4
Phenobarbital lysidine	2933.53		4
Phenobarbital magnesium	2933.53		4
Phenobarbital propylhexedrine	2933.53		4
Phenobarbital quinidine	2939.20		4
Phenobarbital sodium, magnesium	2933.53		4
Phenobarbital sodium (INN)	2933.53	57-30-7	4
Phenobarbital sparteine	2939.79		4
Phenobarbital tetramethyl- ammonium	2933.53		4
Phenobarbital yohimbine	2939.79		4
Phentermine (INN)	2921.46	122-09-8	4
Phentermine hydrochloride	2921.46	1197-21-3	4

Phentermine resinate	3003.90		4
Pinazepam (INN)	2933.91	52463-83-9	4
Pipradrol (INN)	2933.33	467-60-7	4
Pipradrol hydrochloride	2933.33	71-78-3	4
PMA	2922.29		1
PMA hydrochloride	2922.29		1
Prazepam (INN)	2933.91	2955-38-6	4
Psilocine, psilotsin	2939.79		1
Psilocine, psilotsin hydrochloride	2939.79		1
Psilocybine (INN)	2939.79	520-52-5	1
Psilocybine hydrochloride	2939.79		1
Pyrovalerone (INN)	2933.91	3563-49-3	4
Pyrovalerone hydrochloride	2933.91	1147-62-2	4

II. Psychotropic substances subject to control under the 1971 Convention on Psychotropic Substances (contd.)

Name	HS	CAS No.	Convention

	subheading		Schedule No.
Rolicyclidine (INN) (PHP, PCPY)	2933.99	2201-39-0	1
Secbutabarbital (INN)	2933.53	125-40-6	4
Secbutabarbital sodium	2933.53		4
Secobarbital (INN)	2933.53	76-73-3	2
Secobarbital calcium	2933.53		2
Secobarbital resinate	3003.90		2
Secobarbital sodium	2933.53	309-43-3	2
STP, DOM	2922.29	15588-95-1	1
STP, DOM hydrochloride	2922.29		1
Temazepam (INN)	2933.91	846-50-4	4
Tenamfetamine (INN) (MDA)	2932.99	51497-09-7	1
Tenamfetamine (MDA) hydrochloride	2932.99		1
Tenocyclidine (INN)	2934.99	21500-98-1	1

Tenocyclidine hydrochloride	2934.99		1
Tetrahydrocannabinols, all isomers	2932.95	various	2
d-9-Tetrahydrocannabinol	2932.95	1972-08-3	2
Tetrazepam (INN)	2933.91	10379-14-3	4
TMA	2922.29		1
TMA hydrochloride	2922.29		1
Triazolam (INN)	2933.91	28911-01-5	4
Vinylbital (INN)	2933.53	2430-49-1	4
Zipeprol (INN)	2933.55	34758-83-3	2

III. **Precursors**

Name	HS subheading	CAS No.
Acetic anhydride	2915.24	108-24-7
Acetone	2914.11	67-64-1
N-Acetylanthranilic acid	2924.23	89-52-1
alpha-Phenylacetoacetonitrile (APAAN)	2926.40	4468-48-8

4-Anilino-N-phenethylpiperidine (ANPP)	2933.36	21409-26-7
Anthranilic acid	2922.43	118-92-3
Butanone (ethyl methyl ketone)	2914.12	78-93-3
Diethyl ether	2909.11	60-29-7
Ephedrine	2939.41	299-42-3
Ephedrine hydrochloride	2939.41	50-98-6
Ephedrine nitrate	2939.41	81012-98-8
Ephedrine sulfate	2939.41	134-72-5
Ergometrine (INN)	2939.61	60-79-7
Ergometrine hydrochloride	2939.61	74283-21-9
Ergometrine hydrogen maleate	2939.61	129-51-1
Ergometrine oxalate	2939.61	
Ergometrine tartrate	2939.61	129-50-0
Ergotamine (INN)	2939.62	113-15-5
Ergotamine hydrochloride	2939.62	
Ergotamine succinate	2939.62	
Ergotamine tartrate	2939.62	379-79-3

Hydrogen chloride (hydrochloric acid)	2806.10	7647-01-0
Isosafrole	2932.91	120-58-1
Lysergic acid	2939.63	82-58-6
3,4-(Methylenedioxy)phenyl-2-propanone	2932.92	4676-39-5
Norephedrine	2939.44	14838-15-4
Norephedrine hydrochloride	2939.44	154-41-6
N-Phenethyl-4-piperidone (NPP)	2933.37	39742-60-4
Phenylacetone (benzyl methyl ketone, phenylpropan-2-one)	2914.31	103-79-7
Phenylacetic acid	2916.34	103-82-2
Piperidine	2933.32	110-89-4
Piperidine aurichloride	2843.30	
Piperidine hydrochloride	2933.32	6091-44-7
Piperidine hydrogen tartrate (bitartrate)	2933.32	6091-46-9
Piperidine nitrate	2933.32	6091-45-8
Piperidine phosphate	2933.32	

Piperidine picrate	2933.32	6091-49-2
Piperidine platinichloride	2843.90	
Piperidine thiocyanate	2933.32	22205-64-7
Piperonal	2932.93	120-57-0
Potassium permanganate	2841.61	7722-64-7
Pseudoephedrine (INN)	2939.42	90-82-4
Pseudoephedrine hydrochloride	2939.42	345-78-8
Pseudoephedrine sulfate	2939.42	7460-12-0
Safrole	2932.94	94-59-7
Sulphuric acid	2807.00	7664-93-9
Toluene	2902.30	108-88-3

LIST OF PRECURSORS AND ESSENTIAL CHEMICALS WHICH ARE MOST COMMONLY USED IN THE ILLEGAL PRODUCTION OF CERTAIN CONTROLLED SUBSTANCES

CONTROLLED SUBSTANCE (SUBHEADING NUMBER)	**PRECURSOR (P) ESSENTIAL CHEMICAL (E)** (SUBHEADING NUMBER)	**SYNONYM**	**CHEMICAL ABSTRACTS SERVICE (CAS) NUMBER OF (P) OR (E) OR OF THEIR SALTS (S)**

HEROIN or **DIACETY-MORPHINE** (2939.11)	(i) Codeine (P) (2939.11)	Codicept Coducept 7,8-Didehydro-4,5-epoxy-3-methoxy-17-methylmorphinan-6-o1 Methylmorphine 3-**O**-Methylmorphine Morphinan-6-ol, 7,8-didehydro-4,5-epoxy-3-methoxy-17-methyl Morphine, 3-methyl ether Morphine monomethyl ether	76-57-3 52-28-8 (S)
	(ii) Morphine (P) (2939.11)	7,8-Didehydro-4,5-epoxy-17-methyl-morphinan-3,6-diol Morphinan-3,6-diol, 7,8-didehydro-4,5-epoxy-17-methyl	57-27-2 (anhydrous) 6009-81-0 (monohydrate)
	(iii) Acetic anhydride (E) (2915.24)	Acetanhydride Acetic oxide Acetyl oxide Ethanoic anhydride	108-24-7
	(iv) Acetyl chloride (E) (2915.90)	Ethanoyl chloride	75-36-5
	(v) Ethylidene diacetate (E)	Acetic acid, ethylidene ester 1,1-Diacetoxyethane	542-10-9

	(2915.39)		
COCAINE or **METHYL BENZOYL-ECGONINE** (2939.72)	(i) Acetone (E) (2914.11)	2-Propanone Dimethylketone β-Ketopropane Pyroacetic ether Propane-2-one	67-64-1
	(ii) Diethyl ether (E) (2909.11)	Ethyl ether Ether Ethoxyethane Ethyl oxide Diethyl oxide Anaesthetic ether	60-29-7
	(iii) Methyl ethyl ketone (MEK) (E) (2914.12)	Butanone	78-93-3

CONTROLLED SUBSTANCE (SUBHEADING NUMBER)	**PRECURSOR (P) ESSENTIAL CHEMICAL (E)** (SUBHEADING NUMBER)	**SYNONYM**	**CHEMICAL ABSTRACTS SERVICE (CAS) NUMBER OF (P) OR (E) OR OF THEIR**

			SALTS (S)
LYSERGIDE (INN) or **LSD** or **N,N-DIETHYL-LYSERGAMIDE** (2939.69)	(i) Ergotamine (INN) (P) (2939.62)	5'-Benzyl-12'-hydroxy-2'-methylergotaman-3',6',18-trione Ergotaman-3',6',18-trione, 12'-hydroxy-2'-methyl-5'-(phenylmethyl) 12'-Hydroxy-2'-methyl-5'-(phenylmethyl) ergotaman-3',6', 18-trione Indolo[4,3-**fg**]quinoline, ergotaman-3',6',18-trione derivative 8H-Oxazolo[3,2-**a**]-pyrrolo[2,1-**c**]pyrazine, ergotaman-3',6',18-trione derivative N-(5-Benzyl-10b-hydroxy-2-methyl-3,6-dioxoperhydrooxazolo-[3,2-**a**]pyrrolo[2,1-**c**]-pyrazin-2-yl)-**D**-lysergamide Ergam Ergate Ergomar Ergostat Ergotamine bitartrate Ergotamine, tartrate (2 : 1) (S) Ergotamini tartras Ergotaman-3',6',18-trione, 12'-hydroxy-2'-methyl-5'-(phenyl-methyl)-, -2,3dihydroxy-butanedioate (2 : 1) (S)	113-15-5 379-79-3 (S)

		Ergotartrate Etin Exmigra Femergin Gotamine tartrate Gynergene Lingraine Lingran Medihaler Ergotamine Neo-Ergotine Rigetamine Secagyne Secupan	
	(ii) Lysergamide (P) (2939.69)	9,10-Didehydro-6-methylergoline-8-carboxamide Ergine Ergoline-8-carboxamide, 9,10-didehydro-6-methyl Indolo[4,3-fg]quinoline, ergoline-8-carboxamide derivative	478-94-4

CONTROLLED SUBSTANCE (SUB HEADING NUMBER)	PRECURSOR (P) ESSENTIAL CHEMICAL	SYNONYM	CHEMICAL ABSTRACTS SERVIC

	(E) (SUBHEADING NUMBER)		E (CAS) NUMBER OF (P) OR (E) OR OF THEIR SALTS (S)
	(iii) Lysergic acid (P) (2939.63)	Ergoline-8-carboxylic acid, 9,10-didehydro-6- methyl-indolo [4,3-fg] quinoline, ergoline-8-carboxylic acid derivative 4,6,6a,7,8,9-Hexahydro- 7-methylindolo-[4,3-fg]-quinoline-9-carboxylic acid 9,10-Didehydro- 6-methyl- ergoline-8- carboxylic acid	82-58-6
	(iv) Methyl 6-methylnicotinate (P) (2933.39)	Methyl 6-methylpyridine-3- carboxylate 6-Methylnicotinic acid, methyl ester Nicotinic acid, 6-methyl-, methyl ester 3-Pyridinecarboxylic acid, 6-methyl-, methyl ester	5470-70-2
	(v) Ergometrine (INN) (P) (2939.61)	Ergonovine Ergobasine Ergotocine Ergostetrine Ergotrate Ergoklinine Syntometrine 9,10-Didehydro-N-(2- hydroxy-1-methylethyl)-	60-79-7 60-79-7

		6-methylergoline-8-carboxamide N-(2-Hydroxy-1-methyl-etethyl)lysergamide Lysergic acid, 2-propanolamide	
		Lysergic acid, 2-hydroxy-1-methylethyl amide Hydroxypropyllyserg-amide Basergin Neofemergen Cornocentin Ermetrine	129-50-0 (S) 129-51-1 (S)

CONTROLLED SUBSTANCE (SUBHEADING NUMBER)	**PRECURSOR (P) ESSENTIAL CHEMICAL (E)** (SUBHEADING NUMBER)	**SYNONYM**	**CHEMICAL ABSTRACTS SERVICE (CAS) NUMBER OF (P) OR (E) OR OF THEIR SALTS (S)**
AMFETAMINE (INN) (AMPHETAMINE) or **α-METHYL-PHENETHYLAMINE** (2921.46)	(i) Allylbenzene (P) (2902.90)	3-Phenylprop-1-ene	300-57-2
(ii) Phenyl-acetone (P) (2914.31)	P-2-P Phenylpropan-2-one 1-Phenyl-2-oxoprop	103-79-7	

	ane Benzyl methyl ketone BMK		
	(iii) Cathine (INN) (P) (2939.43)	Norpseudoephedrine Adiposetten N 2-Amino-1-hydroxy-1-phenylpropane 2-Amino-2-methyl-1-phenylethanol 2-Amino-1-phenylpropan-1-ol Benzenemethanol, α-(1-aminoethyl) E 50 Exponcit Fugoa-Depot Katine Miniscap M.D. Minusin(e) Norisoephedrine 1-Phenyl-2-aminopropan-1-ol Phenylpropanolamine Pseudonorephedrin(e) Reduform	37577-07-04 36393-56-3 492-39-7

	(iv) Phenylacetic acid (P) (2916.34)	Benzeneacetic acid α-Toluic acid	103-82-2
	(v) Formamide (P) (2924.19)	Methanamide Carbamaldehyde Formic acid amide	75-12-7
	(vi) Benzaldehyde (P) (2912.21)	Benzoic aldehyde Benzenecarbonal	100-52-7
	(vii) Ammonium formate (E) (2915.12)	—	540-69-2
	(viii) Nitroethane (E) (2904.20)	—	79-24-3
	(ix) Hydroxyl-ammonium chloride (E) (2825.10)	Hydroxylamine hydrochloride Oxammonium hydro-chloride	5470-11-1
	(x) Trans-β-Methyl-styrene (P) (2902.90)	1-Phenylpropene Prop-1-enylbenzene	873-66-5

CONTROLLED SUBSTANCE (SUBHEADING NUMBER)	**PRECURSOR (P) ESSENTIAL CHEMICAL (E)** (SUBHEADING NUMBER)	**SYNONYM**	**CHEMICAL ABSTRACTS SERVICE (CAS) NUMBER OF (P) OR (E)**

			OR OF THEIR SALTS (S)
METHYLENE DIOXYAMPHETAMINE or MDA or α-METHYL-3,4-METHYLENE-DIOXYPHENETHYLAMINE (2932.99)	(i) Piperonal (P) (2932.93)	1,3-Benzodioxole-5-carbaldehyde Protocatechualdehyde, methylene ether 1,3-Benzodioxole-5-carboxaldehyde 3,4-(Methylenedioxy)-benzaldehyde Heliotropin Piperonylaldehyde Dioxymethyleneproto- catechuic aldehyde	120-57-0
	(ii) Safrole (P) (2932.94)	5-Allyl-1,3-benzodioxole 1,2-Methylenedioxy-4-prop-2-enylbenzene 5-Prop-2-enyl-1,3- benzodioxole	94-59-7
	(iii) Isosafrole (P) (2932.91)	5-Prop-1-enyl-1,3-benzodioxole 1,2-Methylenedioxy-4-prop-1-enylbenzene	120-58-1
	(iv) Nitroethane (E) (2904.20)	—	79-24-3

	(v) 1-(1,3-Benzo-dioxole-5-yl) propan-2-one (P) (2932.92)	3,4-Methylenedioxy-phenylacetone 3,4-Methylenedioxy-phenylpropane-2-one	4676-39-5
	(vi) Ammonium formate (E) (2915.12)	—	540-69-2
	(vii) Hydroxyl-ammonium chloride (E) (2825.10)	Hydroxylamine hydrochloride Oxammonium hydrochloride	5470-11-1
	(viii) Formamide (E) (2924.19)	Methanamide Carbamaldehyde Formic acid amide	75-12-7
METAMFETAMINE (INN) (METHAMPHETAMINE) or **2-METHYLAMINO-1-PHENYLPROPANE** or **DEOXYEPHEDRINE** (2939.45)	(i) Phenylacetone (P) (2914.31)	P-2-P Phenylpropan-2-one 1-Phenyl-2-oxopropane Benzyl methyl ketone BMK	103-79-7
	(ii) N-Methyl-formamide (P) (2924.19)	Methylformamide	123-39-7
	(iii) Benzyl	(Chloromethyl)benzene	100-44-

	chloride(P) (2903.99)	α-Chlorotoluene	7
	(iv) Ephedrine (P) (2939.41)	1-Phenyl-1-hydroxy-2-methylaminopropane 2-Methylamino-1-phenyl-propan-1-ol	299-42-3

CONTROLLED SUBSTANCE (SUBHEADING NUMBER)	**PRECURSOR (P) ESSENTIAL CHEMICAL (E)** (SUBHEADING NUMBER)	**SYNONYM**	**CHEMICAL ABSTRACTS SERVICE (CAS) NUMBER OF (P) OR (E) OR OF THEIR SALTS (S)**
	(v) Methylamine (P) (2921.11)	Aminomethane Monomethylamin(e) Methanamine	74-89-5
	(vi) Phenylacetic acid (P) (2916.34) (vii) Benzaldehyde (P) (2912.21)	Benzeneacetic acid α-Toluic acid Benzoic aldehyde Benzenecarbonal	103-82-2 100-52-7
METHYLENE-DIOXYMETHAMPHETAMINE or **MDMA** or **α-METHYL-3,4-**	(i) Methylamine (E) (2921.11)	Aminomethane Monomethylamine	74-89-5

METHYLENE-DIOXYPHENETHYL-(METHYL)AMINE or X TC (Ecstasy) (2932.99)		Methanamine	
(ii) Piperonal (P) (2932.93)	1,3-Benzodioxole-5-carbaldehyde Protocatechualdehyde, methylene ether 1,3-Benzodioxole-5-carboxaldehyde 3,4-(Methylenedioxy)-benzaldehyde Heliotropin Piperonylaldehyde Dioxymethyleneprotoca-technic aldehyde	120-57-0	
	(iii) Safrole (P) (2932.94)	5-Allyl-1,3-benzodioxole 1,2-Methylenedioxy-4-prop-2-enylbenzene 5-Prop-2-enyl-1,3-benzodioxole	94-59-7
	(iv) Isosafrole (P) (2932.91)	5-Prop-1-enyl-1,3-benzodioxole 1,2-Methylenedioxy-4-prop-1-enylbenzene	120-58-1
	(v) Nitroethane (E) (2904.20)	—	79-24-3
	(vi) 1-(1,3-Benzo-	3,4-Methylenedioxy-	4676-39-

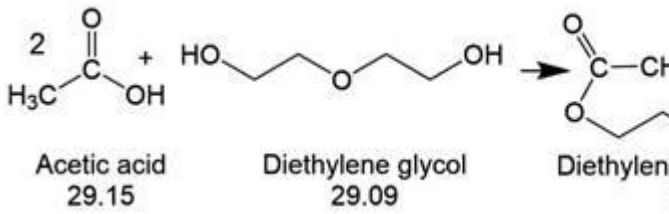
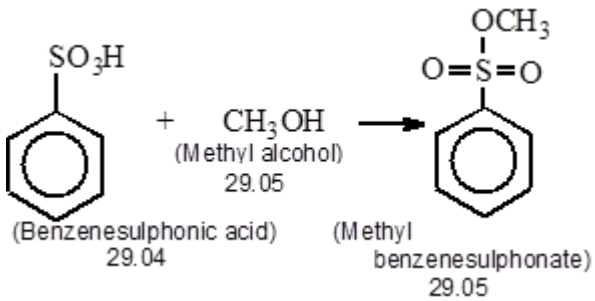
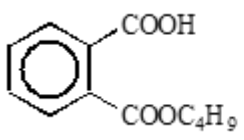
	dioxole-5-yl) propan- 2-one (P) (2932.92)	phenylacetone 3,4-Methylenedioxyphenyl-propane-2-one	5
METHAQUALONE (INN) or 2-METHYL-3-O-TOLYL-4-(3H)-QUINAZOLINONE (2933.55)	(i) Anthranilic acid (P) (2922.43)	o-Aminobenzoic acid 2-Aminobenzoic acid	118-92-3
	(ii) o-Toluidine (P) (2921.43)	o-Aminotoluene 2-Aminotoluene	95-53-4
	(iii) o-Nitro- toluene (P) (2904.20)	1-Methyl-2-nitrobenzene 2-Nitrotoluene	88-72-2
	(iv) Acetic anhydride (E) (2915.24)	Acetanhydride Acetic oxide Acetyl oxide Ethanoic anhydride	108-24-7
	(v) 2-Methyl- 1,3-benzoxazole (P) (2934.99)	—	95-21-6
	(vi) 2-Acetamido- benzoic acid (P) (2924.23)	2-Acetylaminobenzoic acid o-Acetylaminobenzoic acid N-Acetylanthranilic acid	89-52-1

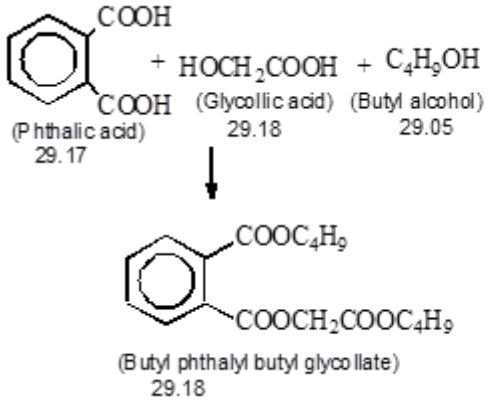
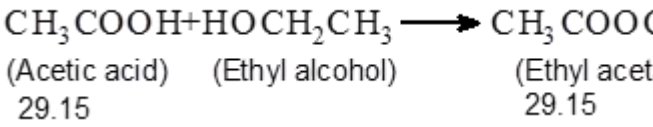
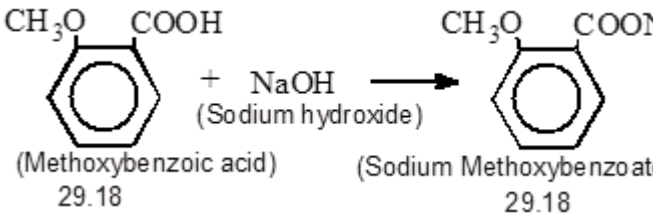
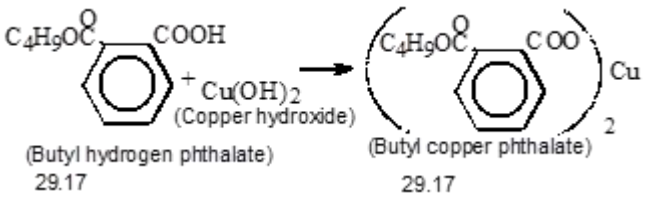
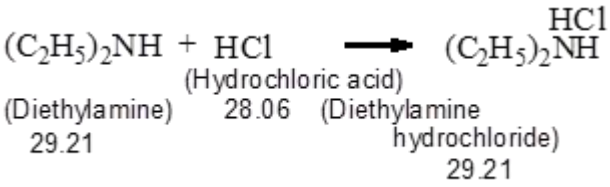
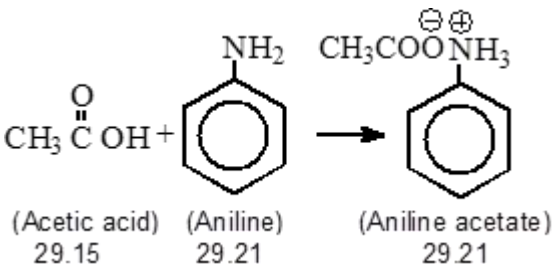
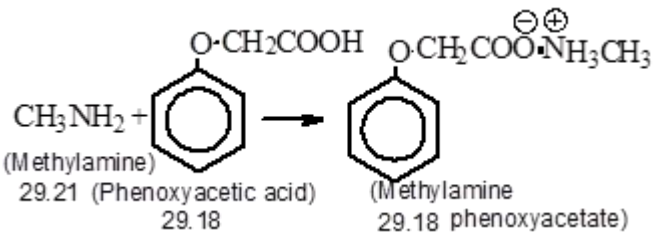
CONTROLLED SUBSTANCE (SUBHEADING	**PRECURSOR (P) ESSENTIAL CHEMICAL**	**SYNONYM**	**CHEMICAL ABSTRACTS SERVICE**

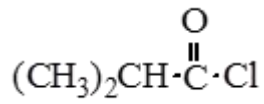
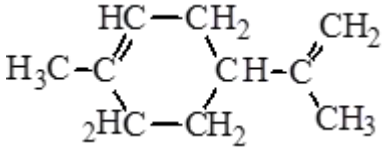
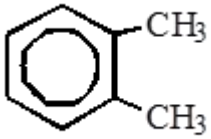
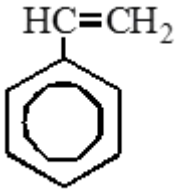
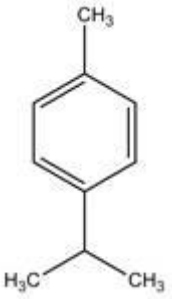
NUMBER)	**(E)** (SUBHEADING NUMBER)		**(CAS) NUMBER OF (P) OR (E) OR OF THEIR SALTS (S)**
MESCALINE or **3,4,5-TRIMETHOXY-PHENETHYLAMINE** (2939.79)	(i) 3,4,5-Trimethoxy-benzalde-hyde (P) (2912.49) (ii) 3,4,5-Trimethoxy-benzoic acid (P) (2918.99)	3,4,5-Trimethoxyformyl-benzene Gallic acid, trimethyl	86-81-7 118-41-2
	(iii) 3,4,5-Trimeth-oxybenzoyl chloride (P) (2918.99)	—	4521-61-3
	(iv) 3,4,5-Trimeth-oxybenzyl alcohol (P) (2909.49)	—	3840-31-1
	(v) Nitromethane (E) (2904.20)	—	75-52-5
PHENCYCLIDINE (INN) or **PCP** or **1-(1-PHENYLCYCLOHEXYL) PIPERIDINE** (2933.33)	(i) Piperidine (P) (2933.32)	Hexahydropyridine Pentamethylenimine	110-89-4
(ii) Cyclohexanone (P) (2914.22)	Pimelic ketone Ketohexamethylene Hytrol o Anone Nadone	108-94-1	

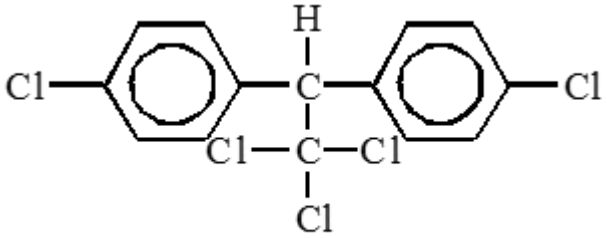
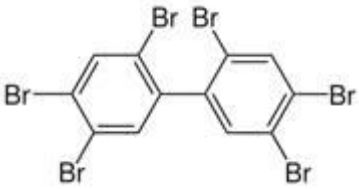
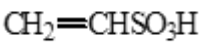
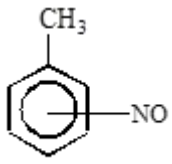
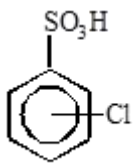
	(iii) Bromobenzene (P) (2903.99)	Monobromobenzene Phenyl bromide	108-86-1

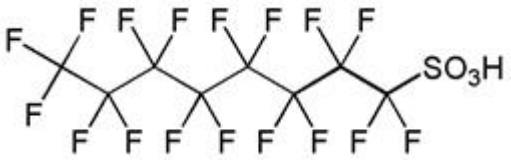
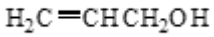
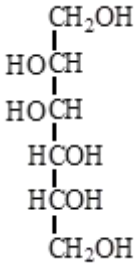
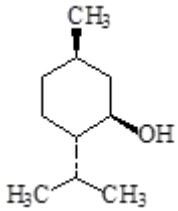
CHEMICAL STRUCTURES OF CERTAIN PRODUCTS DESCRIBED IN THE EXPLANATORY NOTES TO CHAPTER 29

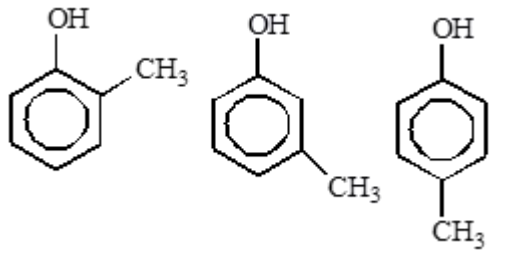
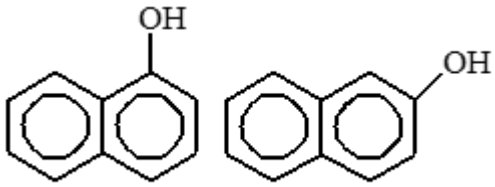
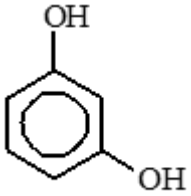
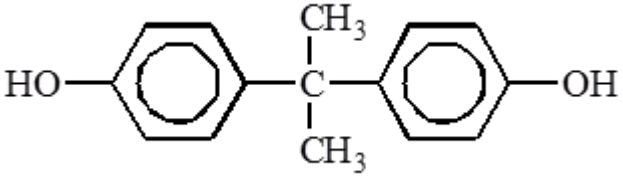
ing	Paragraph			Description in the Explanatory Notes	Chemical Structure
ral	(G)			**Classification of esters, salts, co-ordination compounds and certain halides**	
		(1)		Esters	
			(a)		
			(b)		
			(c)		 (Butyl hydrogenphthalate) 29.17

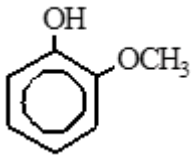
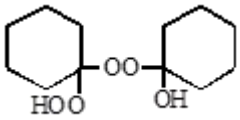
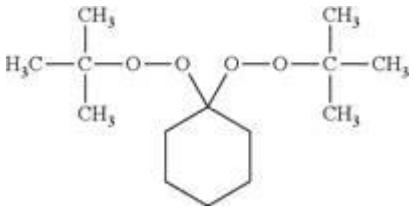
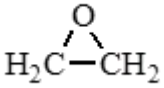
	(G)	(1)	(d)		
			(d)		
		(2)		Salts	
			(a)(i)		
	(G)	(2)	(a)(i)		
			(ii)		
			(b)(i)		
			(ii)		

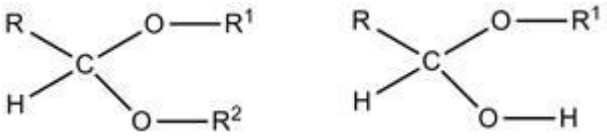
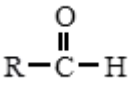
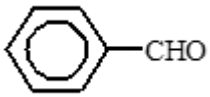
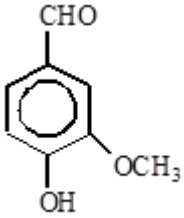
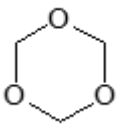
	(G)	(4)		Halides of carboxylic acids (Isobutyryl chloride : 29.15)	
2				**Cyclic hydrocarbons**	
	(B)			CYCLOTERPENES	
		(3)		Limonene	
	(C)			AROMATIC HYDROCARBONS	
		(I)	(c)	o-xylene	
			(d)(1)	Styrene	
2)	(C)	(I)	(d)(4)	***p*-Cymene**	
3				**Halogenated derivatives of hydrocarbons**	
	(F)			HALOGANATED DERIVATIVES OF AROMATIC HYDROCARBONS	

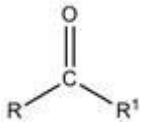
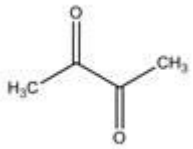
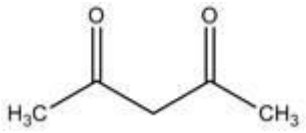
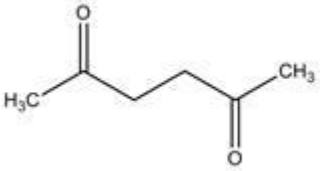
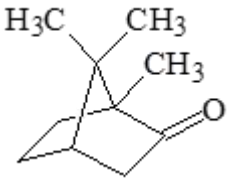
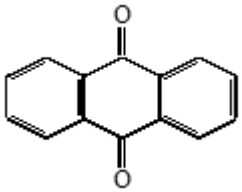
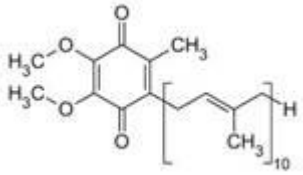
		(6)		DDT (ISO) (clofenotane (INN), 1,1,1-trichloro-2,2-bis(*p*-chlorophenyl)ethane or dichlorodiphenyltrichloroethane)	
		(11)		2.2'.4.4'.5.5'-hexabromobiphenyl	
4				**Sulphonated, nitrated or nitrosated derivatives of hydrocarbons, whether or not halogenated**	
	(A)			SULPHONATED DERIVATIVES	
		(1)	(a)	Ethylenesulphonic acid	
	(B)			NITRATED DERIVATIVES	
		(1)	(d)	Trinitromethane	$CH(NO_2)_3$
	(C)			NITROSATED DERIVATIVES	
		(2)		Nitrosotoluene	
	(D)			SULPHOHALOGENATED DERIVATIVES	
		(1)		Chlorobenzenesulphonic acid	

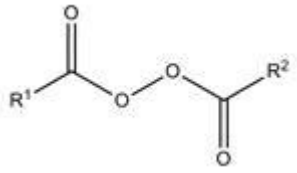
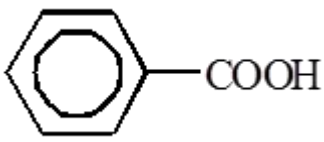
		(5)		Perfluorooctane sulphonic acid (PFOS)	
5				**Acyclic alcohols and their halogenated, sulphonated, nitrated or nitrosated derivatives**	
	(B)			UNSATURATED MONOHYDRIC ALCOHOLS	
		(1)		Allyl alcohol	
	(C)			DIOLS AND OTHER POLYHYDRIC ALCOHOLS	
		(II)	(4)	Mannitol	
6				**Cyclic alcohols and their halogenated, sulphonated, nitrated or nitrosated derivatives**	
	(A)			CYCLANIC, CYCLENIC OR CYCLOTERPENIC ALCOHOLS AND THEIR HALOGENATED, SULPHONATED, NITRATED OR NITROSATED DERIVATIVES	
		(1)		Menthol	

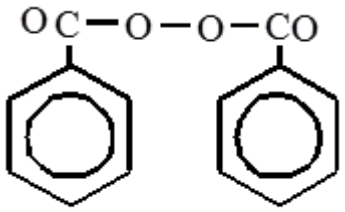
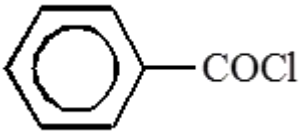
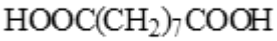
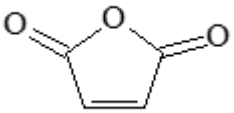
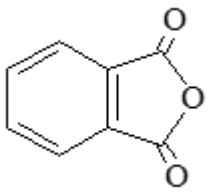
7				**Phenols; phenol-alcohols**	
	(A)			MONONUCLEAR MONOPHENOLS	
		(2)		Cresol(s)	 (o-Cresol) (m-Cresol)
	(B)			POLYNUCLEAR MONOPHENOLS	
		(1)		Naphthol(s)	 (α-Naphthol) (β-Naphthol)
	(C)			POLYPHENOLS	
		(1)		Resorcinol	
7)	(C)	(3)		Bisphenol A	
9				**Ethers, ether-alcohols, ether-phenols, ether-alcohol-phenols, alcohol peroxides, ether peroxides, acetal and hemiacetal peroxide, ketone peroxides (whether or not**	

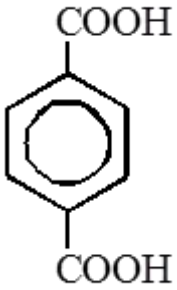
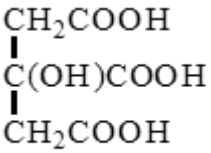
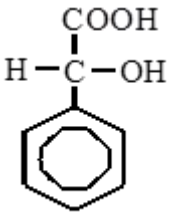
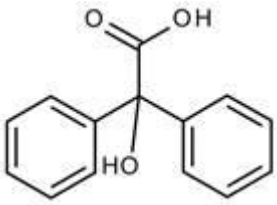
				chemically defined), and their halogenated, sulphonated, nitrated or nitrosated derivatives	
	(C)			ETHER-PHENOLS AND ETHER-ALCOHOL-PHENOLS	
		(1)		Guaiacol	
	(D)			ALCOHOL PEROXIDES, ETHER PEROXIDES, ACETAL AND HEMIACETAL PEROXIDES AND KETONE PEROXIDES	
				Ketone peroxides (Cyclohexanone peroxide)	
				1,1-di(tert-butylperoxy)cyclohexane	
O				**Epoxides, epoxyalcohols, epoxyphenols and epoxyethers, with a three-membered ring, and their halogenated, sulphonated, nitrated or nitrosated derivatives**	
	(1)			Oxirane	
1				**Acetals and hemiacetals, whether or not with other oxygen function, and their halogenated, sulphonated, nitrated or nitrosated**	

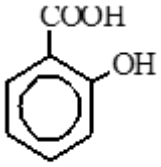
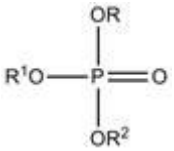
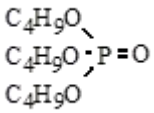
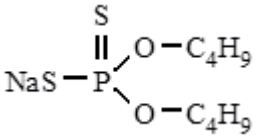
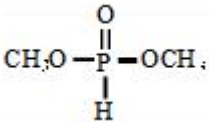
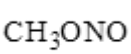
				derivatives	
	(A)			ACETALS AND HEMIACETALS	
2				Aldehydes, whether or not with other oxygen function; cyclic polymers of aldehydes; paraformaldehyde	
	(A)			ALDEHYDES	
		(IV)	(1)	Benzaldehyde	
	(B)			ALDEHYDE-ETHERS, ALDEHYDE-PHENOLS AND ALDEHYDES WITH OTHER OXYGEN FUNCTION	
		(4)		Vanillin	
	(C)			CYCLIC POLYMERS OF ALDEHYDES	
		(1)		Trioxan	
4				Ketones and quinones, whether or not with other oxygen function, and their halogenated,	

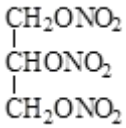
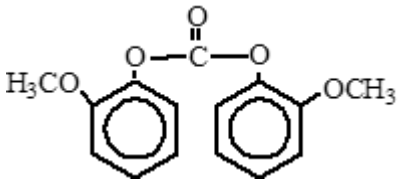
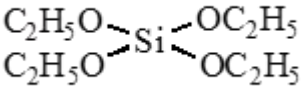
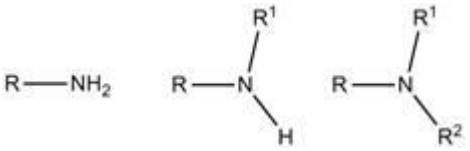
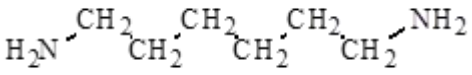
				sulphonated, nitrated or nitrosated derivatives	
	(A)	(I)		KETONES	
			(8)	Diacetyl	
			(9)	Acetylacetone	
			(10)	Acetonylacetone	
		(II)	(1)	Camphor	
4)	(E)			QUINONES	
		(1)		Anthraquinone	
4)	(F)			QUINONE-ALCOHOLS, QUINONE-PHENOLS, QUINONE-ALDEHYDES AND OTHER OXYGEN FUNCTION QUINONES	
		(4)		Coenzyme Q10 (ubidecarenone (INN))	

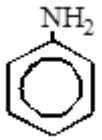
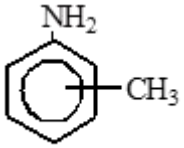
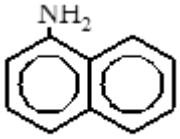
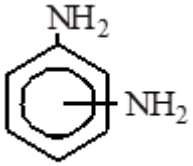
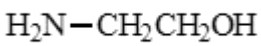
				Saturated acyclic monocarboxylic acids and their anhydrides, halides, peroxides and peroxyacids; their halogenated, sulphonated, nitrated or nitrosated derivatives	
	(C)			ACID PEROXIDES	
		(V)	(a)	n-Butyric acid	$CH_3CH_2CH_2COOH$
				Unsaturated acyclic monocarboxylic acids, cyclic monocarboxylic acids, their anhydrides, halides, peroxides and peroxyacids; their halogenated, sulphonated, nitrated or nitrosated derivatives	
	(A)			UNSATURATED ACYCLIC MONOCARBOXYLIC ACIDS AND THEIR SALTS, ESTERS AND OTHER DERIVATIVES	
		(1)		Acrylic acid	$CH_2{=}CHCOOH$
	(C)			AROMATIC SATURATED MONOCARBOXYLIC ACIDS AND THEIR SALTS, ESTERS AND OTHER DERIVATIVES	
		(1)		Benzoic acid	

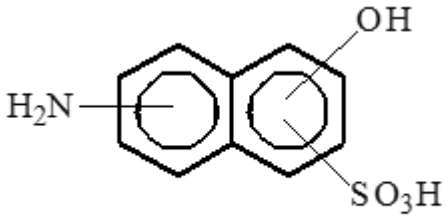
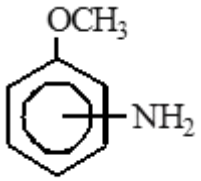
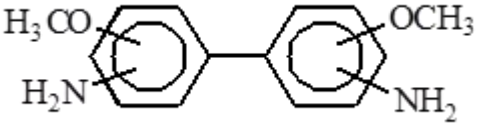
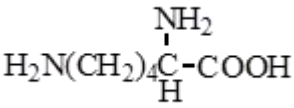
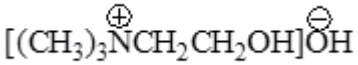
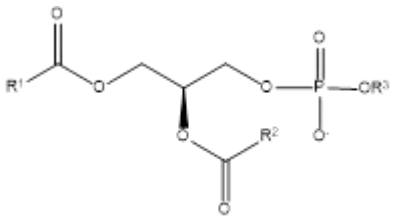
			(a)	Benzoyl peroxide	
6)	(C)	(1)	(b)	Benzoyl chloride	
7				**Polycarboxylic acids, their anhydrides, halides, peroxides and peroxyacids; their halogenated, sulphonated, nitrated or nitrosated derivatives**	
	(A)			ACYCLIC POLYCARBOXYLIC ACIDS AND THEIR ESTERS, SALTS AND DERIVATIVES	
		(3)		Azelaic acid	
		(5)		Maleic anhydride	
	(C)			AROMATIC POLYCARBOXYLIC ACIDS AND THEIR ESTERS, SALTS AND OTHER DERIVATIVES	
		(1)		Phthalic anhydride	

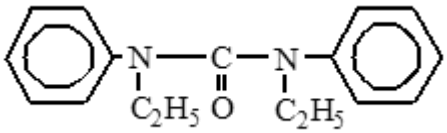
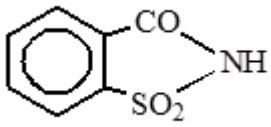
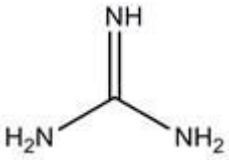
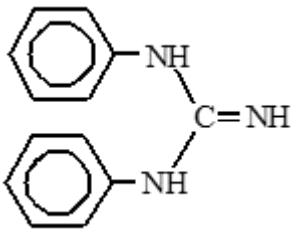
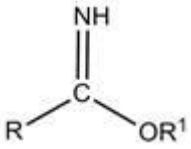
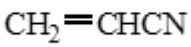
7)	(C)	(2)		Terephthalic acid	
3				**Carboxylic acids with additional oxygen function and their anhydrides, halides, peroxides and peroxyacids; their halogenated, sulphonated, nitrated or nitrosated derivatives**	
	(A)			CARBOXYLIC ACIDS WITH ALCOHOL FUNCTION AND THEIR ESTERS, SALTS AND OTHER DERIVATIVES	
		(3)		Citric acid	
8)	(A)	(6)		Phenylglycolic acid	
		(8)		2,2-Diphenyl-2-hydroxyacetic acid (benzilic acid)	
	(B)			CARBOXYLIC ACIDS WITH PHENOL FUNCTION AND THEIR ESTERS, SALTS AND OTHER DERIVATIVES	

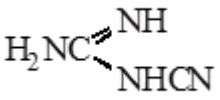
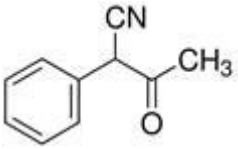
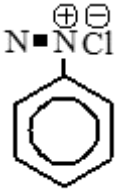
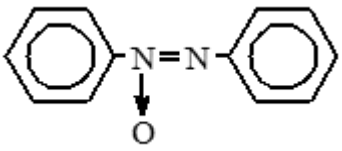
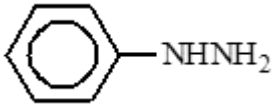
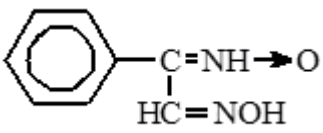
8)	(B)	(I)		Salicylic acid	
				Phosphoric esters and their salts, including lactophosphates; their halogenated, sulphonated, nitrated or nitrosated derivatives	
	(3)			Tributyl phosphate	
				Esters of other inorganic acids of non-metals (excluding esters of hydrogen halides) and their salts; their halogenated, sulphonated, nitrated or nitrosated derivatives	
	(A)			Thiophosphoric esters	
				Sodium O,O-dibutyldithiophosphates	
	(B)			PHOSPHITE ESTERS AND THEIR SALTS.	
				Dimethyl phosphite	
	(D)			Nitrous and nitric esters	
				Methyl nitrite	

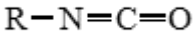
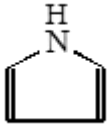
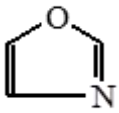
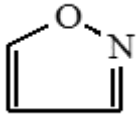
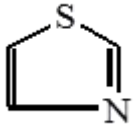
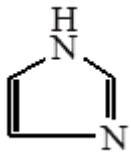
O)	(D)			Nitroglycerol	
	(E)			Carbonic or peroxocarbonic esters and their salts	
		(1)		Diguaiacyl carbonate	
	(F)			Silicic acid esters and their salts	
				Tetraethyl silicate	
1				**Amine-function compounds**	
	(A)			ACYCLIC MONOAMINES AND THEIR DERIVATIVES; SALTS THEREOF	
		(4)		Ethylamine	$CH_3-CH_2-NH_2$
1)	(B)			ACYCLIC POLYAMINES AND THEIR DERIVATIVES; SALTS THEREOF	
		(2)		Hexamethylenediamine	
	(D)			AROMATIC MONOAMINES AND THEIR DERIVATIVES; SALTS	

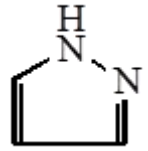
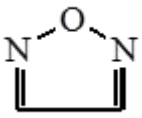
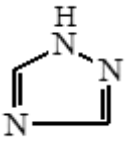
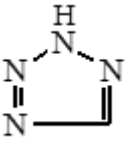
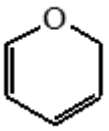
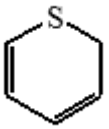
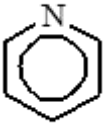
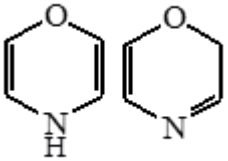
				THEREOF	
		(1)		Aniline	
		(2)		Toluidine(s)	
		(4)		1-Naphtylamine	
1)	(E)			AROMATIC POLYAMINES AND THEIR DERIVATIVES; SALTS THEREOF	
		(1)		Phenylenediamine(s)	
2				**Oxygen-function amino-compounds**	
	(A)			AMINO-ALCOHOLS, THEIR ETHERS AND ESTERS; SALTS THEREOF	
		(1)		Monoethanolamine	
	(B)			AMINO-NAPHTHOLS AND OTHER AMINO-PHENOLS, THEIR ETHERS AND ESTERS; SALTS THEREOF	

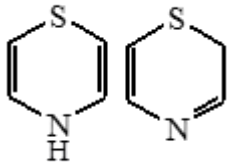
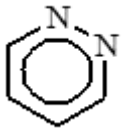
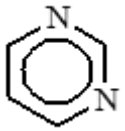
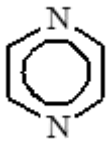
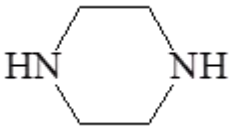
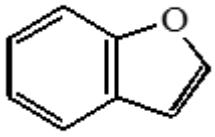
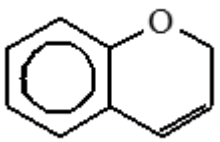
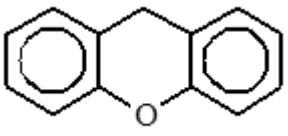
		(1)		Aminohydroxynaphthalenesulphonic acids	
2)	(B)	(a)		Anisidine(s)	
		(b)		Dianisidine(s)	
	(D)			AMINO-ACIDS AND THEIR ESTERS; SALTS THEREOF	
		(1)		Lysine	
3				**Quaternary ammonium salts and hydroxides; lecithins and other phosphoaminolipids, whether or not chemically defined**	
	(1)			Choline (Choline hydroxide)	
3)	(2)			Lecithin	
4				**Carboxyamide-function compounds; amide-function compounds of carbonic acid**	
	(B)			CYCLIC AMIDES	

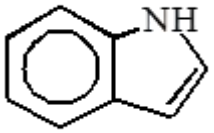
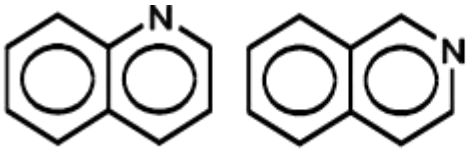
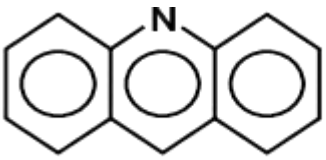
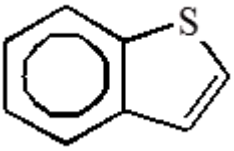
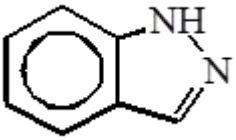
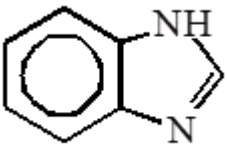
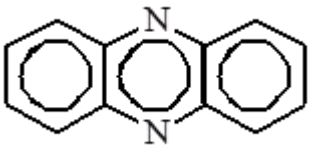
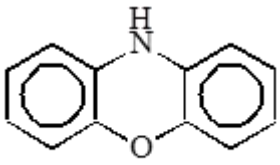
		(1)	(ii)	Diethyldiphenylurea	
5				**Carboxyimide-function compounds (including saccharin and its salts) and imine-function compounds**	
	(A)			IMIDES	
		(1)		Saccharin	
5)	(B)			IMINES	
		(1)		guanidine	
			(a)	Diphenylguanidine	
		(3)		Imino ethers	
6				**Nitrile-function compounds**	
	(1)			Acrylonitrile	

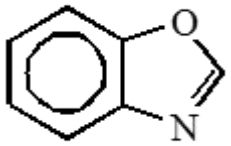
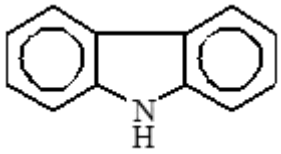
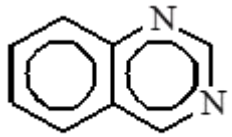
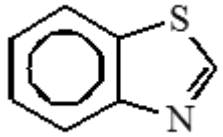
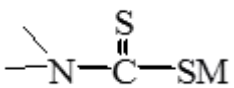
	(2)			1-Cyanoguanidine	
6)	(19)			alpha-Phenylacetoacetonitrile (APAAN)	
7				**Diazo-, azo- or azoxy-compounds**	
	(A)			DIAZO-COMPOUNDS	
		(1)	(a)	Benzenediazonium chloride	
	(B)			AZO-COMPOUNDS	$R^1N = NR^2$
	(C)			AZOXY-COMPOUNDS	$R^1\text{-}N_2O\text{-}R^2$
		(1)		Azoxybenzene	
8				**Organic derivatives of hydrazine or of hydroxylamine**	
	(1)			Phenylhydrazine	
	(11)			Phenylglyoxime	
9				**Compounds with other nitrogen function**	

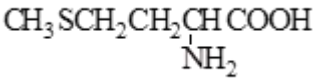
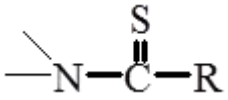
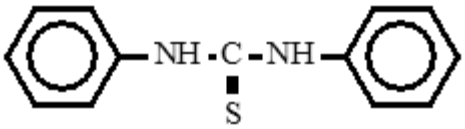
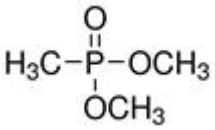
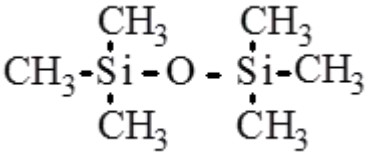
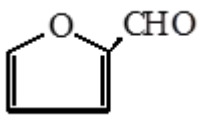
	(1)			Isocyanates	
X ral				ORGANO-INORGANIC COMPOUNDS, HETEROCYCLIC COMPOUNDS, NUCLEIC ACIDS AND THEIR SALTS, AND SULPHONAMIDES	
	(A)			FIVE-MEMBERED RINGS	
		(1)	(a)	Furan	
ral)	(A)	(1)	(b)	Thiophen	
			(c)	Pyrrole	
		(2)	(a)	Oxazole	
			(a)	Isoxazole	
			(b)	Thiazole	
ral)	(A)	(2)	(c)	Imidazole	

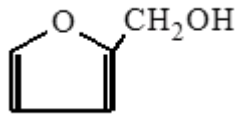
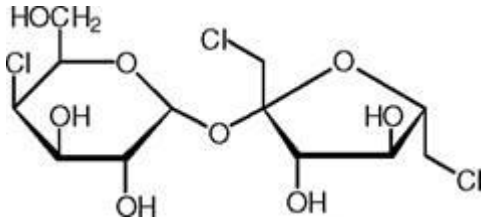
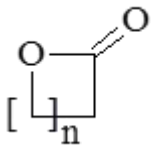
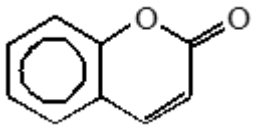
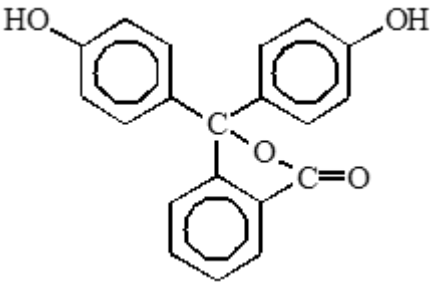
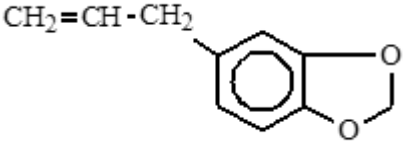
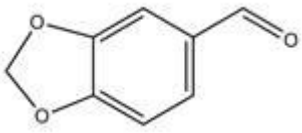
			(c)	Pyrazole	
		(3)	(a)	Furazan	
			(b)	Triazole (1,2,4-Triazole)	
			(c)	Tetrazole	
ral)	(B)			SIX-MEMBERED RINGS	
		(1)	(a)	Pyran (2H-Pyran)	
			(b)	Thiin	
			(c)	Pyridine	
		(2)	(a)	Oxazine (1,4-Oxazine)	

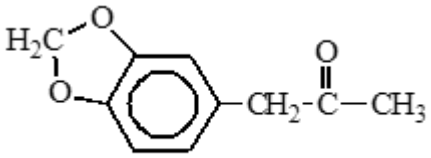
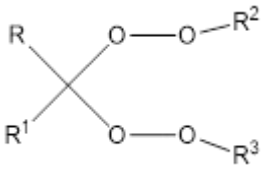
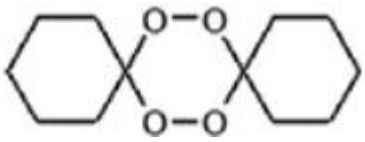
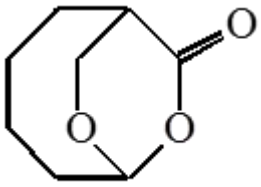
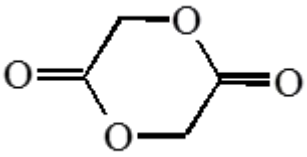
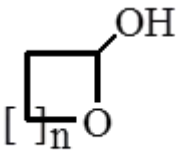
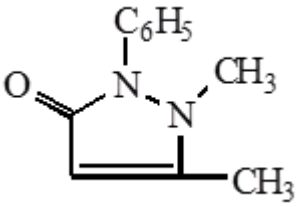
			(b)	Thiazine (1,4-Thiazine)	
ral)	(B)	(2)	(c)	Pyridazine	
			(c)	Pyrimidine	
			(c)	Pyrazine	
			(c)	Piperazine	
	(C)			OTHER MORE COMPLEX HETEROCYCLIC COMPOUNDS	
		(a)		Coumarone	
ral)	(C)	(b)		Benzopyran	
		(c)		Xanthene	

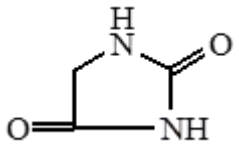
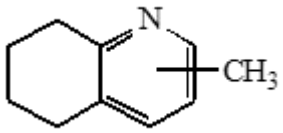
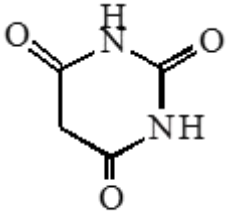
		(d)		Indole	
		(e)		Quinoline and isoquinoline	
		(f)		Acridine	
ral)	(C)	(g)		Benzothiophene (Thionaphthene)	
		(h)		Indazole	
		(ij)		Benzimidazole	
		(k)		Phenazine	
		(l)		Phenoxazine	

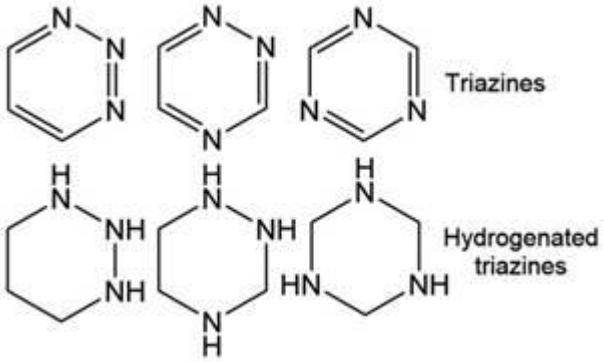
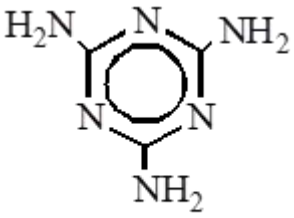
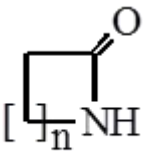
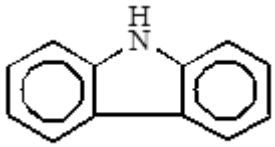
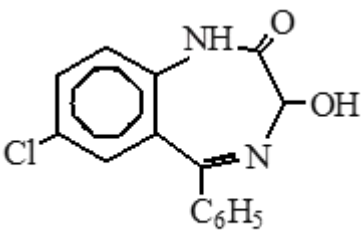
ral)	(C)	(m)		Benzoxazole	
		(n)		Carbazole	
		(o)		Quinazoline	
		(p)		Benzothiazole	
D				**Organo-sulphur compounds**	Compounds with C-S bond
	(A)			DITHIOCARBONATES (XANTHATES)	$ROC(S)SR^1$ R1 = Metal or an organic radic
		(1)		Sodium ethyldithiocarbonate	$C_2H_5O-CS_2Na$
O)	(B)			THIOCARBAMATES, DITHIOCARBAMATES AND THIURAM SULPHIDES	
		(2)		Dithiocarbamates	
	(C)			SULPHIDES (OR THIOETHERS)	RSR^1

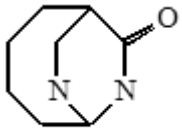
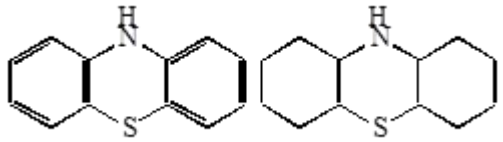
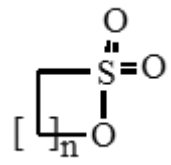
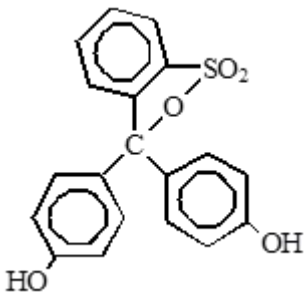
		(1)		Methionine	
	(D)			THIOAMIDES	
		(2)		Thiocarbanilide	
1				**Other organo-inorganic compounds**	
	(3)			Organo-phosphorus compounds	Compounds with C-P bond
				Dimethyl methylphosphonate	
1)	(4)			Organo-silicon compounds	Compounds with C-Si bond
				Hexamethyldisiloxane	
2				**Heterocyclic compounds with oxygen hetero-atom(s) only**	
	(A)			Compounds containing an unfused furan ring (whether or not hydrogenated) in the structure	(See structure of furan against page VI-293 Chapter X (A) (1) (a))
		(2)		2-Furaldehyde	

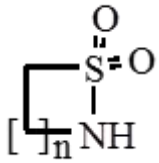
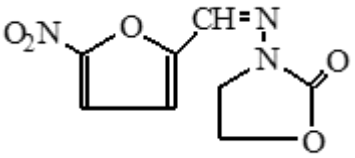
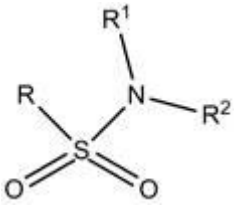
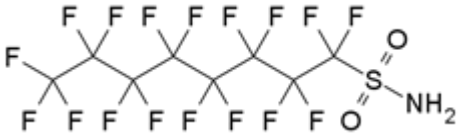
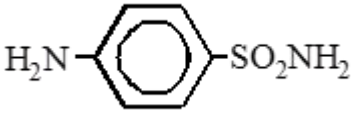
		(3)		Furfuryl alcohol	
		(5)		Sucralose	
2)	(B)			Lactones	
		(a)		Coumarin	
		(p)		Phenolphthalein	
	(C)			Other heterocyclic compounds with oxygen hetero-atom(s) only	
		(5)		Safrole	
2)	(C)	(8)		Piperonal	

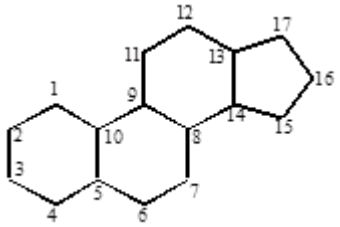
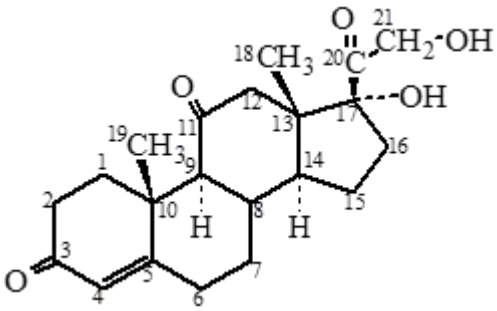
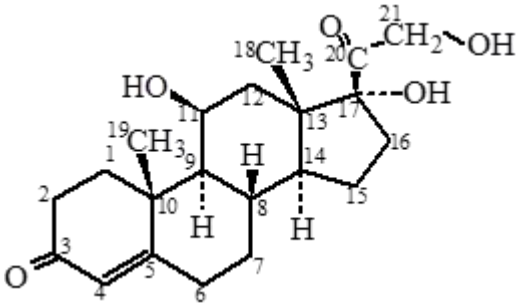
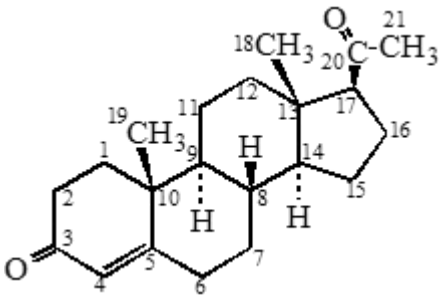
		(10)		1-(1,3-Benzodioxol-5-yl)propan-2-one	
				Ketone peroxides (exclusion) – see 29.09	 
				Example for esters (lactone) forming part of two rings (Subheading Explanatory Notes)	
				Example for dilactone (Subheading Explanatory Notes)	
2)				Internal Hemiacetals	
3				**Heterocyclic compounds with nitrogen hetero-atom(s) only**	
	(A)			Compounds containing an unfused pyrazole ring (whether or not hydrogenated) in the structure	(See structure of pyrazole against page VI Sub-Chapter X (A) (2) (c))
		(1)		Phenazone	
3)	(B)			Compounds containing an unfused	(See structure of imidazole against page V

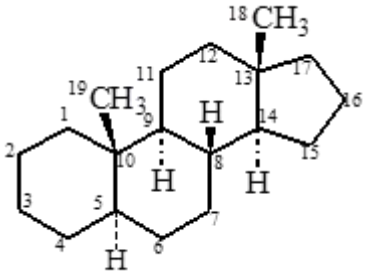
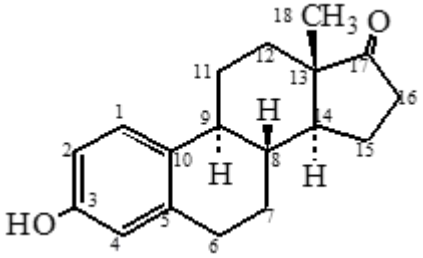
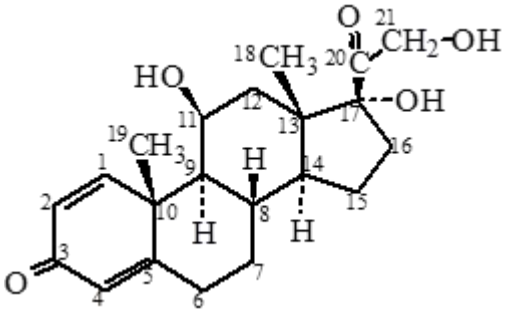
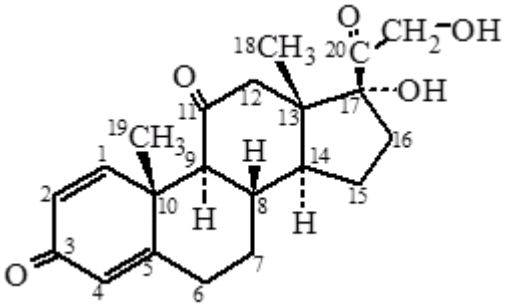
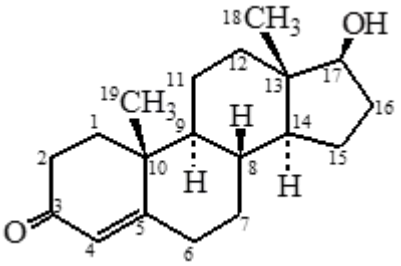
				imidazole ring (whether or not hydrogenated) in the structure	Sub-Chapter X (A) (2) (c))
		(1)		Hydantoin	
	(C)			Compounds containing an unfused pyridine ring (whether or not hydrogenated) in the structure	(See structure of pyridine against page VI Sub-Chapter X (B) (1) (c))
				Fentanyl (INN)	
	(D)			Compounds containing a quinoline or isoquiniline ring-system (whether or not hydrogenated), not further fused	(See structures of quinoline and isoquinoline VI-2930-2 for Sub-Chapter X (C) (e))
		(4)		Tetrahydromethylquinoline (5,6,7,8-Tetrahydromethylquinoline)	
	(E)			Compounds containing a pyrimidine ring (whether or not hydrogenated) or piperazine ring in the structure	(See structure of pyrimidine against page V Sub-Chapter X (B) (2) (c))
		(1)		Malonylurea (Barbituric acid)	

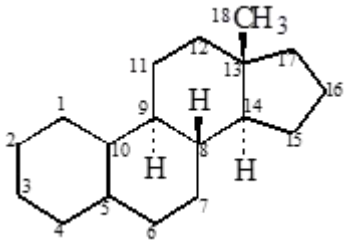
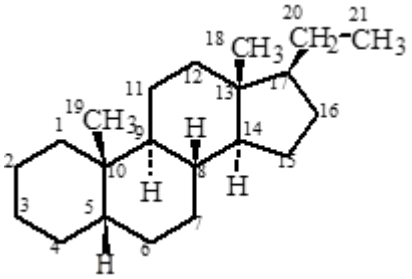
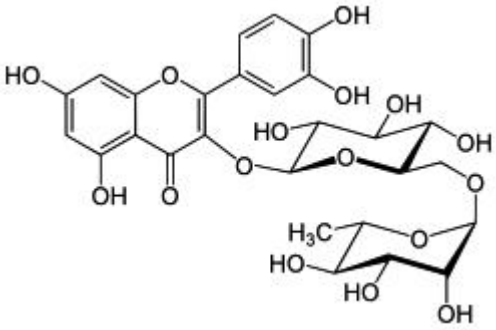
3)	(F)			Compounds containing an unfused triazine ring (whether or not hydrogenated) in the structure	
		(1)		Melamine	
	(G)			Lactams	
3)	(H)			Other heterocyclic compounds with nitrogen hetero-atom(s) only	
		(1)		Carbazole	
		(2)		Acridine	(See structure of acridine against page VI Sub-Chapter X (C) (f))
				Oxazepam (Subheading Explanatory Notes)	

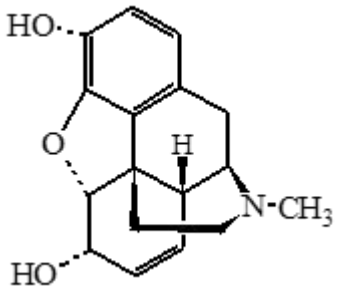
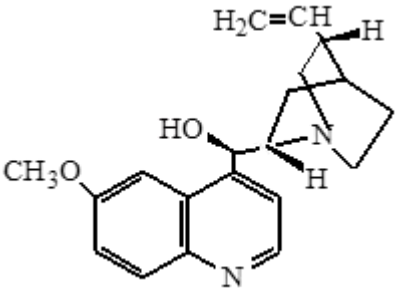
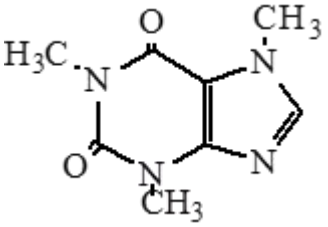
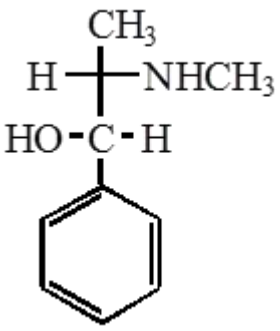
				Example for amide (lactam) forming part of two rings (Subheading Explanatory Notes)	
t				**Nucleic acids and their salts, whether or not chemically defined; other heterocyclic compounds**	
	(A)			Compounds containing an unfused thiazole ring (whether or not hydrogenated) in the structure	(See structure of thiazole against page VI Sub-Chapter X (A) (2) (b))
	(B)			Compounds containing a benzothiazole ring-system (whether or not hydrogenated), not further fused	(See structure of benzothiazole against pag for Sub-Chapter X (C) (p))
	(C)			Compounds containing a phenothiazine ring-system (whether or not hydrogenated), not further fused	
	(D)			Other heterocyclic compounds	
		(1)		Sultones	
			(a)	Phenolsulfonephthalein	

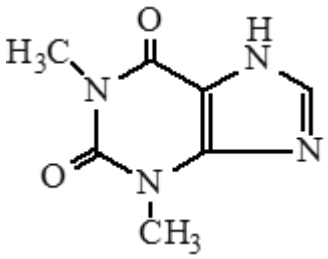
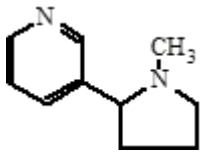
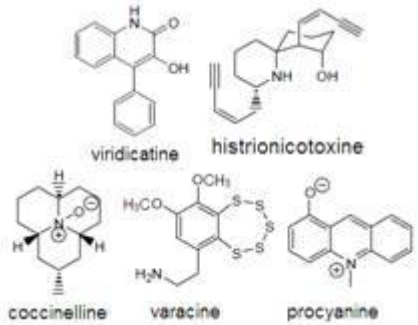
4)	(D)	(2)		Sultams	
		(4)		Furazolidone (INN)	
5				**Sulphonamides**	
	(1)			Perfluorooctane sulphonamide	
	(5)			p-Aminobenzenesulphonamide	
7				***Hormones, prostaglandins, thromboxanes and leukotrienes, natural or reproduced by synthesis; derivatives and structural analogues thereof, including chain modified polypeptides, used primarily as hormones***	
	(V)			Analogues of hormones, prostaglandins, thromboxanes and leukotrienes	

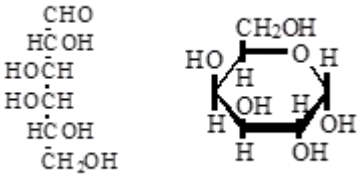
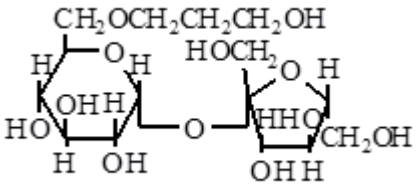
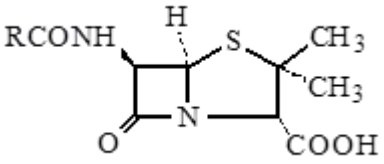
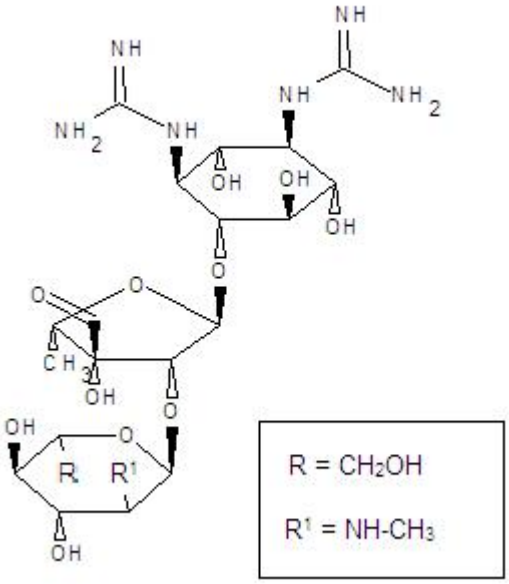
		(b)		Gonane	
	(B)			STEROIDAL HORMONES, THEIR DERIVATIVES AND STRUCTURAL ANALOGUES	
		(1)		Corticosteroid hormones	
			(a)	Cortisone (INN)	
7)	(B)	(1)	(b)	Hydrocortisone (INN)	
		(3)		Oestrogens and progestogens	
			(a)	Progesterone (INN)	

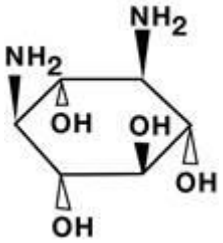
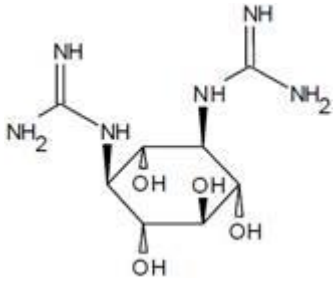
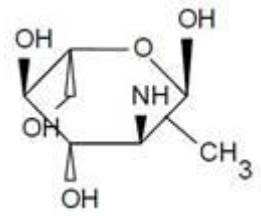
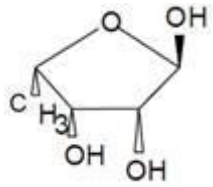
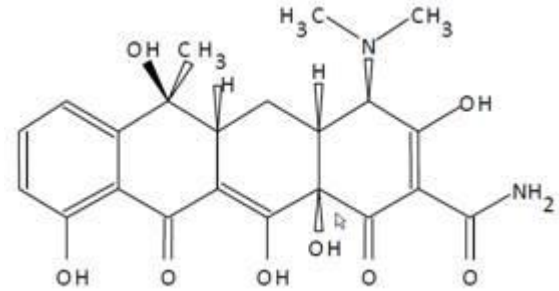
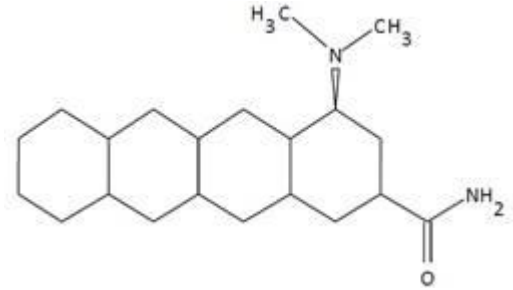
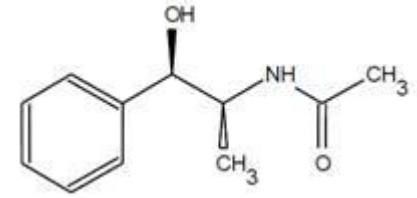
	List			Androstane	
7)	List			Estrone (INN)	
				Prednisolone (INN)	
				Prednisone (INN)	
7)	List			Testosterone (INN)	

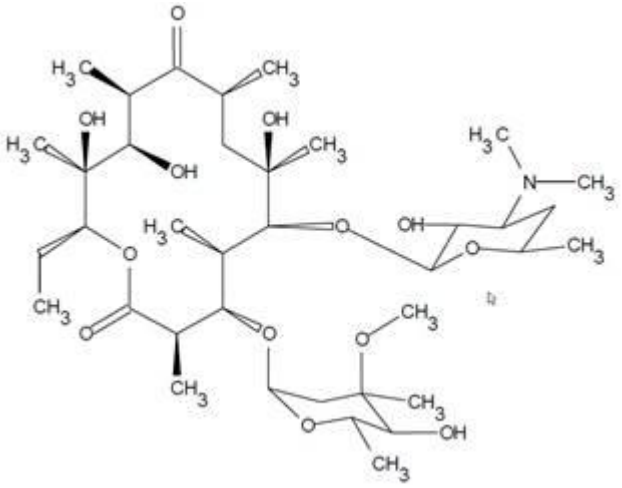
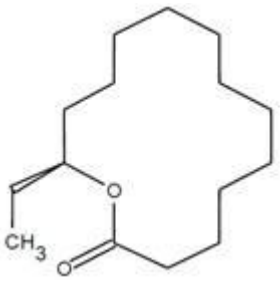
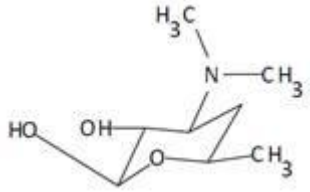
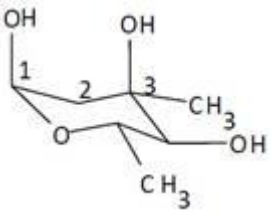
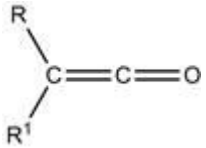
				Estrane	
				Pregnane	
8				**Glycosides, natural or reproduced by synthesis, and their salts, ethers, esters and other derivatives**	
	(1)			Rutoside	
9				**Vegetable alkaloids, natural or reproduced by synthesis, and their salts, ethers, esters and other derivatives**	
	(A)			ALKALOIDS OF OPIUM AND THEIR DERIVATIVES; SALTS THEREOF	

		(1)		Morphine	
9)	(B)			ALKALOIDS OF CINCHONA AND THEIR DERIVATIVES; SALTS THEREOF	
		(1)		Quinine	
	(C)			CAFFEINE AND ITS SALTS	
				Caffeine	
9)	(D)			ALKALOIDS OF EPHEDRA AND THEIR DERIVATIVES; SALTS THEREOF	
		(1)		Ephedrine	

	(E)			THEOPHYLLINE AND AMINOPHYLLINE (THEOPHYLLINE-ETHYLENEDIAMINE) AND THEIR DERIVATIVES; SALTS THEREOF	
	(E)			Theophylline	
9)	(G)			NICOTINE AND ITS SALTS	
				Nicotine	
				OTHER ALKALOIDS OF NON VEGETAL ORIGIN	
	(IJ)			Viridicatin (fungal), histrionicotoxin (animal), coccinelline (insect), varacin (marine) and procyanine (bacterial)	
				Sugars, chemically pure, other than sucrose, lactose, maltose, glucose and fructose; sugar ethers, sugar acetals and sugar esters, and their salts, other than products of heading 29.37, 29.38 or 29.39	

	(A)			SUGARS, CHEMICALLY PURE	
		(1)		Galactose	
	(B)			SUGAR ETHERS, SUGAR ACETALS AND SUGAR ESTERS, AND THEIR SALTS	
		(1)		Hydroxypropyl sucrose	
1				**Antibiotics**	
	(1)			Penicillins	
1)	(2)			Streptomycin	

				Streptamine (constituent of the streptomycin skeleton) (Subheading Explanatory Notes)	
1)				Streptidine (constituent of the streptomycin skeleton) (Subheading Explanatory Notes)	
				Methylglucosamine (constituent of the streptomycin skeleton) (Subheading Explanatory Notes)	
				5-deoxylyxose (constituent of the streptomycin skeleton) (Subheading Explanatory Notes)	
	(3)			Tetracycline	
1)	(3)			4-dimethylamino-naphthacene-2-carboxamide (fully hydrogenated) (constituent of the tetracycline skeleton) (Subheading Explanatory Notes)	
	(4)			N-(2-hydroxy-1-methyl-2-phenethyl)acetamide (constituent of the chloramphenicol skeleton) (Subheading Explanatory Notes)	

	(5)			Erythromycin	
1)	(5)			13-ethyl-13-tridecanolide (constituent of the erythromycin skeleton) (Subheading Explanatory Notes)	
				Desosamine (constituent of the erythromycin skeleton) (Subheading Explanatory Notes)	
				Mycarose (constituent of the erythromycin skeleton) (Subheading Explanatory Notes)	
2				**Other organic compounds**	
	(1)			Ketenes	
	(2)			Boron trifluoride complexes with diethyl ether	$(C_2H_5)_2O{\cdot}BF_3$

(*) Dextromethorphan (INN) ((+)-3- methoxy-N- Methylmorphinan) is specifically excluded from thislist.

(**) Dextrophane (INN) ((+)-3-hydroxy-N-methylmorphinan) is specifically excluded from this list.

(*) Other substances not added.

(**) Natural mixtures, constituents other than alkaloids sufficiently removed, other substances not added .

Chapter 30

Pharmaceutical products

Notes.

1.- This Chapter does not cover :

(a) Foods or beverages (such as dietetic, diabetic or fortified foods, food supplements, tonic beverages and mineral waters), other than nutritional preparations for intravenous administration (Section IV);

(b) Products, such as tablets, chewing gum or patches (transdermal systems), containing nicotine and intended to assist tobacco use cessation (heading 24.04);

(c) Plasters specially calcined or finely ground for use in dentistry (heading 25.20);

(d) Aqueous distillates or aqueous solutions of essential oils, suitable for medicinal uses (heading 33.01);

(e) Preparations of headings 33.03 to 33.07, even if they have therapeutic or prophylactic properties;

(f) Soap or other products of heading 34.01 containing added medicaments;

(g) Preparations with a basis of plaster for use in dentistry (heading 34.07); or

(h) Blood albumin not prepared for therapeutic or prophylactic uses (heading 35.02).

(ij) Diagnostic reagents of heading 38.22.

2.- For the purposes of heading 30.02, the expression "immunological products" applies to peptides and proteins (other than goods of heading 29.37) which are directly involved in the regulation of immunological processes, such as monoclonal antibodies (MAB), antibody fragments, antibody conjugates and antibody fragment conjugates, interleukins, interferons (IFN), chemokines and

certain tumor necrosis factors (TNF), growth factors (GF), hematopoietins and colony stimulating factors (CSF).

3.- For the purposes of headings 30.03 and 30.04 and of Note 4 (d) to this Chapter, the following are to be treated :

(a) As unmixed products :

(1) Unmixed products dissolved in water;

(2) All goods of Chapter 28 or 29; and

(3) Simple vegetable extracts of heading 13.02, merely standardised or dissolved in any solvent;

(b) As products which have been mixed :

(1) Colloidal solutions and suspensions (other than colloidal sulphur);

(2) Vegetable extracts obtained by the treatment of mixtures of vegetable materials; and

(3) Salts and concentrates obtained by evaporating natural mineral waters.

4.- Heading 30.06 applies only to the following, which are to be classified in that heading and in no other heading of the Nomenclature :

(a) Sterile surgical catgut, similar sterile suture materials (including sterile absorbable surgical or dental yarns) and sterile tissue adhesives for surgical wound closure;

(b) Sterile laminaria and sterile laminaria tents;

(c) Sterile absorbable surgical or dental haemostatics; sterile surgical or dental adhesion barriers, whether or not absorbable;

(d) Opacifying preparations for X-ray examinations and diagnostic reagents designed to be administered to the patient, being unmixed products put up in measured doses or products consisting of two or more ingredients which have been mixed together for such uses;

(e) Placebos and blinded (or double-blinded) clinical trial kits for use in recognised clinical trials, put up in measured doses, even if they might contain active medicaments;

(f) Dental cements and other dental fillings; bone reconstruction cements;

(g) First-aid boxes and kits;

(h) Chemical contraceptive preparations based on hormones, on other products of heading 29.37 or on spermicides;

(ij) Gel preparations designed to be used in human or veterinary medicine as a lubricant for parts of the body for surgical operations or physical examinations or as a coupling agent between the body and medical instruments;

(k) Waste pharmaceuticals, that is, pharmaceutical products which are unfit for their originalintended purpose due to, for example, expiry of shelf life; and

(l) Appliances identifiable for ostomy use, that is, colostomy, ileostomy and urostomy pouches cut to shape and their adhesive wafers or faceplates.

Subheading Notes.

1.- For the purposes of subheadings 3002.13 and 3002.14, the following are to be treated :

(a) As unmixed products, pure products, whether or not containing impurities;

(b) As products which have been mixed :

(1) The products mentioned in (a) above dissolved in water or in other solvents;

(2) The products mentioned in (a) and (b) (1) above with an added stabiliser necessary for their preservation or transport; and

(3) The products mentioned in (a), (b) (1) and (b) (2) above with any other additive.

2.- Subheadings 3003.60 and 3004.60 cover medicaments containing artemisinin (INN) for oral ingestion combined with other pharmaceutical active ingredients, or containing any of the following active principles, whether or not combined with other pharmaceutical active ingredients : amodiaquine (INN); artelinic acid or its salts; artenimol (INN); artemotil (INN); artemether (INN); artesunate (INN); chloroquine (INN); dihydroartemisinin (INN); lumefantrine (INN); mefloquine (INN); piperaquine (INN); pyrimethamine (INN) or sulfadoxine (INN).

GENERAL

This Chapter includes pegylated products which consist of polyethylene glycol (or PEGs) polymers bonded to pharmaceuticals of Chapter 30 (e.g., functional proteins and peptides, antibody fragments) in order to improve their efficacy as drugs. Pegylated products of headings of this Chapter remain classified in the same heading as their non-pegylated forms (e.g., Peginterferon (INN) of heading 30.02).

Chapter 31

Fertilisers

Notes.

1.- This Chapter does not cover :

(a) Animal blood of heading 05.11;

(b) Separate chemically defined compounds (other than those answering to the descriptions in Note 2 (a), 3 (a), 4 (a) or 5 below); or

(c) Cultured potassium chloride crystals (other than optical elements) weighing not less than 2.5 g each, of heading 38.24; optical elements of potassium chloride (heading 90.01).

2.- Heading 31.02 applies only to the following goods, provided that they are not put up in the forms or packages described in heading 31.05 :

(a) Goods which answer to one or other of the descriptions given below :

(i) Sodium nitrate, whether or not pure;

(ii) Ammonium nitrate, whether or not pure;

(iii) Double salts, whether or not pure, of ammonium sulphate and ammonium nitrate;

(iv) Ammonium sulphate, whether or not pure;

(v) Double salts (whether or not pure) or mixtures of calcium nitrate and ammonium nitrate;

(vi) Double salts (whether or not pure) or mixtures of calcium nitrate and magnesium nitrate;

(vii) Calcium cyanamide, whether or not pure or treated with oil;

(viii) Urea, whether or not pure.

(b) Fertilisers consisting of any of the goods described in (a) above mixed together.

(c) Fertilisers consisting of ammonium chloride or of any of the goods described in (a) or (b) above mixed with chalk, gypsum or other inorganic non-fertilising substances.

(d) Liquid fertilisers consisting of the goods of subparagraph (a) (ii) or (viii) above, or of mixtures of those goods, in an aqueous or ammoniacal solution.

3.- Heading 31.03 applies only to the following goods, provided that they are not put up in the forms or packages described in heading 31.05 :

(a) Goods which answer to one or other of the descriptions given below :

(i) Basic slag;

(ii) Natural phosphates of heading 25.10, calcined or further heat-treated than for the removal of impurities;

(iii) Superphosphates (single, double or triple);

(iv) Calcium hydrogenorthophosphate containing not less than 0.2 % by weight of fluorine calculated on the dry anhydrous product.

(b) Fertilisers consisting of any of the goods described in (a) above mixed together, but with no account being taken of the fluorine content limit.

(c) Fertilisers consisting of any of the goods described in (a) or (b) above, but with no account being taken of the fluorine content limit, mixed with chalk, gypsum or other inorganic non-fertilising substances.

4.- Heading 31.04 applies only to the following goods, provided that they are not put up in the forms or packages described in heading 31.05 :

(a) Goods which answer to one or other of the descriptions given below :

(i) Crude natural potassium salts (for example, carnallite, kainite and sylvite);

(ii) Potassium chloride, whether or not pure, except as provided in Note 1 (c) above;

(iii) Potassium sulphate, whether or not pure;

(iv) Magnesium potassium sulphate, whether or not pure.

(b) Fertilisers consisting of any of the goods described in (a) above mixed together.

5.- Ammonium dihydrogenorthophosphate (monoammonium phosphate) and diammonium hydrogen-orthophosphate (diammonium phosphate), whether or not pure, and intermixtures thereof, are to be classified in heading 31.05.

6.- For the purposes of heading 31.05, the term "other fertilisers" applies only to products of a kind used as fertilisers and containing, as an essential constituent, at least one of the fertilising elements nitrogen, phosphorus or potassium.

GENERAL

This Chapter covers most products in general use as natural or artificial fertilisers.

On the other hand, the Chapter **does not cover** products which improve rather than fertilise the soil, such as :

(a) Lime (**heading 25.22**).

(b) Marl and leaf mould (whether or not naturally containing small quantities of the fertilising elements nitrogen, phosphorus or potassium) (**heading 25.30**).

(c) Peat (**heading 27.03**).

This Chapter also **excludes** micronutrient preparations which are applied to seeds, to foliage or to soil to assist in seed germination and plant growth. They may contain small amounts of the fertilising elements nitrogen, phosphorus and potassium, but not as essential constituents (e.g., **heading 38.24**).

It also **excludes** prepared plant growing media such as potting soils, based on peat or mixtures of peat and sand or of peat and clay (**heading 27.03**) and mixtures of earth, sand, clay, etc. (**heading 38.24**). All these products may contain small quantities of the fertilising elements nitrogen, phosphorus or potassium.

Chapter 32

Tanning or dyeing extracts; tannins and their derivatives;

dyes, pigments and other colouring matter;

paints and varnishes; putty and other mastics; inks

Notes.

1.- This Chapter does not cover :

(a) Separate chemically defined elements or compounds (except those of heading 32.03 or 32.04, inorganic products of a kind used as luminophores (heading 32.06), glass obtained from fused quartz or other fused silica in the forms provided for in heading 32.07, and also dyes and other colouring matter put up in forms or packings for retail sale, of heading 32.12);

(b) Tannates or other tannin derivatives of products of headings 29.36 to 29.39, 29.41 or 35.01 to 35.04; or

(c) Mastics of asphalt or other bituminous mastics (heading 27.15).

2.- Heading 32.04 includes mixtures of stabilised diazonium salts and couplers for the production of azo dyes.

3.- Headings 32.03, 32.04, 32.05 and 32.06 apply also to preparations based on colouring matter (including, in the case of heading 32.06, colouring pigments of heading 25.30 or Chapter 28, metal flakes and metal powders), of a kind used for colouring any material or used as ingredients in the manufacture of colouring preparations. The headings do not apply, however, to pigments dispersed in non-aqueous media, in liquid or paste form, of a kind used in the manufacture of paints, including enamels (heading 32.12), or to other preparations of heading 32.07, 32.08, 32.09, 32.10, 32.12, 32.13 or 32.15.

4.- Heading 32.08 includes solutions (other than collodions) consisting of any of the products specified in headings 39.01 to 39.13 in volatile organic solvents when the weight of the solvent exceeds 50 % of the weight of the solution.

5.- The expression "colouring matter" in this Chapter does not include products of a kind used as extenders in oil paints, whether or not they are also suitable for colouring distempers.

6.- The expression "stamping foils" in heading 32.12 applies only to thin sheets of a kind used for printing, for example, book covers or hat bands, and consisting of :

(a) Metallic powder (including powder of precious metal) or pigment, agglomerated with glue, gelatin or other binder; or

(b) Metal (including precious metal) or pigment, deposited on a supporting sheet of any material.

GENERAL

This Chapter covers preparations used in the tanning and bating of hides and skins (tanning extracts of vegetable origin, synthetic tanning substances, whether or not mixed with natural tanning materials, and artificial bates).

It also includes colouring matter of vegetable, animal or mineral origin and synthetic organic colouring matter and most of the preparations obtained from these colouring matters (paints, ceramic colours, inks, etc.). Various other preparations such as varnishes, driers and putty are also included.

Except as regards the goods covered by headings 32.03 or 32.04, inorganic products of a kind used as luminophores (heading 32.06), glass obtained from fused quartz or other fused silica in the forms provided for in heading 32.07 and also the dyes or other colouring matter put up in forms or packings for retail sale (heading 32.12), products consisting of chemically defined elements or compounds are **excluded** from this Chapter, and in general fall in **Chapter 28** or **29**.

In the case of certain paints and varnishes of headings 32.08 to 32.10 or mastics of heading 32.14, the intermixture of the various constituents, or the addition of certain constituents (e.g., hardeners) must be carried out at the time of use. Such products remain classified in these headings **provided** the constituents are :

(i) having regard to the method in which they are put up, clearly identifiable as being intended to be used together without first being repacked;

(ii) presented together; and

(iii) identifiable, whether by their nature or by the relative proportions in which they are present, as being complementary one to another.

However, in the case of products to which a hardener has to be added at the time of use, the absence of the hardener does not exclude these products from these headings, **provided** they are, by their composition or packing, clearly identifiable as intended to be used in the preparation of paints, varnishes or mastics.

Chapter 33

Essential oils and resinoids; perfumery, cosmetic or toilet preparations

Notes.

1.- This Chapter does not cover :

(a) Natural oleoresins or vegetable extracts of heading 13.01 or 13.02;

(b) Soap or other products of heading 34.01; or

(c) Gum, wood or sulphate turpentine or other products of heading 38.05.

2.- The expression "odoriferous substances" in heading 33.02 refers only to the substances of heading 33.01, to odoriferous constituents isolated from those substances or to synthetic aromatics.

3.- Headings 33.03 to 33.07 apply, *inter alia*, to products, whether or not mixed (other than aqueous distillates and aqueous solutions of essential oils), suitable for use as goods of these headings and put up in packings of a kind sold by retail for such use.

4.- The expression "perfumery, cosmetic or toilet preparations" in heading 33.07 applies, *inter alia*, to the following products : scented sachets; odoriferous preparations which operate by burning; perfumed papers and papers impregnated or coated with cosmetics; contact lens or artificial eye

solutions; wadding, felt and nonwovens, impregnated, coated or covered with perfume or cosmetics; animal toilet preparations.

GENERAL

The **essential oils** and **extracted oleoresins** of heading 33.01 are all extracted from plant materials. The method of extraction used determines the type of product obtained. For example, according to whether the steam distillation or an organic solvent process is employed, certain plants (e.g., cinnamon) can give either an essential oil or an extracted oleoresin.

Headings 33.03 to 33.07 include products, whether or not mixed (other than aqueous distillates and aqueous solutions of essential oils), suitable for use as goods of these headings and put up in packings of a kind sold by retail for such use (see Note 3 to this Chapter).

The products of headings 33.03 to 33.07 remain in these headings whether or not they contain subsidiary pharmaceutical or disinfectant constituents, or are held out as having subsidiary therapeutic or prophylactic value (see Note 1 (e) to Chapter 30). However, prepared room deodorisers remain classified in heading 33.07 even if they have disinfectant properties of more than a subsidiary nature.

Preparations (e.g., varnish) and **unmixed products** (e.g., unperfumed powdered talc, fuller's earth, acetone, alum) which are suitable for other uses in addition to those described above are classified in these headings **only** when they are :

(a) In packings of a kind sold to the consumer and put up with labels, literature or other indications that they are for use as perfumery, cosmetic or toilet preparations, or as room deodorisers; or

(b) Put up in a form clearly specialised to such use (e.g., nail varnish put up in small bottles furnished with the brush required for applying the varnish).

This Chapter **does not cover** :

(a) Petroleum jelly, **other than** that suitable for use for the care of the skin put up in packings of a kind sold by retail for such use (**heading 27.12**).

(b) Medicinal preparations having a subsidiary use as perfumery, cosmetic or toilet preparations (**heading 30.03** or **30.04**).

(c) Gel preparations designed to be used in human or veterinary medicine as a lubricant for parts of the body for surgical operations or physical examinations or as a coupling agent between the body and medical instruments (**heading 30.06**).

(d) Soaps and paper, wadding, felt and nonwovens, impregnated, coated or covered with soap or detergent (**heading 34.01**).

Annexes

List of the principal essential oils, resinoids and extracted oleoresins of heading 33.01

- Explanatory Notes

ANNEX

List of the principal essential oils,

resinoids and extracted oleoresins of heading 33.01

Esential oils

Angelica	Gardenia	Oak Moss
Anise seed	Garlic	Onion
Badian	Geranium	Origanum
Basil	Ginger	Orris
Bay	Grapefruit	Palmarosa
Benzoin	Guaiacwood	Parsley
Bergamot	Ho (Shiu)	Patchouli
Birch	Hop	Pennyroyal
Bitter almond	Hyacinth	Pepper, black
Bitter orange	Hyssop	Peppermint
Bois de rose	Jasmine	Petitgrain
Broom	Jonquil	Pimento
Cajuput	Juniper	(Allspice)
Calamus	Kuromoji	Pine needle (but not pinewood - **heading 38.05**)
Camphor	Laurel	Rose

Cananga	Lavandin	Rosemary
Canella	Lavender	Rue
Caraway	Lemon	Sage
Cassia	Lemongrass	Sandalwood
Cassie	Lime (Limette)	Sassafras
Cedar	Linaloe	Savin
Cedrat	Mace	Spearmint
Celery	Mandarin (Tangerine)	Spike lavender
Chamomile	Marjoram	Sweet orange
Chenopodium (Wormseed)	Mawah (Kenya geranium)	Tansy
Cinnamon	Melissa	Tarragon
Citronella	Mimosa	Thuja
Clove	Mint	Thyme
Copaiba	Mustard	Tolu
Coriander	Myrrh	Valerian
Cumin	Myrtle	Verbena
Cypress	Narcissus	Vetiver
Dill	Neroli	Violet
Eucalyptus	(Orange flower)	Wintergreen
Fennel	Naiouli	Wormwood
Galangal	Nutmeg	Ylang-ylang

Resinoids

Asafoetida	Galbanum	Myrrh

Benzoin	Labdanum	Olibanum
Castoreum	Mastic	Opopanax
Civet	Mecca balsam (Balm of Gilhead)	Peru balsam
Copaiba	Musk	Styrax
Elemi		Tolu

Extracted Oleoresins

Anise seed	Cubeb	Mustard
Badian	Cumin	Nutmeg
Basil	Deertongue	Oregano
Bay	Dill	Origanum
Canella	Fennel	Paprika
Capsicum	Foenugreek	Paradise seed
Caraway	Galangal	Pepper, black
Cardamon	Ginger	Pimento (Allspice)
Carrot	Hop	Rosemary
Cassia	Horseradish	Sage
Celery	Juniper	Savory
Cinnamon	Laurel	Tarragon
Clove	Lovage	Thyme
Copaiba	Mace	Turmeric
Coriander	Marjoram	

Soap, organic surface-active agents, washing preparations, lubricating preparations, artificial waxes, prepared waxes, polishing or scouring preparations, candles and similar articles, modelling pastes, "dental waxes" and dental preparations with a basis of plaster

Notes.

1.- This Chapter does not cover :

(a) Edible mixtures or preparations of animal, vegetable or microbial fats or oils of a kind used as mould release preparations (heading 15.17);

(b) Separate chemically defined compounds; or

(c) Shampoos, dentifrices, shaving creams and foams, or bath preparations, containing soap or other organic surface-active agents (heading 33.05, 33.06 or 33.07).

2.- For the purposes of heading 34.01, the expression "soap" applies only to soap soluble in water. Soap and the other products of heading 34.01 may contain added substances (for example, disinfectants, abrasive powders, fillers or medicaments). Products containing abrasive powders remain classified in heading 34.01 only if in the form of bars, cakes or moulded pieces or shapes. In other forms they are to be classified in heading 34.05 as scouring powders and similar preparations".

3.- For the purposes of heading 34.02, organic surface-active agents are products which when mixed with water at a concentration of 0.5 % at 20 °C and left to stand for one hour at the same temperature :

(a) give a transparent or translucent liquid or stable emulsion without separation of insoluble matter; and

(b) reduce the surface tension of water to 4.5×10^{-2} N/m (45 dyne/cm) or less.

4.- In heading 34.03 the expression "petroleum oils and oils obtained from bituminous minerals" applies to the products defined in Note 2 to Chapter 27.

5.- In heading 34.04, subject to the exclusions provided below, the expression "artificial waxes and prepared waxes" applies only to :

(a) Chemically produced organic products of a waxy character, whether or not water-soluble;

(b) Products obtained by mixing different waxes;

(c) Products of a waxy character with a basis of one or more waxes and containing fats, resins, mineral substances or other materials.

The heading does not apply to :

(a) Products of heading 15.16, 34.02 or 38.23, even if having a waxy character;

(b) Unmixed animal waxes or unmixed vegetable waxes, whether or not refined or coloured, of heading 15.21;

(c) Mineral waxes or similar products of heading 27.12, whether or not intermixed or merely coloured; or

(d) Waxes mixed with, dispersed in or dissolved in a liquid medium (headings 34.05, 38.09, etc.).

GENERAL

This Chapter covers products mainly obtained by the industrial treatment of fats, oils or waxes (e.g., soap, certain lubricating preparations, prepared waxes, certain polishing or scouring preparations, candles). It also includes certain artificial products, e.g., surface-active agents, surface-active preparations and artificial waxes.

The Chapter **does not cover** separate chemically defined compounds, or natural products not mixed or prepared.

Chapter 35

Albuminoidal substances; modified starches; glues; enzymes

Notes.

1.- This Chapter does not cover :

(a) Yeasts (heading 21.02);

(b) Blood fractions (other than blood albumin not prepared for therapeutic or prophylactic uses), medicaments or other products of Chapter 30;

(c) Enzymatic preparations for pre-tanning (heading 32.02);

(d) Enzymatic soaking or washing preparations or other products of Chapter 34;

(e) Hardened proteins (heading 39.13); or

(f) Gelatin products of the printing industry (Chapter 49).

2.- For the purposes of heading 35.05, the term "dextrins" means starch degradation products with a reducing sugar content, expressed as dextrose on the dry substance, not exceeding 10 %.

Such products with a reducing sugar content exceeding 10 % fall in heading 17.02.

Chapter 36

Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations

Notes.

1.- This Chapter does not cover separate chemically defined compounds other than those described in Note 2 (a) or (b) below.

2.- The expression "articles of combustible materials" in heading 36.06 applies only to :

(a) Metaldehyde, hexamethylenetetramine and similar substances, put up in forms (for example, tablets, sticks or similar forms) for use as fuels; fuels with a basis of alcohol, and similar prepared fuels, in solid or semi-solid form;

(b) Liquid or liquefied-gas fuels in containers of a kind used for filling or refilling cigarette or similar lighters and of a capacity not exceeding 300 cm^3; and

(c) Resin torches, firelighters and the like.

GENERAL

This Chapter includes **propellent powders and prepared explosives**, *viz.*, **mixtures** characterised by the fact that they contain the oxygen necessary for their combustion and that in combustion they produce a large volume of gas at a high temperature.

It also covers certain accessory products required for their ignition (percussion or detonating caps, detonators, etc.).

Articles prepared from explosive, pyrophoric, inflammable or combustible products for producing light, sound, smoke, flame or sparks (e.g., pyrotechnic products, matches, ferro-cerium and certain combustible preparations) are also classified here.

This Chapter **does not cover** separate chemically defined compounds (usually classified in **Chapter 28** or **29**), **except** certain fuels described in Parts (II) (A), (II) (B) (1) and (II) (B) (2) of the Explanatory Note to heading 36.06. It also **excludes** ammunition of **Chapter 93**.

Chapter 37

Photographic or cinematographic goods

Notes.

1.- This Chapter does not cover waste or scrap.

2.- In this Chapter the word "photographic" relates to the process by which visible images are formed, directly or indirectly, by the action of light or other forms of radiation on photosensitive, including thermosensitive, surfaces.

GENERAL

The photographic plates, film, paper, paperboard and textiles of Chapter 37 are those with one or more layers of any emulsion sensitive to light or other forms of radiation having sufficient energy to cause the necessary reaction in photon (or photo) sensitive materials, i.e., radiation of wavelength no longer than approximately 1,300 nanometers in the electromagnetic spectrum (including gamma-rays, X-rays, ultra-violet and near-infrared radiation), as well as particle (or nuclear) radiation, whether for reproduction in monochrome or colour. Certain plates are, however, not coated with an emulsion but consist wholly or essentially of photosensitive plastics which may be affixed to a support. Infrared laser sensitive plates are often called thermosensitive/thermal plates or heat sensitive plates.

The most common emulsions are based on silver halides (silver bromide, silver bromide-iodide, etc.) or on salts of other precious metals, but certain other materials may be used, e.g., potassium ferricyanide or other iron compounds for blue-prints, potassium or ammonium dichromate for photomechanical engraving, diazonium salts for diazo emulsions, etc.

(A) **Plates and film** fall in the Chapter whether :

(1) Unexposed, i.e., not yet submitted to the action of light or other forms of radiation; or

(2) Exposed, whether or not developed (that is, chemically treated to render the image visible).

Plates and film remain in the Chapter whether negative (i.e., with lights and shades reversed), positive (including lavender positives used for the duplication of further positives), or reversible (i.e., with special emulsions which permit the direct production of positives).

(B) **Photographic paper, paperboard and textiles** are included in the Chapter **only** when unexposed or exposed (negative or positive) but **not** developed; after development, they are proper to **Chapter 49** or **Section XI**.

Subject to special conditions explained in the Explanatory Note to heading 37.07, the Chapter also includes chemical products and flashlight materials of a kind used in photography.

This Chapter **does not cover** waste and scrap. Photographic or cinematographic waste and scrap containing precious metal or precious metal compounds, of a kind used principally for the recovery of precious metal, is classified in **heading 71.12**. Other photographic or cinematographic waste and scrap is classified according to constituent material (e.g., if of plastics, **heading 39.15**, if of paper, **heading 47.07**).

Chapter 38

Miscellaneous chemical products

Notes.

1.- This Chapter does not cover :

(a) Separate chemically defined elements or compounds with the exception of the following :

(1) Artificial graphite (heading 38.01);

(2) Insecticides, rodenticides, fungicides, herbicides, anti-sprouting products and plant-growth regulators, disinfectants and similar products, put up as described in heading 38.08;

(3) Products put up as charges for fire-extinguishers or put up in fire-extinguishing grenades (heading 38.13);

(4) Certified reference materials specified in Note 2 below;

(5) Products specified in Note 3 (a) or 3 (c) below;

(b) Mixtures of chemicals with foodstuffs or other substances with nutritive value, of a kind used in the preparation of human foodstuffs (generally heading 21.06);

(c) Products of heading 24.04;

(d) Slag, ash and residues (including sludges, other than sewage sludge), containing metals, arsenic or their mixtures and meeting the requirements of Note 3 (a) or 3 (b) to Chapter 26 (heading 26.20);

(e) Medicaments (heading 30.03 or 30.04); or

(f) Spent catalysts of a kind used for the extraction of base metals or for the manufacture of chemical compounds of base metals (heading 26.20), spent catalysts of a kind used principally for

the recovery of precious metal (heading 71.12) or catalysts consisting of metals or metal alloys in the form of, for example, finely divided powder or woven gauze (Section XIV or XV).

2.- (A) For the purpose of heading 38.22, the expression "certified reference materials" means reference materials which are accompanied by a certificate which indicates the values of the certified properties, the methods used to determine these values and the degree of certainty associated with each value and which are suitable for analytical, calibrating or referencing purposes.

(B) With the exception of the products of Chapter 28 or 29, for the classification of certified reference materials, heading 38.22 shall take precedence over any other heading in the Nomenclature.

3.- Heading 38.24 includes the following goods which are not to be classified in any other heading of the Nomenclature :

(a) Cultured crystals (other than optical elements) weighing not less than 2.5 g each, of magnesium oxide or of the halides of the alkali or alkaline-earth metals;

(b) Fusel oil; Dippel's oil;

(c) Ink removers put up in packings for retail sale;

(d) Stencil correctors, other correcting fluids and correction tapes (other than those of heading 96.12), put up in packings for retail sale; and

(e) Ceramic firing testers, fusible (for example, Seger cones).

4.- Throughout the Nomenclature, "municipal waste" means waste of a kind collected from households, hotels, restaurants, hospitals, shops, offices, etc., road and pavement sweepings, as well as construction and demolition waste. Municipal waste generally contains a large variety of materials such as plastics, rubber, wood, paper, textiles, glass, metals, food materials, broken furniture and other damaged or discarded articles. The term "municipal waste", however, does not cover :

(a) Individual materials or articles segregated from the waste, for example wastes of plastics, rubber, wood, paper, textiles, glass or metals, electrical and electronic waste and scrap (including spent batteries) which fall in their appropriate headings of the Nomenclature;

(b) Industrial waste;

(c) Waste pharmaceuticals, as defined in Note 4 (k) to Chapter 30; or

(d) Clinical waste, as defined in Note 6 (a) below.

5.- For the purposes of heading 38.25, "sewage sludge" means sludge arising from urban effluent treatment plant and includes pre-treatment waste, scourings and unstabilised sludge. Stabilised sludge when suitable for use as fertiliser is excluded (Chapter 31).

6.- For the purposes of heading 38.25, the expression "other wastes" applies to :

(a) Clinical waste, that is, contaminated waste arising from medical research, diagnosis, treatment or other medical, surgical, dental or veterinary procedures, which often contain pathogens and pharmaceutical substances and require special disposal procedures (for example, soiled dressings, used gloves and used syringes);

(b) Waste organic solvents;

(c) Wastes of metal pickling liquors, hydraulic fluids, brake fluids and anti-freezing fluids; and

(d) Other wastes from chemical or allied industries.

The expression "other wastes" does not, however, cover wastes which contain mainly petroleum oils or oils obtained from bituminous minerals (heading 27.10).

7.- For the purposes of heading 38.26, the term "biodiesel" means mono-alkyl esters of fatty acids of a kind used as a fuel, derived from animal, vegetable or microbial fats and oils whether or not used.

Subheading Notes.

1.- Subheadings 3808.52 and 3808.59 cover only goods of heading 38.08, containing one or more of the following substances : alachlor (ISO); aldicarb (ISO); aldrin (ISO); azinphos-methyl (ISO); binapacryl (ISO); camphechlor (ISO) (toxaphene); captafol (ISO); carbofuran (ISO); chlordane (ISO); chlordimeform (ISO); chlorobenzilate (ISO); DDT (ISO) (clofenotane (INN), 1,1,1-trichloro-2,2-bis (*p*-chlorophenyl)ethane); dieldrin (ISO, INN); 4,6-dinitro-*o*-cresol (DNOC (ISO)) or its salts; dinoseb (ISO), its salts or its esters; endosulfan (ISO); ethylene dibromide (ISO) (1,2-dibromoethane); ethylene dichloride (ISO) (1,2-dichloroethane); fluoroacetamide (ISO); heptachlor (ISO); hexachlorobenzene (ISO); 1,2,3,4,5,6-hexachlorocyclohexane (HCH (ISO)), including lindane (ISO, INN); mercury compounds; methamidophos (ISO); monocrotophos (ISO); oxirane (ethylene oxide); parathion (ISO); parathion-methyl (ISO) (methyl-parathion); pentachlorophenol (ISO), its salts or its esters; perfluorooctane sulphonic acid and its salts; perfluorooctane sulphonamides; perfluorooctane sulphonyl fluoride; phosphamidon (ISO); 2,4,5-T (ISO) (2,4,5-trichlorophenoxyacetic acid), its salts or its esters; tributyltin compounds; trichlorfon (ISO).

2.- Subheadings 3808.61 to 3808.69 cover only goods of heading 38.08, containing alpha-cypermethrin (ISO), bendiocarb (ISO), bifenthrin (ISO), chlorfenapyr (ISO), cyfluthrin (ISO),

deltamethrin (INN, ISO), etofenprox (INN), fenitrothion (ISO), lambda-cyhalothrin (ISO), malathion (ISO), pirimiphos-methyl (ISO) or propoxur (ISO).

3.- Subheadings 3824.81 to 3824.88 cover only mixtures and preparations containing one or more of the following substances : oxirane (ethylene oxide), polybrominated biphenyls (PBBs), polychlorinated biphenyls (PCBs), polychlorinated terphenyls (PCTs), tris(2,3-dibromopropyl) phosphate, aldrin (ISO), camphechlor (ISO) (toxaphene), chlordane (ISO), chlordecone (ISO), DDT (ISO) (clofenotane (INN), 1,1,1-trichloro-2,2-bis(*p*-chlorophenyl)ethane), dieldrin (ISO, INN), endosulfan (ISO), endrin (ISO), heptachlor (ISO), mirex (ISO), 1,2,3,4,5,6-hexachlorocyclohexane (HCH (ISO)), including lindane (ISO, INN), pentachlorobenzene (ISO), hexachlorobenzene (ISO), perfluorooctane sulphonic acid, its salts, perfluorooctane sulphonamides, perfluorooctane sulphonyl fluoride or tetra-, penta-, hexa-, hepta- or octabromodiphenyl ethers; short-chain chlorinated paraffins.

Short-chain chlorinated paraffins are mixtures of compounds, with a chlorination degree of more than 48% by weight with the following molecular formula : $C_xH_{(2x-y+2)}Cl_y$, where x=10 - 13 and y= 1 – 13.

4.- For the purposes of subheadings 3825.41 and 3825.49, "waste organic solvents" are wastes containing mainly organic solvents, not fit for further use as presented as primary products, whether or not intended for recovery of the solvents.

GENERAL

This Chapter covers a large number of chemical and related products.

It **does not cover** separate chemically defined elements or compounds (usually classified in **Chapter 28** or **29**), **with the exception** of the following :

(1) Artificial graphite (heading 38.01).

(2) Insecticides, rodenticides, fungicides, herbicides, anti-sprouting products and plant-growth regulators, disinfectants and similar products, put up as described in heading 38.08.

(3) Products put up as charges for fire-extinguishers or put up in fire-extinguishing grenades (heading 38.13).

(4) Cultured crystals (other than optical elements) weighing not less than 2.5 g each, of magnesium oxide or of the halides of the alkali or alkaline-earth metals (heading 38.24).

(5) Ink removers put up in packings for retail sale (heading 38.24).

For the purposes of Note 1 (b) to the Chapter, the expression "foodstuffs or other substances with nutritive value" principally includes edible products of Sections I to IV.

The expression "foodstuffs or other substances with nutritive value" also includes certain other products, for example, products of Chapter 28 used as mineral supplements in food preparations, sugar alcohols of heading 29.05, essential amino acids of heading 29.22, lecithin of heading 29.23, provitamins and vitamins of heading 29.36, sugars of heading 29.40, animal blood fractions of heading 30.02 for use in food preparations, casein and caseinates of heading 35.01, albumins of heading 35.02, edible gelatin of heading 35.03, edible protein substances of heading 35.04, dextrins and other edible modified starches of heading 35.05, sorbitol of heading 38.24, edible products of Chapter 39 (such as amylopectin and amylose of heading 39.13). It should be noted that this list of products is simply illustrative and should not be taken to be exhaustive.

The mere presence of "foodstuffs or other substances with nutritive value" in a mixture would not suffice to exclude the mixture from Chapter 38, by application of Note 1 (b). Substances having a nutritive value that is merely subsidiary to their function as chemical products, e.g., as food additives or processing aids, are not regarded as "foodstuffs or substances with nutritive value" for the purpose of this Note. The mixtures which are excluded from Chapter 38 by virtue of Note 1 (b) are those which are of a kind used in the preparation of human foodstuffs and which are valued for their nutritional qualities.

Section VII

PLASTICS AND ARTICLES THEREOF; RUBBER AND ARTICLES THEREOF

Notes.

1.- Goods put up in sets consisting of two or more separate constituents, some or all of which fall in this Section and are intended to be mixed together to obtain a product of Section VI or VII, are to be classified in the heading appropriate to that product, provided that the constituents are :

(a) having regard to the manner in which they are put up, clearly identifiable as being intended to be used together without first being repacked;

(b) presented together; and

(c) identifiable, whether by their nature or by the relative proportions in which they are present, as being complementary one to another.

2.- Except for the goods of heading 39.18 or 39.19, plastics, rubber, and articles thereof, printed with motifs, characters or pictorial representations, which are not merely subsidiary to the primary use of the goods, fall in Chapter 49.

GENERAL

Section Note 1.

This Note deals with the classification of goods put up in sets consisting of two or more separate constituents, some or all of which fall in Section VII. The Note is, however, limited to sets of which the constituents are intended to be mixed together to obtain a product of Section VI or VII. Such sets are to be classified in the heading appropriate to that product **provided** the constituents meet conditions (a) to (c) of the Note.

It should be noted that goods put up in sets consisting of two or more separate constituents, some or all of which fall in Section VII, intended to be used **successively without prior mixing,** are not covered by Note 1 to this Section. Such goods put up for retail sale are to be classified by application of the General Interpretative Rules (generally Rule 3 (b)); in the case of those not put up for retail sale the constituents are to be classified separately.

Section Note 2.

Goods of heading 39.18 (floor coverings and wall or ceiling coverings of plastics) and heading 39.19 (self-adhesive plates, etc., of plastics), even if printed with motifs, characters or pictorial representations, which are not merely subsidiary to the primary use of the goods, do not fall in Chapter 49 but remain classified in the above-mentioned headings. However, all other goods of plastics or rubber of the kind described in this Section fall in Chapter 49 if the printing on them is not merely subsidiary to their primary use, and the plastics or rubber serves only as a medium for the printing.

Chapter 39

Plastics and articles thereof

Notes.

1.- Throughout the Nomenclature the expression "plastics" means those materials of headings 39.01 to 39.14 which are or have been capable, either at the moment of polymerisation or at some subsequent stage, of being formed under external influence (usually heat and pressure, if necessary with a solvent or plasticiser) by moulding, casting, extruding, rolling or other process into shapes which are retained on the removal of the external influence.

Throughout the Nomenclature any reference to "plastics" also includes vulcanised fibre. The expression, however, does not apply to materials regarded as textile materials of Section XI.

2.- This Chapter does not cover :

(a) Lubricating preparations of heading 27.10 or 34.03;

(b) Waxes of heading 27.12 or 34.04;

(c) Separate chemically defined organic compounds (Chapter 29);

(d) Heparin or its salts (heading 30.01);

(e) Solutions (other than collodions) consisting of any of the products specified in headings 39.01 to 39.13 in volatile organic solvents when the weight of the solvent exceeds 50 % of the weight of the solution (heading 32.08); stamping foils of heading 32.12;

(f) Organic surface-active agents or preparations of heading 34.02;

(g) Run gums or ester gums (heading 38.06);

(h) Prepared additives for mineral oils (including gasoline) or for other liquids used for the same purposes as mineral oils (heading 38.11);

(ij) Prepared hydraulic fluids based on polyglycols, silicones or other polymers of Chapter 39 (heading 38.19);

(k) Diagnostic or laboratory reagents on a backing of plastics (heading 38.22);

(l) Synthetic rubber, as defined for the purposes of Chapter 40, or articles thereof;

(m) Saddlery or harness (heading 42.01) or trunks, suitcases, handbags or other containers of heading 42.02;

(n) Plaits, wickerwork or other articles of Chapter 46;

(o) Wall coverings of heading 48.14;

(p) Goods of Section XI (textiles and textile articles);

(q) Articles of Section XII (for example, footwear, headgear, umbrellas, sun umbrellas, walking-sticks, whips, riding-crops or parts thereof);

(r) Imitation jewellery of heading 71.17;

(s) Articles of Section XVI (machines and mechanical or electrical appliances);

(t) Parts of aircraft or vehicles of Section XVII;

(u) Articles of Chapter 90 (for example, optical elements, spectacle frames, drawing instruments);

(v) Articles of Chapter 91 (for example, clock or watch cases);

(w) Articles of Chapter 92 (for example, musical instruments or parts thereof);

(x) Articles of Chapter 94 (for example, furniture, luminaires and lighting fittings, illuminated signs, prefabricated buildings);

(y) Articles of Chapter 95 (for example, toys, games, sports requisites); or

(z) Articles of Chapter 96 (for example, brushes, buttons, slide fasteners, combs, mouthpieces or stems for smoking pipes, cigarette-holders or the like, parts of vacuum flasks or the like, pens, propelling pencils, and monopods, bipods, tripods and similar articles).

3.- Headings 39.01 to 39.11 apply only to goods of a kind produced by chemical synthesis, falling in the following categories :

(a) Liquid synthetic polyolefins of which less than 60 % by volume distils at 300 °C, after conversion to 1,013 milibars when a reduced-pressure distillation method is used (headings 39.01 and 39.02);

(b) Resins, not highly polymerised, of the coumarone-indene type (heading 39.11);

(c) Other synthetic polymers with an average of at least 5 monomer units;

(d) Silicones (heading 39.10);

(e) Resols (heading 39.09) and other prepolymers.

4.- The expression "copolymers" covers all polymers in which no single monomer unit contributes 95 % or more by weight to the total polymer content.

For the purposes of this Chapter, except where the context otherwise requires, copolymers (including co-polycondensates, co-polyaddition products, block copolymers and graft copolymers) and polymer blends are to be classified in the heading covering polymers of that comonomer unit which predominates by weight over every other single comonomer unit. For the purposes of this Note, constituent comonomer units of polymers falling in the same heading shall be taken together.

If no single comonomer unit predominates, copolymers or polymer blends, as the case may be, are to be classified in the heading which occurs last in numerical order among those which equally merit consideration.

5.- Chemically modified polymers, that is those in which only appendages to the main polymer chain have been changed by chemical reaction, are to be classified in the heading appropriate to the unmodified polymer. This provision does not apply to graft copolymers.

6.- In headings 39.01 to 39.14, the expression "primary forms" applies only to the following forms :

(a) Liquids and pastes, including dispersions (emulsions and suspensions) and solutions;

(b) Blocks of irregular shape, lumps, powders (including moulding powders), granules, flakes and similar bulk forms.

7.- Heading 39.15 does not apply to waste, parings and scrap of a single thermoplastic material, transformed into primary forms (headings 39.01 to 39.14).

8.- For the purposes of heading 39.17, the expression "tubes, pipes and hoses" means hollow products, whether semi-manufactures or finished products, of a kind generally used for conveying, conducting or distributing gases or liquids (for example, ribbed garden hose, perforated tubes). This expression also includes sausage casings and other lay-flat tubing. However, except for the last-mentioned, those having an internal cross-section other than round, oval, rectangular (in which the length does not exceed 1.5 times the width) or in the shape of a regular polygon are not to be regarded as tubes, pipes and hoses but as profile shapes.

9.- For the purposes of heading 39.18, the expression "wall or ceiling coverings of plastics" applies to products in rolls, of a width not less than 45 cm, suitable for wall or ceiling decoration, consisting of plastics fixed permanently on a backing of any material other than paper, the layer of plastics (on the face side) being grained, embossed, coloured, design-printed or otherwise decorated.

10.- In headings 39.20 and 39.21, the expression "plates, sheets, film, foil and strip" applies only to plates, sheets, film, foil and strip (other than those of Chapter 54) and to blocks of regular geometric shape, whether or not printed or otherwise surface-worked, uncut or cut into rectangles (including squares) but not further worked (even if when so cut they become articles ready for use).

11.- Heading 39.25 applies only to the following articles, not being products covered by any of the earlier headings of sub-Chapter II :

(a) Reservoirs, tanks (including septic tanks), vats and similar containers, of a capacity exceeding 300 l;

(b) Structural elements used, for example, in floors, walls or partitions, ceilings or roofs;

(c) Gutters and fittings thereof;

(d) Doors, windows and their frames and thresholds for doors;

(e) Balconies, balustrades, fencing, gates and similar barriers;

(f) Shutters, blinds (including Venetian blinds) and similar articles and parts and fittings thereof;

(g) Large-scale shelving for assembly and permanent installation, for example, in shops, workshops, warehouses;

(h) Ornamental architectural features, for example, flutings, cupolas, dovecotes; and

(ij) Fittings and mountings intended for permanent installation in or on doors, windows, staircases, walls or other parts of buildings, for example, knobs, handles, hooks, brackets, towel rails, switch-plates and other protective plates.

Subheading Notes.

1.- Within any one heading of this Chapter, polymers (including copolymers) and chemically modified polymers are to be classified according to the following provisions :

(a) Where there is a subheading named "Other" in the same series :

(1) The designation in a subheading of a polymer by the prefix "poly" (for example, polyethylene and polyamide-6,6) means that the constituent monomer unit or monomer units of the named polymer taken together must contribute 95 % or more by weight of the total polymer content.

(2) The copolymers named in subheadings 3901.30, 3901.40, 3903.20, 3903.30 and 3904.30 are to be classified in those subheadings, provided that the comonomer units of the named copolymers contribute 95 % or more by weight of the total polymer content.

(3) Chemically modified polymers are to be classified in the subheading named "Other", provided that the chemically modified polymers are not more specifically covered by another subheading.

(4) Polymers not meeting (1), (2) or (3) above, are to be classified in the subheading, among the remaining subheadings in the series, covering polymers of that monomer unit which predominates by weight over every other single comonomer unit. For this purpose, constituent monomer units of polymers falling in the same subheading shall be taken together. Only the constituent comonomer units of the polymers in the series of subheadings under consideration are to be compared.

(b) Where there is no subheading named "Other" in the same series :

(1) Polymers are to be classified in the subheading covering polymers of that monomer unit which predominates by weight over every other single comonomer unit. For this purpose, constituent monomer units of polymers falling in the same subheading shall be taken together. Only the constituent comonomer units of the polymers in the series under consideration are to be compared.

(2) Chemically modified polymers are to be classified in the subheading appropriate to the unmodified polymer.

Polymer blends are to be classified in the same subheading as polymers of the same monomer units in the same proportions.

2.- For the purposes of subheading 3920.43, the term "plasticisers" includes secondary plasticisers.

GENERAL

In general, this Chapter covers substances called polymers and semi-manufactures and articles thereof, **provided** they are not excluded by Note 2 to the Chapter.

Polymers

Polymers consist of molecules which are characterised by the repetition of one or more types of monomer units.

Polymers may be formed by reaction between several molecules of the same or of different chemical constitution. The process by which polymers are formed is termed polymerisation. In its broad sense, this term includes the following principal types of reactions :

(1) **Addition polymerisation**, in which single molecules with ethylenic unsaturation react with each other by simple addition, without the formation of water or other by-products, to form a polymer chain containing only carbon-carbon bonds, e.g., production of polyethylene from ethylene or of ethylene-vinyl acetate copolymers from ethylene and vinyl acetate. This type of polymerisation is sometimes called simple polymerisation or copolymerisation, i.e., polymerisation or copolymerisation in the strict sense.

(2) **Rearrangement polymerisation**, in which molecules with functional groups containing atoms such as oxygen, nitrogen or sulphur react with each other by intramolecular rearrangement and addition, without the formation of water or other by-products, to form a polymer chain in which the monomer units are held together by ether, amide, urethane or other linkages, e.g., production of poly(oxymethylene) (polyformaldehyde) from formaldehyde, of polyamide-6 from caprolactam, or of polyurethanes from a polyol and a di-isocyanate. This type of polymerisation is also called polyaddition.

(3) **Condensation polymerisation**, in which molecules with functional groups containing atoms such as oxygen, nitrogen or sulphur react with each other by a condensation reaction, with the formation of water or other by-products, to form a polymer chain in which the monomer units are held together by ether, ester amide or other linkages, e.g., production of poly(ethylene terephthalate) from ethylene glycol and terephthalic acid, or of polyamide-6,6 from hexamethylenediamine and adipic acid. This type of polymerisation is also called condensation or polycondensation.

Polymers may be chemically modified as, for example, in the chlorination of polyethylene or poly(vinyl chloride), the chlorosulphonation of polyethylene, the acetylation or nitration of cellulose, or the hydrolysis of poly(vinyl acetate).

Abbreviations for polymers

Many polymers described in this Chapter are also known by their abbreviations. The following is a list of some of the more commonly used abbreviations :

ABS	Acrylonitrile-butadiene-styrene copolymer
CA	Cellulose acetate
CAB	Cellulose acetate butyrate
CP	Cellulose propionate
CMC	Carboxymethyl cellulose
CPE	Chlorinated polyethylene
EVA	Ethylene-vinyl acetate copolymer
HDPE	High-density polyethylene
LDPE	Low-density polyethylene
LLDPE	Linear low-density polyethylene
PBT	Poly(butylene terephthalate)
PDMS	Polydimethylsiloxane
PE	Polyethylene
PEOX	Poly(ethylene oxide) (polyoxyethylene)

PET	Poly(ethylene terephthalate)
PIB	Polyisobutylene
PMMA	Poly(methyl methacrylate)
PP	Polypropylene
PPO	Poly(phenylene oxide)
PPOX	Polypropylene oxide (polyoxypropylene)
PPS	Poly(phenylene sulphide)
PS	Polystyrene
PTFE	Polytetrafluoroethylene
PVAC	Poly(vinyl acetate)
PVAL	Poly(vinyl alcohol)
PVB	Poly(vinyl butyral)
PVC	Poly(vinyl chloride)
PVDF	Poly(vinylidene fluoride)
PVP	Poly(vinyl pyrrolidone)
SAN	Styrene-acrylonitrile copolymer

It should be noted that commercial polymers sometimes contain more monomer units than those represented by their abbreviations (e.g., linear low-density polyethylene (LLDPE), which is essentially a polymer of ethylene, containing small amounts (often more than 5 %) of alpha-olefin monomer units). Furthermore, the relative amounts of monomer units in a polymer need not be in the same

order as that represented by its abbreviation (e.g., acrylonitrile-butadiene-styrene (ABS) copolymer containing styrene as the predominant monomer unit).

Polymer abbreviations should therefore be used only as a guide. Classification, in all cases, should be by application of the relevant Chapter Note and Subheading Note and on the basis of the relative composition of the monomer units in a polymer (see Note 4 and Subheading Note 1 to this Chapter).

Plastics

The expression "plastics" is defined in Note 1 to this Chapter as meaning those materials of headings 39.01 to 39.14 which are or have been capable, either at the moment of polymerisation or at some subsequent stage, of being formed under external influence (usually heat and pressure, if necessary with a solvent or plasticiser) by moulding, casting, extruding, rolling or other process into shapes which are retained on the removal of the external influence. Throughout the Nomenclature, the expression "plastics" also includes vulcanised fibre.

The expression, however, does not apply to materials regarded as textile materials of Section XI. It should be noted that this definition of "plastics" is applicable throughout the Nomenclature.

The term "polymerisation" is used in this definition in a wide sense and denotes any method of forming a polymer, including addition polymerisation, rearrangement polymerisation (polyaddition) and condensation polymerisation (polycondensation).

If material of this Chapter can be softened repeatedly by heat treatment and shaped into articles, e.g., by moulding, and then hardened by cooling, it is termed "thermoplastic". If it can be or has already been transformed into an infusible product by chemical or physical means (e.g., by heat), it is termed "thermosetting".

Plastics have almost unlimited applications but many articles made therefrom are classified elsewhere (see Note 2 to this Chapter).

General arrangement of the Chapter

The Chapter is divided into two sub-Chapters. Sub-Chapter I covers polymers in primary forms and sub-Chapter II covers waste, parings and scrap, and semi-manufactures and articles.

In sub-Chapter I, relating to primary forms, the products of headings 39.01 to 39.11 are obtained by chemical synthesis and those of headings 39.12 and 39.13 are either natural polymers or are obtained therefrom by chemical treatment. Heading 39.14 covers ion-exchangers based on polymers of headings 39.01 to 39.13.

In sub-Chapter II, heading 39.15 relates to waste, parings and scrap of plastics. Headings 39.16 to 39.25 cover semi-manufactures or specified articles of plastics. Heading 39.26 is a residual heading

which covers articles, not elsewhere specified or included, of plastics or of other materials of headings 39.01 to 39.14.

Scope of headings 39.01 to 39.11

The scope of these headings is governed by Note 3 to this Chapter. These headings apply only to goods of a kind produced by chemical synthesis, falling in the following categories :

(a) **Liquid synthetic polyolefins**, which are polymers obtained from ethylene, propene, butenes or other olefins. They are classified in heading 39.01 or 39.02 **provided** that less than 60 % by volume distils at 300 °C, after conversion to 1,013 millibars when a reduced-pressure distillation method is used.

(b) **Resins**, not highly polymerised, of the **coumarone-indene type** obtained by the copolymerisation of mixed monomers (including coumarone or indene) derived from coal tar (heading 39.11).

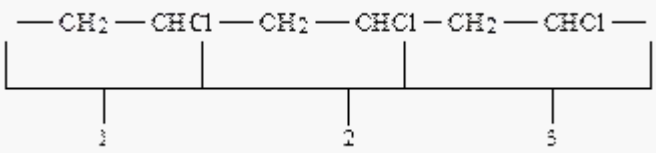
(c) **Other synthetic polymers with an average of at least 5 monomer units** which are structured in an uninterrupted sequence. These include plastics as defined in Note 1 to this Chapter.

For the purpose of calculating the average number of monomer units under Chapter Note 3 (c), polycondensates and certain rearrangement polymers may have more than one monomer unit, each having a different chemical constitution. A monomer unit is the largest constitutional unit contributed by a single monomer molecule in a polymerisation process. It should not be confused with the constitutional repeating unit, which is the smallest constitutional unit which, by repetition, describes the polymer, nor with the term monomer which is a single molecule from which polymers may be formed.

Examples :

(a) Poly(vinyl chloride)

The following chain represents three monomer units :



monomer monomer unit constitutional repeating unit

vinyl chloride

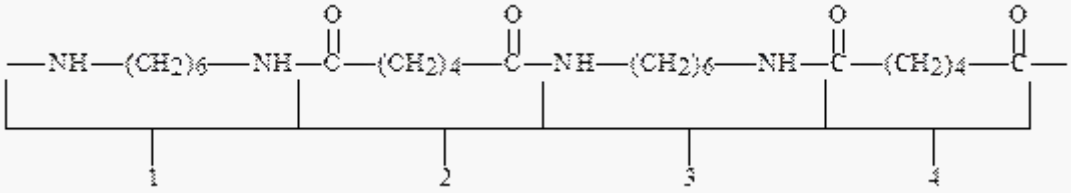
—CH2—CHCl— —CH2—CHCl—

(CH2=CHCl)

(In this case the monomer unit and the constitutional repeating unit are the same).

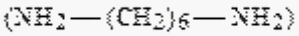
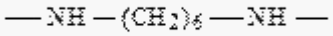
(b) Polyamide-6,6

The following chain represents four monomer units :



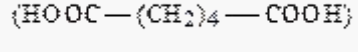
monomers monomer units

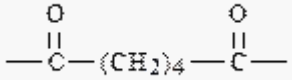
hexamethylenediamine

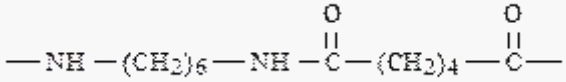
and and

adipic acid



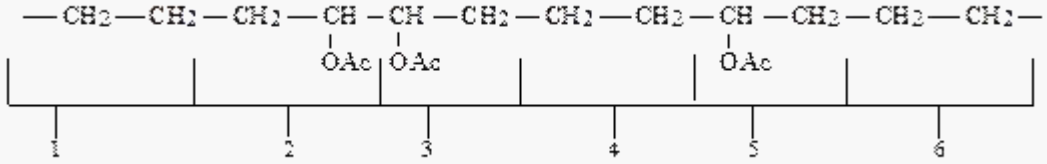


constitutional repeating unit

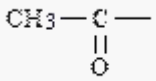


(c) Ethylene-vinyl acetate copolymer

The following chain represents six monomer units :



(where Ac is equal to)

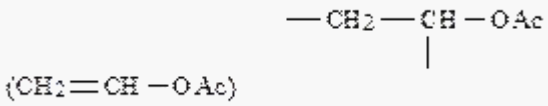


monomers monomer units constitutional repeating unit

ethylene

and and (*)

vinyl acetate



(d) **Silicones** which are non-chemically defined products containing in the molecule more than one silicon-oxygen-silicon linkage, and containing organic groups connected to the silicon atoms by direct silicon-carbon bonds (heading 39.10).

(e) **Resols** (heading 39.09) **and other prepolymers**. Prepolymers are products which are characterised by some repetition of monomer units altough they may contain unreacted monomers. Prepolymers are not normally used as such but are intended to be transformed into higher molecular weight polymers by further polymerisation. Therefore the term **does not cover** finished products, such as di-isobutylenes (**heading 27.10**) or poly(oxyethylene) (polyethylene glycol) with very low molecular weight (**heading 38.24**). Examples of prepolymers are epoxides based on bisphenol-A or phenol-formaldehyde, epoxidised with epichlorohydrin, and polymeric isocyanates.

Copolymers and polymer blends

The term "copolymers" is defined in Note 4 to the Chapter as polymers in which no single monomer unit contributes 95 % or more by weight to the total polymer content.

Thus, for example, a polymer consisting of 96 % of the propylene monomer unit and 4 % other olefin monomer units is not regarded as a copolymer.

Copolymers include co-polycondensation products, co-polyaddition products, block copolymers and graft copolymers.

Block copolymers are copolymers composed of at least two connected polymeric sequence having different monomer unit compositions (e.g., a copolymer of ethylene and propylene containing alternating segments of polyethylene and polypropylene).

Graft copolymers are copolymers composed of main polymer chains which have side polymer chains with a different monomer unit composition. Examples are styrene-butadiene copolymer-*graft*-polystyrene (a polystyrene grafted to a styrene-butadiene copolymer) and polybutadiene-*graft*-styrene-acrylonitrile copolymer.

The classification of copolymers (including co-polycondensates, co-polyaddition products, block copolymers and graft copolymers) and polymer blends is governed by Note 4 to the Chapter. Unless the context otherwise requires, these products are to be classified in the heading covering polymers of that comonomer unit which predominates by weight over every other single comonomer unit. For this purpose, constituent comonomer units of polymers falling in the same heading are to be taken together, as if they were a single comonomer unit.

If no single comonomer unit (or group of constituent comonomer units whose polymers fall in the same heading) predominates, copolymers or polymer blends, as the case may be, are to be classified in the heading which occurs last in numerical order among those which equally merit consideration.

Thus, for example, a vinyl chloride-vinyl acetate copolymer containing 55 % of the vinyl chloride monomer unit falls in heading 39.04, but one which contains 55 % of the vinyl acetate monomer unit falls in heading 39.05.

Similarly, a copolymer consisting of 45 % ethylene, 35 % propylene and 20 % isobutylene monomer units is classified in heading 39.02 since the propylene and isobutylene monomer units, whose polymers fall in heading 39.02, constitute 55 % of the copolymer and, when taken together, predominate over the ethylene monomer unit.

A polymer blend composed of 55 % polyurethane based on toluene diisocyanate and a polyether polyol, and 45 % poly(oxyxylylene) is to be classified in heading 39.09 since the monomer units of polyurethane predominate over those of the poly(oxyxylylene) polyether. In the context of the definition of polyurethanes, all of the monomer units of a polyurethane, including those of the polyether polyol that form part of the polyurethane, are to be taken together as monomer units falling in heading 39.09.

Chemically modified polymers

Chemically modified polymers, that is those in which only appendages to the main polymer chain have been changed by chemical reaction, are to be classified in the heading appropriate to the unmodified polymer (see Note 5 to this Chapter). This provision does not apply to graft copolymers.

Thus, for example, chlorinated polyethylene and chlorosulphonated polyethylene are classified in heading 39.01.

Polymers that are chemically modified to form reactive epoxide groups such that they become epoxide resins (see the Explanatory Note to heading 39.07) are to be classified under heading 39.07.

For example, phenolic resins chemically modified by epichlorohydrin would be classified as epoxide resins and not as chemically modified phenolic resins in heading 39.09.

A polymer blend in which any one of the constituent polymers has been chemically modified is considered to be chemically modified in its entirety.

Primary forms

Headings 39.01 to 39.14 cover goods in primary forms only. The expression "primary forms" is defined in Note 6 to this Chapter. It applies only to the following forms :

(1) **Liquids and pastes.** These may be the basic polymer which requires "curing" by heat or otherwise to form the finished material, or may be dispersions (emulsions and suspensions) or solutions of the uncured or partly cured materials. In addition to substances necessary for "curing" (such as hardeners (cross-linking agents) or other co-reactants and accelerators), these liquids or pastes may contain other materials such as plasticisers, stabilisers, fillers and colouring matter, chiefly intended to give the finished products special physical properties or other desirable characteristics. The liquids and pastes are used for casting, extrusion, etc., and also as impregnating materials, surface coatings, bases for varnishes and paints, or as glues, thickeners, flocculants, etc.

When as a result of the addition of certain substances, the resultant products answer to the description in a more specific heading elsewhere in the Nomenclature, they are **excluded** from Chapter 39; this is, for example, the case with :

(a) Prepared glues - see exclusion (b) at the end of this General Explanatory Note.

(b) Prepared additives for mineral oils (**heading 38.11**).

It should also be noted that solutions (other than collodions) consisting of any of the products specified in headings 39.01 to 39.13 in volatile organic solvents, when the weight of the solvent exceeds 50 % of the weight of the solution, are **excluded** from this Chapter and fall in **heading 32.08** (see Note 2 (e) to this Chapter).

Liquid polymers without solvent, clearly identifiable as being intended for use solely as varnishes, (in which the formation of the film depends on heat, atmospheric humidity or oxygen and not on the addition of a hardener), are classified in **heading 32.10**. When not so identifiable, they fall in this Chapter.

Polymers in primary forms further formulated with additives, which make the products suitable for their expressed use as mastics, are to be classified in heading 32.14.

(2) **Powder, granules and flakes.** In these forms they are employed for moulding, for the manufacture of varnishes, glues, etc. and as thickeners, flocculants, etc. They may consist of the

unplasticised materials which become plastic in the moulding and curing process, or of materials to which plasticisers have been added; these materials may incorporate fillers (e.g., wood flour, cellulose, textile fibres, mineral substances, starch), colouring matter or other substances cited in Item (1) above. Powders may be used, for example, to coat objects by the application of heat with or without static electricity.

(3) **Blocks of irregular shape, lumps and similar bulk forms**, whether or not containing fillers, colouring matter or other substances cited in Item (1) above. Blocks of regular geometric shape are not primary forms and are covered by the expression "plates, sheets, film, foil and strip" (see Note 10 to this Chapter).

Waste, parings and scrap of a single thermoplastic material transformed into primary forms are classified in headings 39.01 to 39.14 (according to the material) and **not** in heading 39.15 (see Note 7 to this Chapter).

Tubes, pipes and hoses

The expression "tubes, pipes and hoses", used in heading 39.17, is defined in Note 8 to this Chapter.

Plates, sheets, film, foil and strip of heading 39.20 or 39.21

The expression "plates, sheets, film, foil and strip", used in headings 39.20 and 39.21 is defined in Note 10 to the Chapter.

Such plates, sheets, etc., whether or not surface-worked (including squares and other rectangles cut therefrom), with ground edges, drilled, milled, hemmed, twisted, framed or otherwise worked or cut into shapes other than rectangular (including square), are generally classified in **headings 39.18, 39.19** or **39.22 to 39.26**.

Cellular plastics

Cellular plastics are plastics having many cells (either open, closed or both), dispersed throughout their mass. They include foam plastics, expanded plastics and microporous or microcellular plastics. They may be either flexible or rigid.

Cellular plastics are produced by a variety of methods. These include incorporating a gas into plastics (e.g., by mechanical mixing, evaporation of a low boiling point solvent, degradation of a gas producing material), mixing plastics with hollow micro-spheres (e.g., of glass or phenolic resin), sintering granules of plastics and mixing plastics with water or solvent-soluble material which are leached out of plastics leaving voids.

Plastics and textile combinations

Wall or ceiling coverings which comply with Note 9 to this Chapter are classified in heading 39.18. Otherwise, the classification of plastics and textile combinations is essentially governed by Note 1 (h) to Section XI, Note 3 to Chapter 56 and Note 2 to Chapter 59. The following products are also covered by this Chapter :

(a) Felt impregnated, coated, covered or laminated with plastics, containing 50 % or less by weight of textile material or felt completely embedded in plastics;

(b) Textile fabrics and nonwovens, either completely embedded in plastics or entirely coated or covered on both sides with such material, provided that such coating or covering can be seen with the naked eye with no account being taken of any resulting change of colour;

(c) Textile fabrics, impregnated, coated, covered or laminated with plastics, which cannot, without fracturing, be bent manually around a cylinder of a diameter of 7 mm, at a temperature between 15 °C and 30 °C;

(d) Plates, sheets and strip of cellular plastics combined with textile fabrics (as defined in Note 1 to Chapter 59), felt or nonwovens, where the textile is present merely for reinforcing purposes.

In this respect, unfigured, unbleached, bleached or uniformly dyed textile fabrics, felt or nonwovens, when applied to one face only of these plates, sheets or strip, are regarded as serving merely for reinforcing purposes. Figured, printed or more elaborately worked textiles (e.g., by raising) and special products, such as pile fabrics, tulle and lace and textile products of heading 58.11, are regarded as having a function beyond that of mere reinforcement.

Plates, sheets and strip of cellular plastics combined with textile fabric on both faces, whatever the nature of the fabric, are **excluded** from this Chapter (generally **heading 56.02, 56.03** or **59.03**).

Combinations of plastics and materials other than textiles

This Chapter also covers the following products, whether they have been obtained by a single operation or by a number of successive operations **provided** that they retain the essential character of articles of plastics :

(a) Plates, sheets, etc., incorporating a reinforcement or a supporting mesh of another material (wire, glass fibres, etc.) embedded in the body of the plastics.

(b) Plates, sheets, etc., of plastics, separated by a layer of another material such as metal foil, paper, paperboard.

Products consisting of paper or paperboard covered with a thin protective sheet of plastics on both faces are **excluded** from this Chapter **provided** they retain the essential character of paper or paperboard (generally **heading 48.11**).

(c) Paper-reinforced stratified sheeting of plastics, and products consisting of one layer of paper or paperboard coated or covered with a layer of plastics, the latter constituting more than half the total thickness, **other than** wall coverings of **heading 48.14**.

(d) Products consisting of glass fibres or sheets of paper, impregnated with plastics and compressed together, **provided** they have a hard, rigid character. (If having more the character of paper or of articles of glass fibres they are classified in **Chapter 48** or **70**, as the case may be.)

The provisions of the preceding paragraph also apply, *mutatis mutandis*, to monofilaments, rods, sticks, profile shapes, tubes, pipes and hoses and articles.

It should be noted that gauze and netting of base metal simply dipped in plastics are **excluded** (**Section XV**), even if the meshes are filled in by the dipping process.

In the case of plates or sheets composed of plies of wood and plastics, those in which the wood constitutes only a support or reinforcement of the plastics are classified in the present Chapter; those in which the plastics have a merely **subsidiary** function (e.g., when they form the foundation for a fine veneer) are **excluded** (**Chapter 44**). It should be noted in this regard that building panels composed of layers of wood and plastics are classified, as a general rule, in Chapter 44 (see the General Explanatory Note to that Chapter).

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In addition to the exclusions mentioned in Note 2, the Chapter **excludes** :

(a) Concentrated dispersions of colouring matter in plastics having the character of products of **Chapter 32**; see, for example, the Explanatory Notes to **heading 32.04** (paragraph (I) (C) regarding concentrated dispersions of colouring matter in plastics, and paragraph (II) (2) concerning organic luminophores, e.g., rhodamine B in plastics), **heading 32.05** (seventh paragraph concerning concentrated dispersions of colour lakes in plastics) and **heading 32.06** (Part A), sixth paragraph, subparagraph (I) concerning concentrated dispersions of other colouring matter in plastics).

(b) Preparations specially formulated for use as adhesives, consisting of polymers or blends thereof of headings 39.01 to 39.13 which, apart from any permitted additions to the products of this Chapter (fillers, plasticisers, solvents, pigments, etc.), contain other added substances not falling in this Chapter (e.g., waxes, rosin esters, unmodified natural shellac) and products of headings 39.01 to 39.13 put up for retail sale as glues or adhesives, not exceeding a net weight of 1 kg (**heading 35.06**).

(c) Plastics and articles thereof (**other than** the goods of heading 39.18 or 39.19), printed with motifs, characters or pictorial representations, which are not merely subsidiary to the primary use of the goods (**Chapter 49**).

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Subheading Explanatory Note.

Subheading Note 1

This Note governs the classification of polymers (including copolymers), chemically modified polymers and polymer blends at subheading level. Before these products can be classified at subheading level, however, they must first be classified in the proper heading under the provisions of Notes 4 and 5 to this Chapter (see the General Explanatory Note to this Chapter).

Classification of polymers (including copolymers) and chemically modified polymers

According to Subheading Note 1, polymers (including copolymers) and chemically modified polymers are to be classified in accordance with the provisions of **subparagraph (a)** of the Note or **subparagraph (b)** of the Note, depending upon whether or not there is a subheading named "Other" in the same series of subheadings.

A subheading named "Other" does not include subheadings such as "Other polyesters" and "Of other plastics".

The expression "in the same series" applies to subheadings of the same level, namely, one-dash subheadings (level 1) or two-dash subheadings (level 2) (see the Explanatory Note to General Interpretative Rule 6).

It should be noted that some headings (e.g., heading 39.07) contain both types of series of subheadings.

(A) **Classification when there is a subheading named "Other" in the same series**

(1) **Subparagraph (a) (1)** of Subheading Note 1 defines polymers with the prefix "poly" (e.g., polyethylene and polyamide-6,6) as being those in which the constituent monomer unit or monomer units of the named polymer taken together contribute 95 % or more by weight of the total polymer content. In the case of named classes of polymers designated with the prefix "poly" (e.g., polyterpenes of subheading 3911.10), all of the monomer units falling in the same class (e.g., different terpene monomer units in the case of polyterpenes) must comprise 95 % or more by weight of the polymer.

It should be stressed that this definition applies **only** to polymers of subheadings which have a subheading named "Other" in the same series.

Thus, for example, a polymer consisting of 96 % of the ethylene monomer unit and 4 % of the propylene monomer unit and having a specific gravity of 0.94 or more (being a polymer of heading 39.01 by application of Note 4 to this Chapter), should be classified as polyethylene in subheading 3901.20 because the ethylene monomer unit contributes more than 95 % of the total polymer content and there is a subheading named "Other" in the same series.

The above definition of polymers with the prefix "poly", when applied to poly(vinyl alcohol), does not require that 95 % or more by weight of the monomer units are the named "vinyl alcohol". However, it does require that the vinyl acetate and vinyl alcohol monomer units taken together represent 95 % or more by weight of the polymer.

(2) **Subparagraph (a) (2)** of Subheading Note 1 deals with the classification of the products of subheadings 3901.30, 3901.40, 3903.20, 3903.30 and 3904.30.

Copolymers classified in these four subheadings must have 95 % or more by weight of the constituent monomer units of the polymers named in the subheading.

Thus, for example, a copolymer consisting of 61 % vinyl chloride, 35 % vinyl acetate and 4 % maleic anhydride monomer units (being a polymer of heading 39.04) should be classified as a vinyl chloride-vinyl acetate copolymer of subheading 3904.30 because vinyl chloride and vinyl acetate monomer units taken together contribute 96 % of the total polymer content.

On the other hand, a copolymer consisting of 60 % styrene, 30 % acrylonitrile and 10 % vinyl toluene monomer units (being a polymer of heading 39.03) should be classified in subheading 3903.90 (named "Other") and **not** in subheading 3903.20 because the styrene and acrylonitrile monomer units taken together contribute only 90 % of the total polymer content.

(3) **Subparagraph (a) (3)** of Subheading Note 1 deals with the classification of chemically modified polymers. These polymers are to be classified in the subheading named "Other", provided that the chemically modified polymers are not more specifically covered by another subheading. The consequence of this Note is that chemically modified polymers are not classified in the same subheading as unmodified polymer, unless the unmodified polymer itself is classifiable in a subheading named "Other".

Thus, for example, chlorinated or chlorosulphonated polyethylene, being chemically modified polyethylene of heading 39.01, should be classified in subheading 3901.90 ("Other").

On the other hand, poly(vinyl alcohol), which is obtained by the hydrolysis of poly(vinyl acetate), should be classified in subheading 3905.30 which specifically covers it.

(4) **Subparagraph (a) (4)** : Polymers which cannot be classified according to the provisions of paragraphs (a) (1), (a) (2) or (a) (3) are classified in the subheading named "Other", unless there is a **more specific subheading** in the series under consideration, which covers polymers of that monomer unit which predominates by weight over every other monomer unit. For this purpose, constituent monomer units of polymers falling in the same subheading shall be taken together. Only the constituent monomer units of the polymers in the same series of subheadings under consideration are to be compared.

The texts of **such specific subheadings** have the format "polymers of x", "x copolymers" or "x polymers" (e.g., propylene copolymers (**subheading 3902.30**), fluoro-polymers (**subheadings 3904.61 and 3904.69**).

To be classified in these subheadings it is only necessary for the monomer unit named in the subheading to predominate over every other single monomer unit in the series under consideration. That is, the monomer unit named in the subheading does not have to represent more than 50 % of the total polymer content of the series under consideration.

Thus, for example, an ethylene-propylene copolymer consisting of 40 % ethylene and 60 % propylene monomer units (being a polymer of heading 39.02) should be classified in subheading 3902.30 as a propylene copolymer because propylene is the only constituent monomer unit to be taken into consideration.

Likewise, a copolymer consisting of 45 % ethylene, 35 % propylene and 20 % isobutylene monomer units (being a polymer of heading 39.02) is to be classified in subheading 3902.30 because only the propylene and isobutylene monomer units are to be compared (the ethylene monomer unit being ignored) and the propylene monomer unit predominates over the isobutylene monomer unit.

On the other hand, a copolymer consisting of 45 % ethylene, 35 % isobutylene and 20 % propylene monomerunits (being a polymer of heading 39.02) is to be classified in subheading 3902.90 because only the isobutylene and propylene monomer units are to be compared and the isobutylene monomer unit predominates over the propylene monomer unit.

(B) **Classification when there is no subheading named "Other" in the same series**

(1) **Subparagraph (b) (1)** of Subheading Note 1 directs classification of polymers to the subheading covering polymers of that monomer unit which predominates by weight over every other single comonomer unit, when there is no subheading named "Other" in the same series. For this purpose, constituent monomer units of polymers falling in the same subheading are to be taken together.

This is similar to the method of classification specified in Note 4 to this Chapter for the classification of polymers at heading level.

The concept of predominance of one monomer unit applies, except when polymers contain monomer units falling outside the series of subheadings under consideration. In such circumstances, only the monomer units relating to the polymers in the series of subheadings under consideration are to be compared.

Thus, for example, copolycondensates of urea and phenol with formaldehyde (being polymers of heading 39.09) are to be classified in subheading 3909.10 if the urea monomer unit predominates over the phenol monomer unit, and in subheading 3909.40 if the phenol monomer unit predominates, since there is no subheading named "Other" in the same series of subheadings.

It should be remembered that the definition of polymers with the prefix "poly" under paragraph (a) (1) of Subheading Note 1 **does not** apply to the subheadings falling in this category.

Thus, for example, copolymers having constituent monomer units of both polycarbonate and poly(ethyleneterephthalate) are to be classified in subheading 3907.40 if the former predominates and in subheading 3907.61 or3907.69 if the latter predominates, since there is no subheading named "Other" in the same series of subheadings.

(2) **Subparagraph (b) (2)** of Subheading Note 1 deals with the classification of chemically modified polymers. These are to be classified in the same subheading as the unmodified polymer when there is no subheading named "Other" in the same series of subheadings under consideration.

Thus, for example, acetylated phenolic resins (being polymers of heading 39.09) are to be classified in subheading 3909.40 as phenolic resins, since there is no subheading named "Other" in the same series.

Classification of polymer blends

The last paragraph of Subheading Note 1 directs the classification of polymer blends. These are to be classified in the same subheading as if they were polymers of the same monomer units in the same proportions.

The following examples illustrate the classification of polymer blends :

- A polymer blend with a specific gravity of more than 0.94 consisting of 96 % polyethylene and 4 % polypropylene is to be classified in subheading 3901.20 as polyethylene because the ethylene monomer unit contributes more than 95 % of the polymer content.

- A polymer blend consisting of 60 % polyamide-6 and 40 % polyamide-6,6 is to be classified in subheading 3908.90 ("Other") since the constituent monomer units of neither of the polymers contribute 95 % or more by weight of the total polymer content.

– A blend of polypropylene (45 %), poly(butylene terephthalate) (42 %) and poly(ethylene isophthalate) (13 %) is to be classified in heading 39.07 since the constituent monomer units of the two polyesters together predominate over the propylene monomer unit. The monomer units of poly(butylene terephthalate) and poly(ethylene isophthalate).are to be considered without regard to how they may have been combined in individual polymers in the blend. In this example, one of the monomer units of poly(ethylene isophthalate) and another of poly(butylene terephthalate) are the **same** monomer units as the constituent monomer units of poly(ethylene terephthalate). However, the blend is to be classified in subheading 3907.99 since, considering the polyester monomer units only, the constituent monomer units of "other polyester", **in the correct stoichiometric ratio**, predominate over the monomer units of poly(ethylene terephthalate).

(*) In this case, the monomer units are randomly oriented and the constitutional repeating unit concept does not apply.

Chapter 40: **Rubber and articles thereof**

Notes.

1.– Except where the context otherwise requires, throughout the Nomenclature the expression "rubber" means the following products, whether or not vulcanised or hard : natural rubber, balata, gutta-percha, guayule, chicle and similar natural gums, synthetic rubber, factice derived from oils, and such substances reclaimed.

2.– This Chapter does not cover :

(a) Goods of Section XI (textiles and textile articles);

(b) Footwear or parts thereof of Chapter 64;

(c) Headgear or parts thereof (including bathing caps) of Chapter 65;

(d) Mechanical or electrical appliances or parts thereof of Section XVI (including electrical goods of all kinds), of hard rubber;

(e) Articles of Chapter 90, 92, 94 or 96; or

(f) Articles of Chapter 95 (other than sports gloves, mittens and mitts and articles of headings 40.11 to 40.13).

3.- In headings 40.01 to 40.03 and 40.05, the expression "primary forms" applies only to the following forms :

(a) Liquids and pastes (including latex, whether or not pre-vulcanised, and other dispersions and solutions);

(b) Blocks of irregular shape, lumps, bales, powders, granules, crumbs and similar bulk forms.

4.- In Note 1 to this Chapter and in heading 40.02, the expression "synthetic rubber" applies to :

(a) Unsaturated synthetic substances which can be irreversibly transformed by vulcanisation with sulphur into non-thermoplastic substances which, at a temperature between 18 °C and 29 °C, will not break on being extended to three times their original length and will return, after being extended to twice their original length, within a period of five minutes, to a length not greater than one and a half times their original length. For the purposes of this test, substances necessary for the cross-linking, such as vulcanising activators or accelerators, may be added; the presence of substances as provided for by Note 5 (B) (ii) and (iii) is also permitted. However, the presence of any substances not necessary for the cross-linking, such as extenders, plasticisers and fillers, is not permitted;

(b) Thioplasts (TM); and

(c) Natural rubber modified by grafting or mixing with plastics, depolymerised natural rubber, mixtures of unsaturated synthetic substances with saturated synthetic high polymers provided that all the above-mentioned products comply with the requirements concerning vulcanisation, elongation and recovery in (a) above.

5.- (A)Headings 40.01 and 40.02 do not apply to any rubber or mixture of rubbers which has been compounded, before or after coagulation, with :

(i) vulcanising agents, accelerators, retarders or activators (other than those added for the preparation of pre-vulcanised rubber latex);

(ii) pigments or other colouring matter, other than those added solely for the purpose of identification;

(iii) plasticisers or extenders (except mineral oil in the case of oil-extended rubber), fillers, reinforcing agents, organic solvents or any other substances, except those permitted under (B);

(B) The presence of the following substances in any rubber or mixture of rubbers shall not affect its classification in heading 40.01 or 40.02, as the case may be, provided that such rubber or mixture of rubbers retains its essential character as a raw material :

(i) emulsifiers or anti-tack agents;

(ii) small amounts of breakdown products of emulsifiers;

(iii) very small amounts of the following : heat-sensitive agents (generally for obtaining thermosensitive rubber latexes), cationic surface-active agents (generally for obtaining electropositive rubber latexes), antioxidants, coagulants, crumbling agents, freeze-resisting agents, peptisers, preservatives, stabilisers, viscosity-control agents, or similar special-purpose additives.

6.- For the purposes of heading 40.04, the expression "waste, parings and scrap" means rubber waste, parings and scrap from the manufacture or working of rubber and rubber goods definitely not usable as such because of cutting-up, wear or other reasons.

7.- Thread wholly of vulcanised rubber, of which any cross-sectional dimension exceeds 5 mm, is to be classified as strip, rods or profile shapes, of heading 40.08.

8.- Heading 40.10 includes conveyor or transmission belts or belting of textile fabric impregnated, coated, covered or laminated with rubber or made from textile yarn or cord impregnated, coated, covered or sheathed with rubber.

9.- In headings 40.01, 40.02, 40.03, 40.05 and 40.08, the expressions "plates", "sheets" and "strip" apply only to plates, sheets and strip and to blocks of regular geometric shape, uncut or simply cut to rectangular (including square) shape, whether or not having the character of articles and whether or not printed or otherwise surface-worked, but not otherwise cut to shape or further worked.

In heading 40.08 the expressions "rods" and "profile shapes" apply only to such products, whether or not cut to length or surface-worked but not otherwise worked.

GENERAL

Definition of rubber

The expression "rubber" is defined in Note 1 to this Chapter. Where this expression is used without qualification in this and other Chapters of the Nomenclature, it means the following products :

(1) **Natural rubber, balata, gutta-percha, guayule, chicle and similar** (i.e., rubber-like) **natural gums** (see the Explanatory Note to heading 40.01).

(2) **Synthetic rubber** as defined in Note 4 to this Chapter. For the purpose of the test required by Note 4, a sample of the unsaturated synthetic substance or a substance of a kind specified in Note 4 (c) (in the condition of unvulcanised raw material) is to be vulcanised with sulphur and then subjected to the elongation and recovery test (see the Explanatory Note to heading 40.02). Accordingly, in the case of substances containing materials not permitted by Note 4, such as mineral oil, the test is to be carried out on a sample which does not contain such materials or from which such materials have been removed. In the case of vulcanised rubber articles, which cannot be tested as such, it is necessary to obtain a sample of the unvulcanised raw material from which the articles are made, in order to perform the test. No test is, however, required for thioplasts which are regarded as synthetic rubber by definition.

(3) **Factice derived from oils** (see the Explanatory Note to heading 40.02).

(4) **Reclaimed rubber** (see the Explanatory Note to heading 40.03).

The expression "rubber" covers the foregoing products whether unvulcanised, vulcanised or hard.

The term "vulcanised" refers in general to rubber (including synthetic rubber) which has been cross-linked with sulphur or any other vulcanising agent (such as, sulphur chloride, certain oxides of polyvalent metals, selenium, tellurium, thiuram di- and tetrasulphides, certain organic peroxides and certain synthetic polymers), whether or not using heat or pressure, or by high energy, radiation so that it passes from a mainly plastic state to a mainly elastic one. It should be noted that the criterion concerning vulcanisation with sulphur is relevant only for the purposes of Note 4, i.e., for determining whether a substance is synthetic rubber or not. Once a substance has been determined to be synthetic rubber, products made therefrom are considered as vulcanised rubber products for the purpose of headings 40.07 to 40.17, whether they have been vulcanised with sulphur or with some other vulcanising agent.

For the purpose of vulcanisation, in addition to vulcanising agents, certain other substances are also normally added, such as accelerators, activators, retarders, plasticisers, extenders, fillers, reinforcing agents or any of the additives mentioned in Note 5 (B) to this Chapter. Such vulcanisable mixtures are regarded as compounded rubber and are classified in heading 40.05 or 40.06 depending upon the form in which they are presented.

Hard rubber, (for example, ebonite) is obtained by vulcanising rubber with a high proportion of sulphur to the point where it becomes practically inflexible and inelastic.

Scope of the Chapter

This Chapter covers rubber, as defined above, in the raw or semi-manufactured states, whether or not vulcanised or hard, and articles wholly of rubber or whose essential character derives from rubber, other than products excluded by Note 2 to this Chapter.

The general arrangement of the headings is as follows :

(a) Subject to Note 5, headings 40.01 and 40.02 essentially cover raw rubber in primary forms or in plates, sheets or strip.

(b) Headings 40.03 and 40.04 cover reclaimed rubber in primary forms or in plates, sheets or strip, and waste, parings and scrap of rubber (other than hard rubber) and powders and granules obtained therefrom.

(c) Heading 40.05 covers compounded rubber, unvulcanised, in primary forms or in plates, sheets or strip.

(d) Heading 40.06 covers other forms and articles of unvulcanised rubber, whether or not compounded.

(e) Headings 40.07 to 40.16 cover semi-manufactures and articles of vulcanised rubber other than hard rubber.

(f) Heading 40.17 covers hard rubber, in all forms, including waste and scrap and articles of hard rubber.

Primary forms (headings 40.01 to 40.03 and 40.05)

The expression "primary forms" is defined in Note 3 to this Chapter. It should be noted that pre-vulcanised latex is specifically included in the definition of "primary forms" and is therefore to be regarded as unvulcanised. Since headings 40.01 and 40.02 do not cover rubber or mixtures of rubbers to which an organic solvent has been added (see Note 5), the expression "other dispersions and solutions" in Note 3 applies to heading 40.05 only.

Plates, sheets and strip (headings 40.01, 40.02, 40.03, 40.05 and 40.08)

These expressions are defined in Note 9 to this Chapter and include blocks of regular geometric shape. Plates, sheets and strip may be surface-worked (printed, embossed, grooved, channelled, ribbed, etc.) or simply cut to rectangular (including square) shape, whether or not having the character of articles, but may not be otherwise cut to shape or further worked.

Cellular rubber

Cellular rubber is rubber having many cells (either open, closed, or both), dispersed throughout its mass. It includes sponge or foam rubber, expanded rubber and microporous or microcellular rubber. It may be either flexible or rigid (e.g., ebonite sponge).

Note 5

Note 5 to this Chapter provides criteria to distinguish rubber or mixtures of rubber in primary forms, plates, sheets or strip, which have not been compounded (headings 40.01 and 40.02) from those which have been compounded (heading 40.05). This Note does not make any distinction on the basis of whether compounding has been done before or after coagulation. It, however, permits the presence of certain substances in the rubber or mixtures of rubbers of headings 40.01 and 40.02 provided that the rubber or mixture of rubbers retains its essential character as a raw material. Such substances include mineral oil, emulsifiers or anti-tack agents, small amounts (generally not exceeding 5 %) of breakdown products of emulsifiers and very small amounts (generally less than 2 %) of special purpose additives.

Rubber and textile combinations

The classification of rubber and textile combinations is essentially governed by Note 1 (ij) to Section XI, Note 3 to Chapter 56 and Note 4 to Chapter 59, and as regards conveyor or transmission belts or belting by Note 8 to Chapter 40 and Note 6 (b) to Chapter 59. The following products are covered by this Chapter :

(a) Felt impregnated, coated, covered or laminated with rubber, containing 50 % or less by weight of textile material, and felt completely embedded in rubber;

(b) Nonwovens, either completely embedded in rubber or entirely coated or covered on both sides with such material, provided that such coating or covering can be seen with the naked eye with no account being taken of any resulting change of colour;

(c) Textile fabrics (as defined in Note 1 to Chapter 59) impregnated, coated, covered or laminated with rubber, weighing more than 1,500 g/m^2 and containing 50 % or less by weight of textile material;

(d) Plates, sheets or strip of cellular rubber, combined with textile fabrics (as defined in Note 1 to Chapter 59), felt or nonwovens, where the textile is present merely for reinforcing purposes.

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This Chapter **does not cover** articles mentioned in Note 2 to this Chapter. Additional exclusions are referred to in the Explanatory Notes to certain headings of this Chapter.

Section VIII

RAW HIDES AND SKINS, LEATHER, FURSKINS AND ARTICLES THEREOF; SADDLERY AND HARNESS; TRAVEL GOODS, HANDBAGS AND SIMILAR CONTAINERS; ARTICLES OF ANIMAL GUT

(OTHER THAN SILK-WORM GUT)

Chapter 41

Raw hides and skins (other than furskins) and leather

Notes.

1.- This Chapter does not cover :

(a) Parings or similar waste, of raw hides or skins (heading 05.11);

(b) Birdskins or parts of birdskins, with their feathers or down, of heading 05.05 or 67.01; or

(c) Hides or skins, with the hair or wool on, raw, tanned or dressed (Chapter 43); the following are, however, to be classified in Chapter 41, namely, raw hides and skins with the hair or wool on, of bovine animals (including buffalo), of equine animals, of sheep or lambs (except Astrakhan, Broadtail, Caracul, Persian or similar lambs, Indian, Chinese, Mongolian or Tibetan lambs), of goats or kids (except Yemen, Mongolian or Tibetan goats and kids), of swine (including peccary), of chamois, of gazelle of camels (including dromedaries), of reindeer, of elk, of deer, of roebucks or of dogs.

2.- (A) Headings 41.04 to 41.06 do not cover hides and skins which have undergone a tanning (including pre-tanning) process which is reversible (headings 41.01 to 41.03, as the case may be).

(B) For the purposes of headings 41.04 to 41.06, the term "crust" includes hides and skins that have been retanned, coloured or fat-liquored (stuffed) prior to drying.

3.- Throughout the Nomenclature the expression "composition leather" means only substances of the kind referred to in heading 41.15.

GENERAL

This Chapter covers :

(I) **Raw hides (the skins of the larger quadrupeds) and skins (other than birdskins with their feathers or down and furskins) (headings 41.01 to 41.03).** These headings also include raw hides and skins with the hair or wool on of animals mentioned in Note 1 (c) and referred to in the Explanatory Notes to headings 41.01 to 41.03.

Before undergoing tanning, hides and skins are first subjected to a series of preparatory processes, which consist of soaking them in alkaline solutions (to soften them and remove any salt used for preservation), dehairing and defleshing ("fleshing"), then removing the lime and other substances used in dehairing, and finally rinsing.

Headings 41.01 to 41.03 also cover raw hides and skins without the hair or wool, which have been subjected to a reversible tanning (including pre-tanning) process. Such process temporarily stabilises the hide or skin for splitting operations and temporarily prevents putrefaction. Hides and skins thus processed require further tanning before finishing and are **not** considered products of headings 41.04 to 41.06.

Hides and skins with the hair or wool on that have been pre-tanned or further prepared are **excluded** from this Chapter by Note 1(c) to this Chapter.

(II) **Hides and skins which have been tanned or crusted but not further prepared (headings 41.04 to 41.06).** Tanning renders the hides and skins resistant to decay, and increases their impermeability to water. Tannins penetrate into the hide structure and form crosslinks with the collagen. This is an irreversible chemical reaction, which gives the resultant product stability against heat, light or perspiration and makes a hide or skin mouldable and usable.

They are then either "vegetable tanned" (in baths containing certain woods, barks, leaves, etc., or their extracts), "mineral tanned" (with mineral salts, e.g., chrome salts, iron salts or alums) or "chemically tanned" (with formaldehyde or certain synthetic chemicals). Sometimes combinations of these processes are used. Tanning of heavy leather by a mixture of alum and salt is known as **Hungarian dressing**, while in **alum tanning** a mixture of salt, alum, egg yolk and flour is used. Alum tanned hides and skins are used mainly in the manufacture of gloves, apparel and footwear.

Hides and skins which have been tanned or further prepared beyond tanning are known in trade as "**leather**". Leather which has been dried after tanning is known as "**crust**" or "crust**leather**". During the crusting procedure, a fat-liquor or oil may be added to give the crust some lubrication and flexibility, and the hide or skin may be retanned or coloured by immersion (e.g., in a drum) before drying.

Sheep and lamb skins which have been oil-tanned and dressed to produce **chamois** leather (including combination chamois leather) are provided for in **heading 41.14**.

(III) **Leather further prepared after tanning or crusting (headings 41.07, 41.12 and 41.13).** After tanning or crusting, the leather frequently undergoes further treatment ("currying") to remove irregularities of the surface and render it ready for use by making it more supple, waterproof, etc. These processes consist of further working by softening, stretching, thinning, beating or hardening the surface, and feeding ("stuffing") with oils.

The leather may then be further dressed or finished by the application of a surface colour or pigment, graining or stamping to imitate skins of other kinds, sizing, polishing, grinding (or buffing) of the flesh side (or occasionally the grain side) to give a suède or velvet finish, waxing, blacking, smoothing (glazing), satin finishing, printing, etc.

Parchment-dressed leather is prepared from raw hides or skins, not by a process of tanning, but by treating the raw hides and skins to ensure their preservation. These are softened, dehaired, defleshed, washed and then stretched on a frame, coated with a paste containing whiting and soda or slaked lime, shaved to reduce them to the desired thickness and ground with pumice. Finally, they may be dressed with gelatin and starch.

The finer quality leathers, called "vellum", are prepared from the skins of new-born calves. These materials are used for fine bookbinding, for important documents, for drum-skins, etc. Thicker hides and skins (i.e., usually of larger bovine animals) are sometimes similarly treated (the coarser products being known as "rawhide") and are used for the manufacture of machinery parts, tools, travel goods, etc.

(IV) **Chamois leather; patent leather and patent laminated leather; metallised leather (heading 41.14).** Heading 41.14 includes the specialty leathers named in the heading text and produced by specific finishing operations. The heading therefore covers sheep and lamb skins which have been oil-tanned and dressed to produce **chamois leather** (including combination chamois leather); leather which has been coated or covered with a varnish or lacquer or with a pre-formed sheet of plastics **(patent leather or patent laminated leather)**; and leather which has been coated with metal powder or metal leaf **(metallised leather)**.

(V) **Composition (bonded) leather with a basis of leather or leather fibre (heading 41.15).**

(VI) **Parings and other waste of leather or of composition leather (heading 41.15).** This heading does not include parings and similar waste of raw hides or skins or of furskins.

Hides, skins and leather fall in this Chapter whether whole (i.e., the shape of the hides, skins and leather have the contour of the animal, but may have the skin of the head and legs removed) or in portions (e.g., sides, shoulders, butts, bends, bellies, cheeks), strips or sheets; pieces of leather cut to special shapes are, however, regarded as articles of other Chapters, particularly **Chapter 42** or **64**.

Split hides and skins and split leathers are classified in the same headings as the corresponding whole hides and skins and whole leathers respectively. Splitting is the process to horizontally divide hides and skins into more than one layer and may be carried out either before or after tanning. The object in splitting is to obtain a more even thickness for processing and a more uniform final leather. The outer or grain layer of a hide, known as the "grain split", is levelled by passing the hide across an endless band-knife to an accuracy of a few millimetres; the bottom layer, known as the "flesh split", is of irregular shape and thickness. Several layers can be produced from an exceptionally thick hide, such as buffalo. However, in such cases, the middle layers are weaker in structure than the outer layers.

Articles of leather; saddlery and harness;

travel goods, handbags and similar containers;

articles of animal gut (other than silk-worm gut)

Notes.

1.- For the purposes of this Chapter, the term "leather" includes chamois (including combination chamois) leather, patent leather, patent laminated leather and metallised leather.

2.- This Chapter does not cover :

(a) Sterile surgical catgut or similar sterile suture materials (heading 30.06);

(b) Articles of apparel or clothing accessories (except gloves, mittens and mitts), lined with furskin or artificial fur or to which furskin or artificial fur is attached on the outside except as mere trimming (heading 43.03 or 43.04);

(c) Made up articles of netting (heading 56.08);

(d) Articles of Chapter 64;

(e) Headgear or parts thereof of Chapter 65;

(f) Whips, riding-crops or other articles of heading 66.02;

(g) Cuff-links, bracelets or other imitation jewellery (heading 71.17);

(h) Fittings or trimmings for harness, such as stirrups, bits, horse brasses and buckles, separately presented (generally Section XV);

(ij) Strings, skins for drums or the like, or other parts of musical instruments (heading 92.09);

(k) Articles of Chapter 94 (for example, furniture, luminaires and lighting fittings);

(l) Articles of Chapter 95 (for example, toys, games, sports requisites); or

(m) Buttons, press-fasteners, snap-fasteners, press-studs, button moulds or other parts of these articles, button blanks, of heading 96.06.

3.- (A) In addition to the provisions of Note 2 above, heading 42.02 does not cover :

(a) Bags made of sheeting of plastics, whether or not printed, with handles, not designed for prolonged use (heading 39.23);

(b) Articles of plaiting materials (heading 46.02).

(B) Articles of headings 42.02 and 42.03 which have parts of precious metal or metal clad with precious metal, of natural or cultured pearls, of precious or semi-precious stones (natural, synthetic or reconstructed) remain classified in those headings even if such parts constitute more than minor fittings or minor ornamentation, provided that these parts do not give the articles their essential character. If, on the other hand, the parts give the articles their essential character, the articles are to be classified in Chapter 71.

4.- For the purposes of heading 42.03, the expression "articles of apparel and clothing accessories" applies, *inter alia*, to gloves, mittens and mitts (including those for sport or for protection), aprons and other protective clothing, braces, belts, bandoliers and wrist straps, but excluding watch straps (heading 91.13).

GENERAL

This Chapter principally covers articles of leather or composition leather; however, headings 42.01 and 42.02 also include certain articles characteristically of the leather trade but made from other materials. It further covers certain articles of gut, goldbeater's skin, bladders or tendons.

Leather

For the purposes of this Chapter, the term "leather" is defined in Note 1 to this Chapter. The term "leather" includes chamois (including combination chamois) leather, patent leather, patent laminated leather and metallised leather, i.e., the products described in heading 41.14.

Certain leather articles, however, are classified in **other Chapters** and these are referred to in the Explanatory Notes to the various headings hereafter.

Chapter 43

Furskins and artificial fur; manufactures thereof

Notes.

1.- Throughout the Nomenclature references to "furskins", other than to raw furskins of heading 43.01, apply to hides or skins of all animals which have been tanned or dressed with the hair or wool on.

2.- This Chapter does not cover :

(a) Birdskins or parts of birdskins, with their feathers or down (heading 05.05 or 67.01);

(b) Raw hides or skins, with the hair or wool on, of Chapter 41 (see Note 1 (c) to that Chapter);

(c) Gloves, mittens and mitts, consisting of leather and furskin or of leather and artificial fur (heading 42.03);

(d) Articles of Chapter 64;

(e) Headgear or parts thereof of Chapter 65; or

(f) Articles of Chapter 95 (for example, toys, games, sports requisites).

3.- Heading 43.03 includes furskins and parts thereof, assembled with the addition of other materials, and furskins and parts thereof, sewn together in the form of garments or parts or accessories of garments or in the form of other articles.

4.- Articles of apparel and clothing accessories (except those excluded by Note 2) lined with furskin or artificial fur or to which furskin or artificial fur is attached on the outside except as mere trimming are to be classified in heading 43.03 or 43.04 as the case may be.

5.- Throughout the Nomenclature the expression "artificial fur" means any imitation of furskin consisting of wool, hair or other fibres gummed or sewn on to leather, woven fabric or other materials, but does not include imitation furskins obtained by weaving or knitting (generally, heading 58.01 or 60.01).

GENERAL

This Chapter covers :

(1) Raw furskins **other than** raw hides and skins of **heading 41.01**, **41.02** or **41.03**.

(2) Hides and skins tanned or dressed with the hair or wool on, unassembled or assembled.

(3) Apparel, clothing accessories and other manufactured articles of furskin (subject to the **exceptions** specified in the Explanatory Note to heading 43.03).

(4) Artificial fur and articles thereof.

It is to be noted that birdskins and parts of birdskins, with their feathers or down, are **not** treated as furskins; they fall in **heading 05.05** or **67.01**.

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It is to be noted that headings 43.01 to 43.03 cover furskins and articles of furskin of some species of wild animals which are now threatened with extinction or which may become so unless trade in specimens of such species is strictly regulated. Such species are listed in the Appendices of the 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (Washington Convention).

Section IX

WOOD AND ARTICLES OF WOOD; WOOD CHARCOAL; CORK AND ARTICLES OF CORK; MANUFACTURES OF STRAW, OF ESPARTO OR OF OTHER PLAITING MATERIALS; BASKETWARE AND WICKERWORK

Chapter 44

Wood and articles of wood; wood charcoal

Notes.

1.- This Chapter does not cover :

(a) Wood, in chips, in shavings, crushed, ground or powdered, of a kind used primarily in perfumery, in pharmacy, or for insecticidal, fungicidal or similar purposes (heading 12.11);

(b) Bamboos or other materials of a woody nature of a kind used primarily for plaiting, in the rough, whether or not split, sawn lengthwise or cut to length (heading 14.01);

(c) Wood, in chips, in shavings, ground or powdered, of a kind used primarily in dyeing or in tanning (heading 14.04);

(d) Activated charcoal (heading 38.02);

(e) Articles of heading 42.02;

(f) Goods of Chapter 46;

(g) Footwear or parts thereof of Chapter 64;

(h) Goods of Chapter 66 (for example, umbrellas and walking-sticks and parts thereof);

(ij) Goods of heading 68.08;

(k) Imitation jewellery of heading 71.17;

(l) Goods of Section XVI or Section XVII (for example, machine parts, cases, covers, cabinets for machines and apparatus and wheelwrights' wares);

(m) Goods of Section XVIII (for example, clock cases and musical instruments and parts thereof);

(n) Parts of firearms (heading 93.05);

(o) Articles of Chapter 94 (for example, furniture, luminaires and lighting fittings, prefabricated buildings);

(p) Articles of Chapter 95 (for example, toys, games, sports requisites);

(q) Articles of Chapter 96 (for example, smoking pipes and parts thereof, buttons, pencils, and monopods, bipods, tripods and similar articles) excluding bodies and handles, of wood, for articles of heading 96.03; or

(r) Articles of Chapter 97 (for example, works of art).

2.- In this Chapter, the expression "densified wood" means wood which has been subjected to chemical or physical treatment (being, in the case of layers bonded together, treatment in excess of that needed to ensure a good bond), and which has thereby acquired increased density or hardness together with improved mechanical strength or resistance to chemical or electrical agencies.

3.- Headings 44.14 to 44.21 apply to articles of the respective descriptions of particle board or similar board, fibreboard, laminated wood or densified wood as they apply to such articles of wood.

4.- Products of heading 44.10, 44.11 or 44.12 may be worked to form the shapes provided for in respect of the goods of heading 44.09, curved, corrugated, perforated, cut or formed to shapes other than square or rectangular or submitted to any other operation provided it does not give them the character of articles of other headings.

5.- Heading 44.17 does not apply to tools in which the blade, working edge, working surface or other working part is formed by any of the materials specified in Note 1 to Chapter 82.

6.- Subject to Note 1 above and except where the context otherwise requires, any reference to "wood" in a heading of this Chapter applies also to bamboos and other materials of a woody nature.

Subheading Notes.

1.- For the purposes of subheading 4401.31, the expression "wood pellets" means by-products such as cutter shavings, sawdust or chips, of the mechanical wood processing industry, furniture-making industry or other wood transformation activities, which have been agglomerated either directly by compression or by the addition of a binder in a proportion not exceeding 3 % by

weight. Such pellets are cylindrical, with a diameter not exceeding 25 mm and a length not exceeding 100 mm.

2.- For the purposes of subheading 4401.32, the expression "wood briquettes" means by-products such as cutter shavings, sawdust or chips, of the mechanical wood processing industry, furniture making or other wood transformation activities, which have been agglomerated either directly by compression or by addition of a binder in a proportion not exceeding 3 % by weight. Such briquettes are in the form of cubiform, polyhedral or cylindrical units with the minimum cross-sectional dimension greater than 25 mm.

3.- For the purposes of subheading 4407.13, "S-P-F" refers to wood sourced from mixed stands of spruce, pine and fir where the proportion of each species varies and is unknown.

4.- For the purposes of subheading 4407.14, "Hem-fir" refers to wood sourced from mixed stands of Western hemlock and fir where the proportion of each species varies and is unknown.

GENERAL

This Chapter covers unmanufactured wood, semi-finished products of wood and, in general, articles of wood.

These products may be grouped broadly as follows :

(1) Wood in the rough (as felled, split, roughly squared, debarked, etc.) and fuel wood, wood waste and scrap, sawdust, wood in chips or particles; hoopwood, poles, piles, pickets, stakes, etc.; wood charcoal; wood wool and wood flour; railway or tramway sleepers (generally headings 44.01 to 44.06). However, the Chapter **excludes** wood, in chips, in shavings, crushed, ground or powdered, of a kind used primarily in perfumery, in pharmacy, or for insecticidal, fungicidal or similar purposes (**heading 12.11**) and wood, in chips, in shavings, ground or powdered, of a kind used primarily in dyeing or in tanning (**heading 14.04**).

(2) Sawn, chipped, sliced, peeled, planed, sanded, end-jointed, e.g., finger-jointed (i.e., jointed by a process whereby shorter pieces of wood are glued together end to end, with joints resembling interlaced fingers, in order to obtain a greater length of wood) and continuously shaped wood (headings 44.07 to 44.09).

(3) Particle board and similar board, fibreboard, laminated wood and densified wood (headings 44.10 to 44.13).

(4) Articles of wood (**except** certain kinds specified in Note 1 to this Chapter and which, together with others, are referred to in the Explanatory Notes to particular headings below) (headings 44.14 to 44.21).

As a general rule, building panels composed of layers of wood and plastics are classified in this Chapter. Classification of these panels depends on their external surface or surfaces which normally give them their essential character in terms of their intended uses. Thus, for example, a building panel, used as a structural element in roofing, wall or floor applications and consisting of an external layer of particle board and a layer of insulating material of plastics, is classified in heading 44.10, whatever the thickness of the layer of plastics, since it is the rigid, strong, wood portion which allows the panel to be used as a structural element, the plastics having a subsidiary insulation function. On the other hand, a panel in which a wood backing serves merely as a support for an exterior surface of plastics is, in most cases, classified in **Chapter 39**.

Articles of wood presented unassembled or disassembled are classified with the corresponding complete articles, provided the parts are presented together. Similarly, accessories or parts of glass, marble, metal or other material presented with wooden articles to which they belong are classified with such articles whether fitted thereto or not.

Headings 44.14 to 44.21 which cover manufactured articles of wood, apply to such articles whether made of ordinary wood or of particle board or similar board, fibreboard, laminated wood or densified wood (see Note 3 to this Chapter).

Generally speaking, throughout the Nomenclature, the classification of wood is not affected by treatment necessary for its preservation, such as seasoning, superficial charring, priming and stopping, or impregnation with creosote or other wood preservatives (e.g., coal tar, pentachlorophenol (ISO), chromated copper arsenate or ammoniacal copper arsenate); nor is it affected by reason of being painted, stained or varnished. However, these general considerations do **not** apply in the case of the subheadings of headings 44.03 and 44.06, where specific classification provision has been made for particular categories of painted, stained or preservative-treated wood.

Certain materials of a woody nature, e.g., bamboo and osier, are used mainly in making articles of basketware. In the unmanufactured state such materials are classified in **heading 14.01**, and in the form of articles of basketware in **Chapter 46**. However, products such as bamboo in chips or particles (used for the manufacture of particle board, fibreboard or cellulose pulp) and articles of bamboo or other woody materials, **other than** basketware, furniture or other articles specifically included in other Chapters, are classified in this Chapter with the corresponding products or articles of true wood, **except** where the context otherwise requires (e.g., in the case of headings 44.10 and 44.11) (see Note 6 to this Chapter).

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Subheading Explanatory Notes.

Names of certain tropical woods

For the purposes of the relevant subheadings of headings 44.03, 44.07, 44.08, 44.09 and 44.12, the names of tropical woods are designated according to the pilot-names recommended by the International Technical Association for Tropical Timber (l'Association technique internationale des bois tropicaux) (ATIBT), the French Agricultural Research Centre for International Development) (Centre de Coopération Internationale en Recherche Agronomique pour le Développement) (CIRAD) and the International Tropical Timber Organization (ITTO). The pilot-name is based on the popular name employed in the principal country of production or of consumption.

The relevant pilot-names, together with corresponding scientific names and local names, are listed in the Annex to the Explanatory Notes to this Chapter.

ANNEX

APPELLATION OF CERTAIN TROPICAL WOODS [1]

Pilot-name	Scientific names	Local names	
Abarco	*Cariniana pyriformis* Miers.	Venezuela	Bacu
Abura	*Hallea ciliata* Leroy (Syn. *Mitragyna ciliata* Aubr. & Pellegr.) *Hallea rubrostipulata* F. Leroy (Syn. *Mitragyna rubrostipulata* Harv.) *Hallea stipulosa* O. Kuntze (Syn. *Mitragyna*	Angola Cameroon Congo Côte d'Ivoire Equatorial Guinea Gabon Ghana Nigeria Sierra Leone Uganda	Mivuku Elolom Vuku Bahia Elelon Elelom Nzam Subaha Abura Mboi Nzingu

	stipulosa O. Ktze)	Dem. Rep. of the Congo Zambia *France*	Mvuku Nzingu *Bahia*
Acacia	*Acacia auriculiformis* A.Cunn. ex Benth. *Acacia mangium* Willd.	Australia Indonesia Malaysia Papua New Guinea Thailand *UK* *USA*	Black Wattle, Brown Salwood Mangge Hutan, Tongke Hutan Kayu Safoda Arr Kra Thin Tepa *Brown Salwood,* *Black Wattle* *Brown Salwood,* *Black Wattle*

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[1] **Note :**

The third column shows the commercial names used in the exporting countries, together with the name of the exporting country. The commercial names in use in the importing countries, when they differ from the pilot-names, are given in italics.

Pilot-name	**Scientific names**	**Local names**	
Acajou	*Khaya spp.*	Angola	Undia Nunu

Pilot-name	Scientific names	Local names	
d'Afrique	*Khaya ivorensis* A. Chev. (Syn. *Khaya klainei* Pierre ex A.Chev.)	Cameroon Côte d'Ivoire Equatorial Guinea Gabon Ghana Nigeria France Germany UK	N'Gollon Acajou Bassam Caoba del Galón Zaminguila Takoradi Mahogany Ogwango Acajou Bassam Khaya Mahagoni African Mahogany
	Khaya anthotheca C. DC.	Angola Cameroon Congo Côte d'Ivoire Ghana Uganda France Germany	N'Dola Mangona N'Dola Acajou Blanc, Acajou Krala Ahafo Munyama Acajou Blanc Khaya Mahagoni

Pilot-name	Scientific names	Local names	
	Khaya grandifoliola C. DC.	Côte d'Ivoire Nigeria Uganda France UK	Acajou à Grandes Feuilles Akuk, Benin Mahogany, Eri Kire Acajou à Grandes Feuilles Heavy African Mahogany
Adjouaba	*Dacryodes klaineana* (Pierre) H. J. Lam (Syn. *Pahylobus deliciosa* Pellegr.)	Dem. Rep. of the Congo Congo Gabon	Mouguengueri Safukala Assia, Igaganga, Ossabel
Afina	*Strombosia glaucescens* Engl. *Strombosia pustulata* Oliv.	Côte d'Ivoire Nigeria	Poe Itako, Otingbo
Afrormosia	*Pericopsis elata* Van Meeuwen (Syn. *Afrormosia elata* Harms)	Cameroon Central African	Obang Obang

Pilot-name	Scientific names	Local names	
		Republic Côte d'Ivoire Ghana Dem. Rep. of the Congo France	Assamela Kokrodua Ole, Bohala, Mohole Assamela, Oleo Pardo

Pilot-name	Scientific names	Local names	
Aielé	*Canarium schweinfurtii* Engl.	Angola Cameroon Central African Republic Congo Gabon Ghana Equatorial Guinea Nigeria Uganda	M'bili Abel Gberi M'bili Abeul, Ovili Bediwunua, Eyere Abe Elemi Mwafu

Pilot-name	Scientific names	Local names	
		Dem. Rep. of the Congo Sierra Leone UK	Bidikala, M'bidikala Billi Canarium
Aiéouéko	*Dimorphandra spp.*		
Akak	*Duboscia viridiflora* (K.Schum.) Mildbr.		
Ako	*Antiaris toxicaria* subsp. *africana* (Engl.) C.C.Berg (Syn. *Antiaris africana* Engl.) *Antiaris toxicaria* subsp. *welwitschii* (Engl.) C.C.Berg. (Syn. *Antiaris welwitschii* Engl.)	Angola Côte d'Ivoire Ghana Nigeria Tanzania Uganda Dem. Rep. of the Congo	Sansama Ako, Akede Chenchen, Kyenkyen Oro, Ogiovu Mlulu, Mkuzu Kirundu, Mumaka Bonkonko, Bonkongo

Pilot-name	Scientific names	Local names	
		Germany UK	Antiaris Antiaris
Akossika	*Scottellia spp.* *Scottellia coriacea* A. Chev.	Cameroon Central African Republic Gabon Ghana Liberia Nigeria Germany Italy UK	Ngobisolo Kelembicho Bilogh-Bi-Nkele Koroko, Kruku Korokon Odoko Odoko Odoko Odoko
Alan	*Shorea albida* Sym.	Malaysia	Alan-Batu, Red Selangan, Meraka, Selangan Merah, Alan-Paya
Alep	*Desbordesia glaucescens* A. Chev. ex Hutch. & Dalziel	Cameroon Congo	Omang Benga

Pilot-name	Scientific names	Local names	
		Gabon Nigeria Dem. Rep of the Congo	Alep Kowo Benga

Pilot-name	Scientific names	Local names	
Almácigo	*Bursera simaruba (L.) Sarg.*	South America *France* *UK*	Almácigo, Almácigo Blanco, Chacaj Chaca-Jiote, Desnudo, Gumo-Limbo, Indio Desnudo, Indo Desnudo, Jiñocuave *Bois d'encens,* *Chiboue,* *Chique,* *Gommier blanc* *Gum tree,* *Mexican White Beach,*

Pilot-name	Scientific names	Local names	
			Turpentine Tree, *West Indian Birch*
Almendrillo	*Taralea oppositifolia* Aubl. (Syn. *Coumarouna oppositifolia* (Willd.)Taub.)	South America	Cumaru Rana, Shihuahuaco, Tarala
Alumbi	*Julbernardia seretii* Troupin (Syn. *Berlinia seretii* De Wild.)		
Amapa	*Brosimum parinarioides* Ducke	Brazil	Amapá Doce
Amapola	*Pseudobombax ellipticum* (Kunth) Dugand		
Amberoi	*Pterocymbium beccarii* K. Schum.	Indonesia Malaysia Myanmar Philippines Thailand	Kelumbuk, Papita Melembu, Teluto, Keluak Sawbya Taluto Oi-chang, Po-ikeng,

Pilot-name	Scientific names	Local names	
			Po-kradang
Amourette	*Brosimum guianense* (Aubl.) Huber	French Guiana Peru Suriname Venezuela UK	Lettre Mouchete, Mourette Cashiba Playa, Waira Caspi Belokoro, Peni-Paia, Poevinga Palo de Oro Snakewood
Andira	*Andira spp.*	Brazil Colombia Ecuador French Guiana Guyana Mexico	Acapurana, Almendo de Rio, Andira Uchi, Angelim Congo Moton Saint Martin Rouge Bat Seed, Koraro Maquilla

Pilot-name	Scientific names	Local names	
		Peru Suriname Trinidad and Tobago Venezuela	Quinillo Colorado Rode Kabbes Angelin Sarrapio Montanero

Pilot-name	Scientific names	Local names	
Andiroba	*Carapa guianensis* Aubl. *Carapa procera* DC.	Brazil Colombia Costa Rica Ecuador Guyana French Guiana Honduras Panama	Andiroba, Carapa, Andirobeira, Andiroba Branca, Andiroba Vermelha Masabalo, Mazabalo Cedro Bateo, Cedro Macho Tangare, Figueroa Crabwood Carapa Bastard Mahogany, Cedro Macho Cedro Bateo,

Pilot-name	Scientific names	Local names	
		Surinam Trinidad and Tobago Venezuela	Cedro Macho Krappa Crappo Carapa, Masabalo
Andoung	*Monopetalanthus spp.* *Monopetalanthus coriaceus* Morel *Monopetalanthus durandii* Hallé & Normand *Monopetalanthus hedinii* (A.Chev.) Aubrev. *Monopetalanthus heitzii* Pellegr. *Monopetalanthus letestui* Pellegr.	Gabon	Andjung, Andoung de heitz, Ekop, Ekop-mayo, N'Douma, Zoele
Angelim	*Hymenolobium spp.*	Brazil French Guiana	Angelim Amarelo, Angelim da Mata, Angelim Pedra, Angelim Rosa, Mirarena, Sapupira Amarella Saint Martin Gris,

Pilot-name	Scientific names	Local names	
		Suriname	Saint Martin Jaune Makkakabes, Saandoe
Angelim rajado	*Marmaroxylon racemosum* (Ducke) Killip.	Brazil French Guiana Guyana Suriname	Angelim Rajado, Ingarana da Terra Firma, Ingarana, Bois Serpent Snakewood Bostamarinde Sneki Oedoe
Angelim vermelho	*Dinizia excelsa* Ducke	Brazil Guyana	Angelim Falso, Angelim Ferro, Angelim Pedra, Faveira Grande, Faveira Preta, Gurupa Parakwa

Pilot-name	Scientific names	Local names	
Angueuk	*Ongokea gore* Pierre	Cameroon	Andjek, Angueuk

Pilot-name	Scientific names	Local names	
		Côte d'Ivoire Gabon Dem. Rep. of the Congo	Kouero Andjek, Angueuk Boleko
Aniégré (Aningré)	*Aningeria spp.* *Aningeria robusta* Aubr. & Pellegr. *Aningeria altissima* Aubr. & Pellegr. (Syn. *Sideroxylon altissimum* Hutch. & Dalz.) *Pouteria superba* A.Chev. (Syn. *Aningeria superba* A. Chev. Syn. *Malacantha superba* Verm.) *Chrysophyllum giganteum* A.Chev (Syn. *Gambeyobotrys*	Angola Central African Republic Congo Côte d'Ivoire Ethiopia Kenya Nigeria Uganda Dem. Rep. of the Congo Germany	Mukali, Kali M'Boul Mukali, N'Kali Aningueri blanc, Aniegre Kararo Muna, Mukangu Landojan Osan Tutu Aningré-Tanganyika

Pilot-name	Scientific names	Local names	
	gigantea (A.Chev.) Aubrev.)	*Italy* *UK*	*Nuss* *Tanganyika Nuss* *Aningeria*
Apobeaou	*Breviea leptosperma* (Baehni) Heine		
Araribà	*Centrolobium spp.*	Brazil Colombia Ecuador Panama Paraguay Venezuela	Ararauba, Ararauva Guayacan Hobo, Balaustre Amarillo Guayaquil Amarillo Guayaquil Morosimo Balaustre, Guayacan Hobo
Arisauro	*Vatairea guianensis* Aubl.	Brazil	Amargoso, Gele Kabbes, Inkassa, Yonko
Aromata	*Clathrotropis macrocarpa* Ducke	South America	Alma negra, Cabari, Sapan,

Pilot-name	Scientific names	Local names	
			Timbo Pau, Timbo Rana
Assacù	*Hura crepitans* L.	Bolivia Brazil Colombia Ecuador Guyana French Guiana Peru Suriname Venezuela USA	Ochoco Assacu Ceiba Lechosa Habillo Sandbox Bois du Diable, Sablier Catahua Possentrie, Possum, Ura Wood Ceiba Habillo, Jabillo Possumwood

Pilot-name	Scientific names	Local names	
Assas	*Bridelia aubrevillei* Pellegr.		
Avodiré	*Turraeanthus africana* Pellegr.	Côte d'Ivoire	Avodiré

Pilot-name	Scientific names	Local names	
		Ghana Liberia Nigeria Dem. Rep. of the Congo Belgium	Apapaye Blimah-Pu Apaya M'Fube, Lusamba Lusamba
Awoura	*Julbernardia pellegriniana* Troupin (Syn. *Paraberlinia bifoliolata* Pellegr.)	Cameroon Gabon France Germany	Ekop-Beli Awoura, Beli Zebrali Zebrali
Ayous (Obéché)	*Triplochiton scleroxylon* K. Schum.	Cameroon Central African Republic Côte d'Ivoire Equatorial Guinea Ghana Nigeria	Ayous M'Bado Samba Ayus Wawa Arere,

Pilot-name	Scientific names	Local names	
			Obeche
		France	
		Germany	Samba,
		UK	Abachi
		USA	Wawa
			Obeche or Samba
Azobé	*Lophira alata* Banks ex Gaertn. (Syn. *Lophira procera* A. Chev.)	Cameroon	Bongossi
		Congo	Bonkolé
		Côte d'Ivoire	Azobé
		Equatorial Guinea	Akoga
		Gabon	Akoga
		Ghana	Kaku
		Nigeria	Ekki,
			Eba
		Sierra Leone	Hendui
		Germany	Bonkole,
			Bongossi
		UK	Ekki
Balata	*Chrysophyllum sanguinolentum* (Pierre)	South America	Assopokballi,

Pilot-name	Scientific names	Local names	
pomme	Baehni		Balata Pommier, Balata Saignant, Barataballi, Bois Cochon, Suitiamini

Pilot-name	Scientific names	Local names	
Balau red	*Shorea spp.* *Shorea balangeran* (Korth.) Burck *Shorea collina* Ridl. *Shorea guiso* Blume *Shorea inaequilateralis* Sym. *Shorea kunstleri* King *Shorea ochrophloia* Strugnell ex Desch.	Indonesia Malaysia	Belangeran, Balau Merah Balau Laut Merah, Damar Laut Merah, Balau Membatu, Balau Merah, Red Selangan Batu, Membatu, Seri, Selangan Batu Merah, Seraya Sirup, Selangan Batu No. 1, Sengawan, Semayur,

Pilot-name	Scientific names	Local names	
		Philippines Thailand Germany UK	Empenit-Meraka Guijo, Gisok Makata, Chankhau Red Balau Red Balau
Pilot-name	**Scientific names**	**Local names**	
Balau yellow	*Shorea spp.* *Shorea argentea* C.F.C. Fisher *Shorea atrinervosa* Sym. *Shorea balangeran* (Korth.) Burck *Shorea barbata* Brandis *Shorea ciliata* King *Shorea exelliptica* W. Meijer *Shorea foxworthyi* Sym. *Shorea gisok* Foxw. *Shorea glauca* King *Shorea laevis* Ridl. *Shorea laevifolia* (Parijs.)	India Indonesia Malaysia	Sal Bangkirai, Agelam, Benuas, Brunas, Selangan batu, Kumus, Kedawang, Pooti Damar laut Kumus, Sengkawan Darat,

Pilot-name	Scientific names	Local names	
	Endert		Balau Kumus,
	Shorea materialis Ridl.		Balau Simantok,
	Shorea maxwelliana King		Selangan Batu No.1,
	Shorea obtusa Wall. ex Blume		Selangan Batu No.2
	Shorea roxburghii G. Don	Myanmar	Thitya
	Shorea seminis V. Sl.	Philippines	Yakal,
	Shorea submontana Sym.		Gisok,
	Shorea sumatrana Sym.		Malaykal
	Shorea scrobiculata Burck	Thailand	Chan,
	Shorea superba Sym.		Ak or Aek,
			Pa-Yom Dong
		Germany	Balau
		UK	Balau,
			Selangan Batu

Pilot-name	Scientific names	Local names	
Balsa	*Ochroma lagopus* Sw.	Bolivia	Tami
		Brazil	Pau de Balsa
		Colombia	Lanu
	Ochroma pyramidale (Cav. ex Lam.) Urb.	Central America	Balsa
		Ecuador	Balsa

Pilot-name	Scientific names	Local names	
		El Salvador Guatemala Honduras Nicaragua Peru Trinidad and Tobago Venezuela	Algodon Lanilla Guano, Balsa Gatillo Balsa, Topa, Palo de Balsa Bois flot Balso
Balsamo	*Myroxylon balsamum* Harms.	Mexico Peru France	Arbol del Bálsamo, Bálsamo, Bálsamo de Perú o de Tolu Myroxylon *Baumier du Pérou*
Banga-wanga	*Amblygonocarpus andongensis* Exell & Torre (Syn. *Amblygonocarpus obtusangulus* (Oliv.) Harms)		

Pilot-name	Scientific names	Local names	
Baromalli	*Catostemma fragrans* Benth.	South America	Arenillo, Baramalli, Baraman, Baramanni, Flambeau Rouge, Kajoewaballi
Basralocus	*Dicorynia guianensis* Amshoff & Vouacapoua	Brazil French Guiana Suriname	Angelica do Para, Tapainuna Angelique Basralokus, Barakaroeballi
Batai	*Paraserianthes falcataria* (L.) I.C.Nielsen (Syn. *Albizia falcataria* (L.) Fosberg)	Philippines Indonesia Malaysia UK	Falcata, Moluccan sau Jeungjing, Sengon laut, Sikat Batai, Kayu machis, Puah *Indonesian albizia*

Pilot-name	Scientific names	Local names	
Batibatra	*Enterolobium schomburgkii* Benth.	Brazil French Guiana Suriname	Batibatra, Fava de Rosca, Fava Orelha de Macaco, Fava Orelha de Negro, Timbauba, Timborana Acacia Franc, Bougou Bati Batra Tamaren Prokoni
Pilot-name	**Scientific names**	**Local names**	
Benuang	*Octomeles sumatrana* Miq.	Indonesia Papua New Guinea Philippines	Benuang, Binuang Bini, Winuang Erima, Irima, Ilimo Binuang
Bété (Mansonia)	*Mansonia altissima* A. Chev.	Cameroon Côte d'Ivoire Ghana	Koul Bété Aprono

Pilot-name	Scientific names	Local names	
		Nigeria	Ofun
Bilinga	*Nauclea diderrichii* Merr. (Syn. *Sarcocephalus diderrichii* De Wild. Syn. *Nauclea trillesii* Merr.) *Nauclea xanthoxylon* (A.Chev.) Aubrév. (Syn. *Sarcocephalus xanthoxylon* A. Chev.) *Nauclea gilletii* De Wild. Merr.	Angola Benin Cameroon Central African Republic Congo Côte d'Ivoire Dem. Rep. of the Congo Equatorial Guinea Ghana Gabon Nigeria Sierra Leone Uganda Germany	Engolo Opepe Akondoc Kilu Linzi, Mokesse, N'Gulu-Maza Badi Bonkingu, N'Gulu-Maza Aloma Kusia Bilinga Opepe Bundui Kilingi

Pilot-name	Scientific names	Local names	
		UK	Aloma Opepe
Billian	*Eusideroxylon zwageri* Teijsm. & Binn.	Indonesia Philippines	Onglen, Un Tambulian
Bintangor	*Calophyllum spp.*	Indonesia Madagascar Malaysia Myanmar New Caledonia Papua New Guinea Philippines Solomon Islands Sri-Lanka Thailand Vietnam Vanuatu	Bintangur Vintanina Bintangor, Penaga Sultan Champa Tamanou Calophyllum Bansanghal, Vutalau Koila Domba-Gass Poon Cong, Mu-u Tamanou
Bitis	*Madhuca spp.*	Southeast Asia	Belian,

Pilot-name	Scientific names	Local names	
			Betis
Bodioa	*Anopyxis klaineana* Pierre ex Engl. (Syn. *Anopyxis ealaensis* (De Wild) Sprague)		

Pilot-name	Scientific names	Local names	
Bois rose femelle	*Aniba rosaeodora* Ducke (Syn. *Aniba duckei* Kosterm.)	Brazil	Pau-Rosa
Bomanga	*Brachystegia laurentii* Louis. *Brachystegia mildbraedii* Harms (Syn. *Brachystegia nzang* Pellegr.) *Brachystegia zenkeri* Harms	Cameroon Congo Dem. Rep. of the Congo Gabon France UK	Ekop-Evene, Ekop-Leke Bomanga Bomanga, Nzang Yegna Ariella Ariella
Bossé clair	*Guarea cedrata* Pellegr. *Guarea laurentii* De Wild.	Côte d'Ivoire Ghana Nigeria Dem. Rep. of the	Bossé Kwabohoro Obobo Nofua Bosasa

Pilot-name	Scientific names	Local names	
		Congo Germany UK	 Bossé Scented Guarea
Bossé foncé	*Guarea thompsonii* Sprague & Hutch.	Côte d'Ivoire Kenya Nigeria Dem. Rep. of the Congo Germany UK	Mutigbanaye Bolon Obobo Nekwi Diampi Diampi Black Guarea
Botong	*Barringtonia asiatica* (L.) Kurz.	Southeast Asia	Fish Poison Tree, Sea Poison Tree
Breu-sucuruba	*Trattinickia spp.*	Brazil	Amesclão, Breu Preto, Mangue, Morcegueira, Ulu
Bubinga	*Guibourtia spp.* *Guibourtia*	Cameroon	Essingang

Pilot-name	Scientific names	Local names	
	demeusei (Harms) J. Léon. *Guibourtia pellegriniana* J. Léon. *Guibourtia tessmannii* (Harms) J. Léon.	Gabon UK	Buvenga Kevasingo

Pilot-name	Scientific names	Local names	
Burada	*Parinari campestris* Aubl.	Brazil French Guiana Guyana Suriname Venezuela	Parinari Fongouti Koko, Gaulette Blanc, Gris-Gris Blanc Broad-Leaved Burada, Burada, Candlewood, Kupisini, Mahaicaballi, Makarai, Wamuk, Wamuku Behoerada, Foengoe, Koebesini

Pilot-name	Scientific names	Local names	
			Guaray, Merecurillo
Burmese Ebony	*Diospyros burmanica* Kurz.	Myanmar	Burmese Ebony, Hpunmang, Maimakho-Ling, Mia-Mate-Si, Te
Burmese Rosewood	*Dalbergia oliveri* Gamble ex Prain	Myanmar	Ching-Chan, Ket-Daeng
Busehi	*Lebrunia bushaie* Staner		
Cabreùva	*Myrocarpus frondosus* Allem.	South America	Cabreùva Parda, Ibirà, Incienso, Oleo de Caboreiba, Oleo de Macaco, Oleo Pardo, Pagé, Payò
Cachimbo	*Cariniana decandra* Ducke		

Pilot-name	Scientific names	Local names	
Cambara (Jaboty)	*Erisma spp.* *Erisma uncinatum Warm.*	Brazil French Guiana Peru Suriname Venezuela Germany	Quarubarana, Jaboty, Cedrinho, Cambara, Quarubatinga, Quaruba, Vermelha Jaboty, Manonti Kouali, Felli Kouali Cambara Singri-Kwari Mureillo Cambara
Canalete	*Cordia spp.*	Argentina Brazil Colombia Cuba	Loro Negro Louro Pardo Canalete Anacahuite, Baria

Pilot-name	Scientific names	Local names	
		Mexico Venezuela	Amapa Asta, Bocote, Cupane, Siricote Canalete

Pilot-name	Scientific names	Local names	
Canelo	*Nectandra spp.* *Ocotea spp.*	Brazil Central America Colombia Ecuador French Guiana Guyana Peru Suriname Trinidad and	Louro Louro Branco, Louro Inhamui Aguacatillo Laurel Amarillo Laurel, Canelo Amarillo, Jigua Amarillo Tinchi Cedre Apici Kereti-Silverballi Moena Amarilla Pisi Laurier

Pilot-name	Scientific names	Local names	
		Tobago Venezuela	Laurel
Canelón	*Aniba guianensis* Aubl.		
Capomo	*Brosimum alicastrum* Sw.	South America	Charo, Ramón
Caracoli	*Anacardium excelsum* Skeels	Brazil Colombia Ecuador Nicaragua Venezuela	Caju Assu, Caju da Matta Caracoli Maranon Espavel Caracoli
Castanheiro Para	*Bertholletia excelsa* Humb. & Bonpl.	Brazil Colombia	Castanha-do-Brasil, Castanha-do Pará, Castanheira Canstana do Brasil, Canstana do Pará, Castaña, Castanha-do-Maranhao, Nuez del Brasil

Pilot-name	Scientific names	Local names	
		France UK	Châtaigne du brésil, Noix du brésil Noix du pará Brazil nut, Butter nut, Cream nut, Para nut
Castanopsis	Castanopsis spp.		
Catiguà	Trichilia catigua A. Juss.		
Cativo	Prioria copaifera Griseb.	Colombia Costa-Rica Panama Venezuela	Cativo, Trementino Amasamujer Copachu Cativo, Camibar Cativo Muramo, Curucai
Pilot-name	**Scientific names**	**Local names**	
Cedro	Cedrela spp.	Brazil	Cedro

Pilot-name	Scientific names	Local names	
	Cedrela angustifolia DC. (Syn. *Cedrela lilloi* C. de Candolle) *Cedrela fissilis* Vell. *Cedrela odorata* L.	French Guiana Guyana Honduras Suriname	Cedrat, Cedro Red Cedar Cedro, Cigarbox Ceder
Cedroi	*Tapirira spp.* *Tapirira guianensis* Aubl.	Guyana	Warimia
Celtis d'Afrique (Diania, Ohia)	*Celtis spp.* *Celtis adolfi-friderici* Engl. *Celtis brieyi* De Wild. *Celtis gomphophylla* Baker (Syn. *Celtis durandii* Engl.) *Celtis mildbraedii* Engl.	Benin Cameroon Central African Republic Dem. Rep. of the Congo Congo Côte d'Ivoire	Bawe Odou, Odou Vrai Balze Bolunde, Diania, Kayombo Edou, Kiliakamba Asan, Ba, Lohonfe Engo,

Pilot-name	Scientific names	Local names	
	Celtis tessmannii Rendle *Celtis zenkeri* Engl.	Gabon Ghana Kenya Liberia Nigeria Uganda Germany UK	Celtis, Esa-Kokoo, Esa-Kosua Shiunza Lokonfi Dunki, Ita, Zuwo Ekembe-Bakaswa, Namanuka Celtis Red-Fruited White-Stinkwood
Cerejeira	*Amburana cearensis* (Allemão) A. C. Sm.	Argentina	Roble Criollo, Roble del País, Roble, Palo Trébol, Trébol Roble Americano

Pilot-name	Scientific names	Local names	
		Bolivia Brazil Paraguay Peru	Amburana, Cerejeira, Cumarú de Cheiro, Umburana Trébol Ishipingo, Sorioco

Pilot-name	Scientific names	Local names	
Champak	*Michelia spp.* (Syn. *Magnolia spp.*)	Myanmar Philippines	Saga, Sagawa, Sanga Hangilo, Sandit
Checham	*Metopium brownei* Roxb.	Central and South America	Caribbean Rosewood Black Poisonwood
Chengal	*Balanocarpus heimii* King.	Indonesia Malaysia Thailand	Penak-Bunga, Penak-Sabut, Penak-Tembaga Chengal Takian Chan

Pilot-name	Scientific names	Local names	
Chicha / Xixa	*Sterculia spp.* *Sterculia apetala* (Jacq.) Karst.	Bolivia	Mani
		Brazil	Achicha,
			Chicha,
			Tacacazeiro
			Camajura
		Colombia	Anacaguita
		Cuba	Cacao de Mote,
		Ecuador	Sapote,
			Saput,
			Zapote
			Kobe
		French Guiana	Maho
		Guyana	Bellota,
		Mexico	Chiapas
			Huarmi-Caspi,
		Peru	Zapote Silvestre
			Anacaguita
		Puerto Rico	Jahoballi,
		Suriname	Kobehe,
			Okro-Oedoe
			Mahoe
		Trinidad and	Camoruco,

Pilot-name	Scientific names	Local names	
		Tobago Venezuela	Mayagua, Sunsun
Cocobolo	*Dalbergia retusa* Hemsl.		
Comino Crespo	*Aniba perutilis* Hemsl.	Bolivia Brazil Colombia Peru	Coto, Coto Piquiante Laurel Amarelo, Pau Rosa Aceite de Palo, Caparrapi, Chachajo, Comino, Comino Canelo, Comino Real, Laurel Comino, Punte Comino, Ishpingo Chico, Moena Amarilla, Muena Negro

Pilot-name	Scientific names	Local names	
		UK	Keriti
Pilot-name	**Scientific names**	**Local names**	
Congotali	*Letestua durissima* Lecomte	Congo Gabon	Congotali Kong-Afane
Copaiba	*Copaifera spp.*	Argentina Brazil Colombia Panama Venezuela	Timbo-y-Ata Copaibarana, Copahyba Canime, Copaiba Cabino Blanco, Camiba Cabimo, Palo de Aceite
Cordia d'Afrique	*Cordia spp.* *Cordia africana* Lam. (Syn. *Cordia abyssinica* R. Br. Syn. *Cordia holstii* Gürke ex Engl.) *Cordia millenii* Baker	Cameroon Central African Republic Congo Ethiopia	Ebais, Ebe Sumba Makobokobo, Mringamringa, Mringaringa, Mukumari

Pilot-name	Scientific names	Local names	
	Cordia platythyrsa Baker	Gabon Nigeria Uganda UK	Auhi, Awhi, Ekhi Ebais, Ebe Omo Mukebu African Cordia, East African cordia, Large-leafed cordia, Sudan teak
Coula	*Coula edulis* Baill.		
Crabwood d'Afrique	*Carapa spp.* *Carapa grandiflora* Sprague	Côte d'Ivoire Ghana Liberia Nigeria Sierra Leone	Alla, Dona Bete, Krupi Toon-kor-dah Agogo Gobi,

Pilot-name	Scientific names	Local names	
		Uganda USA UK	Kowi Mujogo, Mutongana African Crabwood African Crabwood
Cristobal granadillo	*Platymiscium pleiostachyum* Donn. Sm	South America	Jacaranda do brejo

Pilot-name	Scientific names	Local names	
Cumaru	*Dipteryx spp.*	Bolivia Brazil Colombia Guyana French Guiana Honduras Peru	Almendrillo Cumaru, Cumaru Ferro, Cumarurana Sarrapia Kumaru, Tonka Bean Gaiac de Cayenne, Tonka Ebo Charapilla, Shihuahuaco Amarillo

Pilot-name	Scientific names	Local names	
		Suriname Venezuela	Koemaroe, Tonka Sarrapia
Cupiuba	*Goupia glabra* Aubl.	Brazil Colombia French Guiana Guyana Peru Suriname Venezuela UK	Cachaceiro, Copiuva, Cupiuba Chaquiro, Saino, Sapino Goupi Copi, Kabukalli Capricornia Koepi Congrio Blanco Kabulalli
Curupay	*Anadenanthera colubrina* (Vell.) Brenan	South America	Angico, Cebil, Huilco, Vilca,

Pilot-name	Scientific names	Local names	
			Wilco
Dabéma	*Piptadeniastrum africanum* Brenan (Syn. *Piptadenia africana* Hook. f.)	Cameroon Congo Côte d'Ivoire Equatorial Guinea Gabon Ghana Liberia Nigeria Uganda Sierra Leone Dem. Rep. of the Congo UK	Atui N'Singa Dabema Tom Toum Dahoma Mbeli Agboin, Ekhimi Mpewere Mbele, Guli Bokungu, Likundu Dahoma, Ekhimi

Pilot-name	Scientific names	Local names	
Dibétou	*Lovoa spp.* *Lovoa brownii* Sprague *Lovoa swynnertonii* Baker f. *Lovoa trichilioides* Harms (Syn. *Lovoa klaineana* Pierre)	Cameroon Côte d'Ivoire Equatorial Guinea Gabon Ghana Kenya Nigeria Sierra Leone Dem. Rep. of the Congo Uganda France	Bibolo Dibétou Nivero, Embero Eyan Dubini-Biri, Mpengwa Mukongoro Mukusu Apopo, Sida, Anamenila Wnaimei Lifaki-Maindu, Bombulu Nkoba *Noyer d'Afrique,* *Noyer du Gabon* *African Walnut, Tigerwood* *Tigerwood, Uganda Walnut*

Pilot-name	Scientific names	Local names	
		UK USA	Congowood
Difou	Morus lactea Mildbr. Morus mesozygia Stapf	Portugal France UK	Chocobondo Mûrier du Sénégal East African mulberry, African mulberry, Uganda mulberry
Divida	Scorodophloeus zenkeri Harms		
Djohar	Senna siamea (Lam.) H.S.Irwin & Barneby. (Syn. Cassia siamea (Lam.) H.S.Irwin & Barneby)	Southeast Asia France	Bombay Blackwood, Iron Wood, Kassod Tree, Siamese Senna, Thailand Shower, Yellow Cassia Casse de Siam
Douka (Makoré)	Tieghemella spp. Tieghemella	Côte d'Ivoire Ghana	Makoré Baku,

Pilot-name	Scientific names	Local names	
	africana Pierre (Syn. *Dumoria africana* Dubard) *Tieghemella heckelii* Pierre ex Dubard (Syn. *Mimusops heckelii* Hutch. & Dalz.)	Equatorial Guinea Gabon	Abacu Okola Douka

Pilot-name	Scientific names	Local names	
Doussié	*Afzelia africana* Smith *Afzelia pachyloba* Eggeling & Dale *Afzelia bipindensis* Harms (Syn. *Afzelia bella* Harms) *Afzelia cuanzensis* Oliv.	Angola Cameroon Congo Côte d'Ivoire Ghana Mozambique Nigeria Senegal Sierra	N'kokongo Uvala M'Banga, Doussié N'Kokongo Lingue, Azodau Papao Mussacossa, Chanfuta Apa, Aligna Lingue Kpendei

Pilot-name	Scientific names	Local names	
		Leone Tanzania Dem. Rep. of the Congo Germany Portugal UK USA	Mkora, Mbembakofi Bolengu Afzelia Chafuta Afzelia Afzelia
Drago	*Pterocarpus officinalis* Jacq.	South America France UK	Lagunero, Pallo de Poyo, Sangre, Sangre de Drago, Sangrillo Mangle-médaille, Mangle-rivière Palétuvier, Sang-dragon Blood-wood,

Pilot-name	Scientific names	Local names	
			Dragon's-blood
Duabanga	*Duabanga grandiflora* (Roxb. ex DC.) Walpers	India Indonesia Malaysia Myanmar Papua New Guinea Philippines Thailand Vietnam	Lampati Ramdala Kalam Magas, Magaswith, Phay-Sung, Tagahas Myaukngo Duabanga Loktob Linkwai Phay
Dukali	*Parahancornia fasciculata* (Poir.) Benoist		
Durian	*Durio spp.*	Indonesia Malaysia	Durian Apa-Apa, Bengang, Durian, Durian Isa,

Pilot-name	Scientific names	Local names	
			Punggai
		France	Durion
		UK	Durian
Pilot-name	**Scientific names**	**Local names**	
Ebène d'Afrique (Ebène Madagascar)	*Diospyros spp.* *Diospyros crassiflora* Hiern. (Syn. *Diospyros evila* Pierre ex A.Chev.) *Diospyros perrieri* Jum.	Benin Cameroon Central African Republic Congo Equatorial Guinea Gabon Nigeria	Cubaga, Ebène Epinde-pinde, Mavini, Mevini, Ndou Bingo, Ngoubou Mopini Ébano Evila Abokpo, Kanran, Nyareti Osibin

Pilot-name	Scientific names	Local names	
		Germany UK	Afrikanishes Ebenholz African ebony, Madagascar ebony
Ebène noire d'Asie	*Diospyros ebenum* J. Koen. *Diosyros vera* (Lour.) A.Chev. (Syn. *Diospyros ferrea* Willd.) *Diospyros melanoxylon* Roxb. *Diospyros mollis* Griff. *Diospyros mun* A.Chev. & Lecomte		
Ebène veinée d'Asie	*Diospyros celebica* Bakh. *Diospyros marmorata* R.Park. *Diospyros rumphii* Bakh.		
Ebiara	*Berlinia bracteosa* Benth. *Berlinia confusa* Hoyle. *Berlinia grandiflora* Hutch. & Delz.	Angola Benin Cameroon Congo Dem. Rep. of the	M'possa Bagbe Abem, Essabem M'Possa M'Possa

Pilot-name	Scientific names	Local names	
		Congo Côte d'Ivoire Gabon Ghana Nigeria Sierra Leone Germany UK	Melegba, Pocouli Ebiara Berlinia Ekpogoi Sarkpei *Berlinia* *Berlinia*

Pilot-name	Scientific names	Local names	
Ekaba	*Tetraberlinia spp.* *Tetraberlinia bifoliolata* (Harms) Hauman (Syn. *Berlinia bifoliolata* Harms) *Tetraberlinia tubmaniana* J. León.	Cameroon Congo Equatorial Guinea Gabon Liberia Germany Netherlands	Ekop-Ribi Eko-Andoung Ekop Ekop-Andoung Hoh, Sikon *Ekop* *Ekop*

Pilot-name	Scientific names	Local names	
		Spain UK	Ekaban Tetraberlinia
Ekoune	*Coelocaryon preussii* Warb.	Cameroon Central African Republic Congo Dem. Rep. of the Congo Equatorial Guinea Gabon Nigeria	Nom Eteng Kolomeko Kikubi-Lomba Lomba-Kumbi Ekoune, Ekun Ekoune, Ekun Egbenrin
Emien	*Alstonia boonei* De Wild. *Alstonia congensis* Engl. (Syn. *Alstonia gilletii* De Wild.)	Nigeria Uganda UK	Awun, Egbu Mubajangalabi, Mujua, Mukoge, Musoga Alstonia, Pattern wood,

Pilot-name	Scientific names	Local names	
			Stool wood
Essessang	Ricinodendron spp. Ricinodendron africanum Müll. Arg. Ricinodendron heudelotii Pierre ex Henckel Ricinodendron rautanenii Schinz.	Benin Congo Côte d'Ivoire Ghana Mozambique Togo UK	Muawa Erimado Erimado Erimado Muawa Erimado African Nut Tree, African Wood, African Wood-Oil Nut Tree, Cork Wood
Essia	Petersianthus macrocarpus Liben (Syn. Petersia africana Welw.)	UK	Esia
Essoula	Plagiostyles africana Prain ex De Wild.		
Etimoé	Copaifera mildbraedii Harms	Benin Cameroon Central African	Akpaflo Essak

Pilot-name	Scientific names	Local names	
	Copaifera salikounda Heckel	Republic Congo Côte d'Ivoire Dem. Rep. of the Congo Gabon Ghana Nigeria	Bilombi Yama Etimoé Bofelele Andem-Evine Entedua Ovbialeke
Pilot-name	**Scientific names**	**Local names**	
Eveuss	*Klainedoxa buesgenii* Engl. *Klainedoxa gabonensis* Pierre ex Engl.	Cameroon Central African Republic Congo Côte d'Ivoire Dem. Rep. of the Congo Equatorial Guinea Gabon Ghana Nigeria	Ngon Oboro Kuma-kuma Kroma Ikele, Kuma-kuma Eves Eveuss Kruma Odudu
Evino	*Vitex ciliata* Pellegr.		

Pilot-name	Scientific names	Local names	
	Vitex pachyphylla Baker		
Eyek	*Pachyelasma tessmannii* Harms		
Eyong	*Eribroma oblongum* Pierre ex A.Chev. (Syn. *Sterculia oblonga* Masters)	Cameroon Central African Republic Côte d'Ivoire Equatorial Guinea Gabon Ghana Nigeria UK	Bongele, Eyong Bongo Bi N'Chong, N'Zong N'Chong, N'Zong Ohaa Okoko White Sterculia, Yellow Sterculia
Eyoum	*Dialium spp.* *Dialium bipindense* Harms.	Cameroon Congo Côte d'Ivoire	Mfang, M'Fan Penzi Afambeou,

Pilot-name	Scientific names	Local names	
	Dialium dinklagei Harms.	Gabon	Kofina Eyoum, Omvong
	Dialium aubrevillei Pellegr.	Guinea-Bissau Liberia	Pau Veludo Ciania, Gbelle-Flu,
	Dialium pachyphyllum Harms.	Mozambique Dem. Rep. of the Congo	Gia Kaba Ziba Bongola, Kasudu
Faro	*Daniellia spp.* *Daniellia klainei* Pierre *Daniellia ogea* Rolfe *Daniellia thurifera* Bennet	Benin Cameroon Congo Côte d'Ivoire Dem. Rep. of the Congo Equatorial Guinea Gabon Ghana Nigeria Sierra Leone	Jatin Nsou Singa N'Dola Faro Bolengu N'Su Lonlaviol Ogea Oziya Gnessi

Pilot-name	Scientific names	Local names	
		Germany UK	*Daniellia* *Ogea*

Pilot-name	Scientific names	Local names	
Faveira	*Parkia multijuga* Benth.	Brazil Colombia Ecuador French Guiana Guyana Peru Suriname Venezuela	Fava Araba Tucupi, Fava Bolota, Faveira, Parica, Visgueiro Huarango, Rayo Tangama Dodomissinga, Kouatakaman Black Manariballi, Ipanai, Uya Goma Pashaco Kwatakama Cascaron
Faveira	*Vatairea paraensis* Ducke	Brazil	Angelim Amargoso,

Pilot-name	Scientific names	Local names	
Amargosa			Aracuy,
			Fava Amarela,
			Fava Amargosa,
			Faveria Amarela,
			Faveira Amargosa,
			Faveria Bolacha
		Colombia	Guerra,
			Maqui
		Guyana	Arisauro,
			Bastard Purpleheart,
			Bauwau
		French Guiana	Inkassa,
			Yongo
		Honduras	Amargo
		Panama	Amargo
		Peru	Mari-Mari,
			Marupa del Bajo
		Suriname	Arisoeroe,
			Gele Kabbes,
			Geli-Kabissi
Fijian Sterculia	*Sterculia vitiensis* Seem.	Oceania	Waciwaci

Pilot-name	Scientific names	Local names	
Framiré	*Terminalia ivorensis* A. Chev.	Cameroon Côte d'Ivoire Ghana Liberia Nigeria Sierra Leone UK	Lidia Framiré Emeri Baji Idigbo, Black Afara Baji Idigbo
Formigueiro	*Triplaris cumingiana* Fisch. & C.A.Mey. (Syn. *Triplaris guayaquilensis* Wedd.)	Ecuador	Fernansanchez
Freijo	*Cordia goeldiana* Hub.	Brazil	Freijo Frei-Jorge
Pilot-name	**Scientific names**	**Local names**	
Fuma (Fromager)	*Ceiba pentandra* (L.) Gaertn. (Syn. *Ceiba thonningii* A. Chev. Syn. *Bombax pentandrum* L.)	Cameroon Congo Côte d'Ivoire Ghana	Doum Fuma Enia, Fromager Onyina

Pilot-name	Scientific names	Local names	
		Liberia Nigeria Sierra Leone Dem. Rep. of the Congo France Germany UK	Ghe Okha, Araba Ngwe, Banda Fuma Fromager Ceiba Ceiba
Gaiac	Guaiacum spp.	Mexico Venezuela France Germany Netherlands Spain UK	Palo Santo, Guayacancillo Guayacán Gaiac Mexiko-Pockholz Pockhout Guayacán Guaiacum Wood
Galacwood	Bulnesia sarmientoi Lorentz ex Griseb.		

Pilot-name	Scientific names	Local names	
Gale Silverballi	*Aniba hypoglauca* Sandwith (Syn. *Aniba ovalifolia* Mez.)	South America	Gale Silverballi, Garl, Kawioi, Kurero Shiruaballi, Kurero Silverballi, Moena Puchiri, Silverballi, Yellow Silverballi, Yellow Sweetwood
Gavilan	*Schizolobium amazonicum* Huber ex Ducke		Pashaco, Pino Chuncho
Gavilán Blanco	*Oreomunnea pterocarpa* Oerst.		
Geronggang	*Cratoxylum arborescens* (Vahl) Bl. *Cratoxylum arborescens* var. *miquelli* King *Cratoxylum glaucum* Korth. *Cratoxylum lingustrinum* Bl. *Cratoxylum polyanthum* Korth.	Indonesia Malaysia	Gerunggang Mapat Mulu Selunus Gonggang Serungan

Pilot-name	Scientific names	Local names

Pilot-name	Scientific names	Local names	
Gerutu	*Parashorea densiflora* Slooten & Sym. *Parashorea lucida* (Miq.) Kurz *Parashorea parvifolia* Wyatt-Smith ex P.S.Ashton *Parashorea smythiesii* Wyatt-Smith ex P.S.Ashton	India Indonesia Laos Malaysia Thailand	Tavoy Wood White Meranti Mai Hao Gerutu, Gerutu Pasir, Heavy White Seraya, Meranti Gerutu, Meruyun, Urat Mata Batu, Urat Mata Bukit, Urat Mata Daun Kechil, Khai Khieo
Gheombi	*Sindoropsis letestui* (Pellegr.) J. Léon. (Syn. *Copaifera letestui* Pellegr.)	Cameroon Gabon	Lumbandjii Gheombi, Ngom
Goiabao	*Chrysophyllum lucentifolium* Cronquist (Syn. *Planchonella pachycarpa* Pires Syn. *Pouteria pachycarpa* Pires Syn. *Syzygiopsis pachycarpa* Ducke)	Brazil	Abiu Casca, Abiurana, Abiurana Amarela, Abiurana Goiaba, Goiabao, Goyabao

Pilot-name	Scientific names	Local names	
Gombé	*Didelotia africana* Baill. *Didelotia idae* Oldem., de Wit & Léon. *Didelotia letouzeyi* Pellegr.	Cameroon Côte d'Ivoire Gabon Liberia Sierra Leone	Ekop-Gombe, Gombe Broutou Angok Bondu Timba
Greenheart	*Chlorocardium rodiei* (Schomb.) Rohwer, H.G.Richt. & van der Werff	Brazil Guyana Surinam Venezuela	Bibiru, Itauba Branca Bibiru, Demerara, Greenheart Beeberoe Groenhart Sipiroe Viruviru
Pilot-name	**Scientific names**	**Local names**	
Grenadille d'Afrique	*Dalbergia melanoxylon* Gutif. & Perr.	Chad Dem. Rep. of the Congo Ethiopia Kenya	Tabum Kafundula Zobbi, Zebe Kikwaju,

Pilot-name	Scientific names	Local names	
		Namibia and South Africa	Mpingo, Poyi Driedoring Ebbehout, Mokelete, Sebrahout, Swartdriedoring,
		Uganda	Umbambangwe Motangu
		Zambia	Chinsale, Kasalusalu, Mfwankomo, Mkelete, Mkumudwe, Msalu, Mukelete, Musonkomo
		Zimbabwe	Murwiti, Pulupulu
		UK	African blackwood, African ebony, Mugembe,

Pilot-name	Scientific names	Local names	
			Poyi
Grigri	*Licania spp.*	Brazil Colombia Costa Rica Guyana Mexico Peru Venezuela	Anauerá, Caraipé, Turiuva Carbonero Zapote Kautaballi, Konoko, Zapote Carbonero, Zapote Carbonero
Guágara	*Sabal mauritiiformis* Griseb. & H.Wendl.	South America	Catarata, Palma Amarga, Palma de Guagara, Palma de Vaca, Palmiche

Pilot-name	Scientific names	Local names	
Guariuba	*Clarisia racemosa* Ruiz. & Pav.	Bolivia Brazil	Murure Guariuba,

Pilot-name	Scientific names	Local names	
		Colombia Ecuador Peru	Oiticica Amarela, Oiticica da Mata Aji, Guariuba Mata Palo, Moral Bobo, Pituca Capinuri, Guariuba, Murere, Turupay Amarillo
Haiari	*Alexa spp.*	Brazil Guyana Suriname	Melancieira Haiariballi Nekoe-Oedoe
Haldu	*Haldina cordifolia* (Roxb.) Ridsdale (Syn. *Adina cordifolia* (Roxb.) Hook. f.)	Cambodia India Indonesia Laos Malaysia Myanmar	Khvao, Kwao Haldu Lasi Thom Meraga Hnaw

Pilot-name	Scientific names	Local names	
		Philippines Sri Lanka Thailand Vietnam	Adina, Haldu Kolon Kwao, Tong Lueang Gao-Vang
Hard Alstonia (Pulai)	*Alstonia angustiloba* Miq. *Alstonia macrophylla* Wall. ex G.Don. *Alstonia spatulata* Bl. *Alstonia scholaris* (L.) R. Br. *Alstonia pneumatophora* Back. ex Den Berger	Indonesia Malaysia Myanmar Papua New Guinea Philippines Thailand Vietnam *Australia* *India*	Pulai, Sepati Pulai Letok, Sega White Cheese Wood, Mike Wood Dita Thia Mo-Cua *White Cheese Wood,* *Mike Wood* *Chaitanwood,* *Chatian*

Pilot-name	Scientific names	Local names	
		UK	Pagoda Tree, Patternwood

Pilot-name	Scientific names	Local names	
Hevea	Hevea brasiliensis (Willd. ex A.Juss.) Müll.Arg.	Brazil Guyana Malaysia Peru Thailand Venezuela UK USA	Mapalapa, Seringa, Seringueira Hatti Hevea Wood Jeve, Shirenga Rubber Tree Arbol de Caucho Para Rubber Tree Rubber Wood
Higuerilla	Micandra spruceana (Baill.) R. Shultes	Colombia Peru	Reventillo, Yetcha Carapacho, Higuerilla Negra, Shiringa Masha

Pilot-name	Scientific names	Local names	
		Venezuela	Cunuri
Huruasa	*Abarema jupunba* (Willd.) Britton & Killip	Guyana	Ingarana, Tento Azul
Iatandza	*Albizia angolensis* Welw. *Albizia ferruginea* Benth.	Angola Benin Cameroon Congo Côte d'Ivoire Gabon Ghana Liberia Nigeria Uganda Dem. Rep. of the Congo UK	Zanzangue Agla Nyinfun Evouvous Sifou-Sifou Yatanza Iatandza Awiemfo-Samina, Okuro Musase Ayinre-Ogo Mugavu, Nongo Elongwamba, Okuru West African Albizia
Ibirà Pytâ	*Peltophorum dubium* (Spreng.) Taub (Syn. *Peltophorum*	Argentina Brazil	Canafístula Guarucaia

Pilot-name	Scientific names	Local names	
	vogelianum Benth.)	Paraguay	Yvyrapyta
Idewa	*Haplormosia monophylla* Harms	Liberia	Black Gum, Liberian Black Gum
Igaganga	*Dacryodes igaganga* Aubr. & Pell.		
Ilomba	*Pycnanthus angolensis* (Welw.) Warb. (Syn. *Pycnanthus kombo* Baill.) Warb.	Angola Cameroon Congo Côte d'Ivoire Equatorial Guinea Gabon Ghana Nigeria Sierra Leone Dem. Rep. of the Congo	Ilomba Eteng Ilomba Walélé Calabo Eteng Otié Akomu Kpoyéi Lolako, Lejonclo

Pilot-name	Scientific names	Local names	
Imbuia	*Ocotea porosa* Barosso (Syn. *Phoebe porosa* (Nees & Mart.) Mez.)	Brazil South America	Canela, Imbuia, Embuia Laurel

Pilot-name	Scientific names	Local names	
			Brazilian Walnut
		UK	Imbuya,
		USA	Brazilian Walnut
Inga	*Inga spp.*	Argentina	Inga
		Brazil	Inga,
			Ingazeira,
			Inga-Chi-Chi,
			Inga-Chi-Chica
		French Guiana	Bois Pagode,
			Bougouni,
			Lebi Oueko,
			Oueko
		Guyana	Kurang,
			Kwari,
			Kwarye,
			Maporokon,
			Yokar
		Honduras	Guama
		Peru	Shimbillo
		Suriname	Abonkini,

Pilot-name	Scientific names	Local names	
			Prokonie
Ingyin	*Pentacme siamensis* (Miq.) Kurz		
Inyak	*Antonia ovata* Pohl		
Ipé	*Handroanthus heptaphyllus* (Vell.) Mattos (Syn. *Tabebuia ipe* (Mart.) Standl.) *Handroanthus capitatus* (Bur & K.Schum) Sanwith (Syn. *Tabebuia capitata* Sandw.) *Handroanthus serratifolius* (Vahl) S.O.Grose (Syn. *Tabebuia serratifolia* Nichols) *Handroanthus impetiginosus* (Mart. ex DC.) Mattos (Syn. *Tabebuia impetiginosa* (Mart.)	Argentina Bolivia Brazil Central America Colombia French Guiana Guyana	Lapacho Ipé, Lapacho, Tajibo Ipé, Ipé Roxo, Pau d'Arco Amapa, Prieta, Cortez, Guayacan, Cortés Canaguate, Polvillo, Roble Morado Ebene verte Hakia,

Pilot-name	Scientific names	Local names	
	Standl.)		Ironwood
		Paraguay	Lapacho Negro
		Peru	Tahuari Negro,
			Ebano Verde
		Suriname	Groenhart
		Trinidad and Tobago	Poui,
			Yellow Poui
		Venezuela	Acapro,
			Araguaney

Pilot-name	Scientific names	Local names	
Iroko	*Milicia spp.*	Angola	Moreira
		Cameroon	Abang
		Congo	Kambala
		Côte d'Ivoire	Iroko
	Milicia excelsa C.C. Berg	East Africa	Mvuli,
	(Syn. *Chlorophora excelsa* (Welw.) Benth.)		Mvule
		Equatorial Guinea	Abang
	Milicia regia C.C. Berg	Gabon	Abang,
	(Syn. *Chlorophora regia* A. Chev.)		Mandji
		Ghana	Odum
		Liberia	Semli

Pilot-name	Scientific names	Local names	
		Mozambique Nigeria Sierra Leone Dem. Rep. of the Congo Belgium	Tule Mufula Iroko Semli Lusanga, Molundu, Mokongo Kambala
Itaùba	*Mezilaurus spp.*	Brazil French Guiana Suriname	Louro Itauba Taoub Jaune Kaneelhout
Izombé	*Testulea gabonensis* Pellegr.	Cameroon Congo Gabon	Rone N'Gwaki Ake, Akewe, Izombe, N'Komi
Jacareuba	*Calophyllum brasiliense* Cambess.	Brazil	Árbol de santa María, Calophylle du Brésil, Guanandi, Maria,

Pilot-name	Scientific names	Local names	
			Santa Maria

Pilot-name	Scientific names	Local names	
Jatoba	*Hymenaea courbaril* L.	Brazil	Jatobá
		French Guiana	Gomme Animée,
			Pois Confiture
		Central and South America, Caribbean	Algarrobo,
			Algarrobo de la Antillas,
			Algarrobo das Antilhas,
			Azucar,
			Cuapinol,
			Curbaril,
			Guapinol,
			Huayo,
			Jataí,
			Jutaby
		Suriname	Rode Lokus
		UK	Brazilian Cherry,
			Brazilian Copal,
			Cayenne Copal,
			Copal,

Pilot-name	Scientific names	Local names	
			Demarara Copal, *Kerosene Tree,* *Stinking Toe,* *Latin American Locust,* *West Indian Locust*
Jelutong	*Dyera costulata* Hook. f. *Dyera polyphylla* (Miq.) Steenis (Syn. *Dyera lowii* Hook. f.)	Indonesia Malaysia Singapore	Jelutong, Djelutong, Melabuwai Jelutong, Andjaroetoeng, Letoeng, Pantoeng, Jelutong Bukit, Jelutong Paya Red and/or White Jelutong
Jequitiba	*Cariniana legalis* O. Ktze (Syn. *Cariniana brasiliensis* Casar.) *Allantoma integrifolia* (Ducke) S.A.Mori (Syn. *Cariniana*	Bolivia Brazil	Yesquero Jequitiba, Jequitiba Branco, Jequitiba Rosa, Jequitiba Vermelho,

Pilot-name	Scientific names	Local names	
	integrifolia Ducke)		Estopeiro
Jito	*Guarea guidonia* (L.) Sleumer (Syn. *Guarea guara* (Jacq.) P. Wils. Syn. *Guarea trichilioides* L.)		
Jongkong	*Dactylocladus stenostachys* Oliv.	Indonesia Malaysia	Mentibu, Sampinur Medang-Tabak, Jongkong, Medang, Merubong
Pilot-name	**Scientific names**	**Local names**	
Jororí	*Swartzia jororí* Harms		
Jùraco	*Bucida buceras* L.	Mexico, Central and South America	Black Olive, Bois Gris-Gris, Bois Margot, Gregre, Júcaro, Oxhorn Bucida, Ucar

Pilot-name	Scientific names	Local names	
Kabok	*Irvingia malayana* Oliv. ex A. Benn.	Malaysia Thailand UK	Pau Kijang Kabok *Wild Almond*
Kadam	*Neolamarckia spp.* *Neolamarckia cadamba* (Roxb.) Bosser (Syn. *Anthocephalus cadamba* (Roxb.) Miq.) *Neolamarckia macrophylla* (Roxb.) Bosser (Syn. *Anthocephalus macrophyllus* (Kuntze) Havil.)	Indonesia Malaysia Myanmar Philippines	Jabon, Kelempajan Kalempayn Kelampo, Kelepayan, Ludai, Kelempayan Mau, Yemau, Maukadon, Mau-Lettan-She Kaatoan Bangkal
Kanda (Kanda brun, Kanda rose)	*Beilschmiedia spp.* *Beilschmiedia congolana* Robyns & Wilczek *Beilschmiedia gaboonensis* Benth. & Hook.	Cameroon Central African Republic Côte d'Ivoire	Kanda Bonzale Bitehi Nkonengu

Pilot-name	Scientific names	Local names	
	Beilschmiedia hutchinsoniana Robyns & Wilczek *Beilschmiedia letouzeyi* Robyns & Wilczek *Beilschmiedia mannii* Robyns & Wilczek *Beilschmiedia oblongifolia* Robyns & Wilczek	Gabon Tanzania	Mfimbo
Kapokier	*Bombax buonopozense* P. Beauv. (Syn. *Bombax flammeum* Ulbr.)		

Pilot-name	Scientific names	Local names	
Kapur	*Dryobalanops spp.* *Dryobalanops sumatrensis* (J.F.Gmel.) Kosterm. (Syn. *Dryobalanops aromatica* C.F. Gaertn.) *Dryobalanops beccarii* Dyer *Dryobalanops fusca* V.	Brunei Darussalam Indonesia Malaysia	Kapur Bukit, Kapur Peringii, Kapur Anggi Kapur Singkel, Kapur Sintuk, Kapur Empedu, Kapur Tanduk, Kapur Kayatan, Petanang Kapur-Kejatan,

Pilot-name	Scientific names	Local names	
	St. *Dryobalanops lanceolata* Burck *Dryobalanops oblongifolia* Dyer *Dryobalanops rappa* Becc.	France UK	Keladan, Swamp Kapur, Borneo Camphorwood-Paigie Capur Borneo Camphor, Borneo Camphorwood, Borneo Camphorwood-Paigie
Karité	*Vitellaria paradoxa* C.F.Gaertn. (Syn. *Butyrospermum paradoxum* (C.F. Gaertn.) Hepper Syn. *Butyrospermum parkii* (G. Don) Kotschy)	Africa	Shea Butter Tree, Shea Tree, Shi Tree
Kasai	*Pometia spp.*	Papua New Guinea Myanmar Philippines Vietnam France	Taun Sibu Malugai Truong Bois de Pieux

Pilot-name	Scientific names	Local names	
		Spain UK	Longán de Fiji Fiji Longan, Island Lychee
Kaudamu	*Myristica castaneifolia* A. Gray	Southeast Asia	Fiji Nutmeg
Kedondong	*Canarium spp.* *Dacryodes spp.* *Santiria spp.*	India Indonesia Malaysia Philippines Thailand Vietnam	Dhuwhite, White Dhup Kenari, Kiharpan Kedondong, Upi Dulit, Pili Ma-Kerm Cham

Pilot-name	Scientific names	Local names	
Kekatong	*Cynometra spp.*	Fiji Malaysia Myanmar Philippines	Moivi Belangkan, Kekatong Myinga Oringen

Pilot-name	Scientific names	Local names	
		Thailand	Mang-kha
Kékélé	*Holoptelea grandis* Mildbr.	Benin Cameroon Central African Republic Congo Côte d'Ivoire Dem. Rep. of the Congo Ghana Nigeria Uganda	Sayo Avep-Ele Gomboul Mbosso Kékélé Nemba-Mbobolo Onakwa Olazo Mumuli
Kelat	*Eugenia spp.*	India Indonesia Malaysia	Jaman Jaman, Jambu, Jamun, Meralu, Nir-Naval Black Kelat, Common Kelat, Kelat Tabye

Pilot-name	Scientific names	Local names	
		Myanmar Papua New Guinea Philippines Thailand Vietnam	Water Gum Makasin Chomphu Plong, Tram
Keledang (Terap)	*Artocarpus spp.*	Indonesia Malaysia Philippines Thailand	Teureup Pudau, Terap Antipolo Ka-ok
Kembang semangkok	*Scaphium spp.*	Malaysia Myanmar Thailand	Kembang semangkok, Selayar Thitlaung Samrong
Kempas	*Koompassia malaccensis* Maing. ex Benth.	Indonesia Malaysia Papua New Guinea	Menggeris, Toemaling Kempas, Mengris, Impas Kempas

Pilot-name	Scientific names	Local names	
		Thailand	Yuan

Pilot-name	Scientific names	Local names	
Keranji	*Dialium spp.*	Cambodia Indonesia Myanmar Thailand Vietnam UK	Xoay, Kralanh Kerandji Taung-Kaye Kaki-Khao, Khleng, Yi-Thongbung Xoay *Keranji,* *Kranji*
Keriti Silverballi	*Ocotea puberula* (Rich.) Nees	Argentina Brazil	Canela Guaica, Guaicá Canela-de-Corvo, Guaica, Canela-Parda, Canela-Pimenta, Canela Pinho, Canela-Sebo

Pilot-name	Scientific names	Local names	
		Peru Paraguay Suriname	Moraja Kaspi Laurel Guaika, Guaika Keretiballi
Keruing	*Dipterocarpus spp.* *Dipterocarpus acutangulus* Vesque *Dipterocarpus appendiculatus* Scheff. *Dipterocarpus alatus* A. DC. *Dipterocarpus baudii* Korth. *Diptrocarpus gracilis* Blume (Syn. *Dipterocarpus pilosus* Roxb.) *Dipterocarpus cornutus* Dyer	Cambodia India Indonesia Laos Malaysia Myanmar Philippines Sri Lanka Thailand Vietnam	Chloeuteal, Dau, Khlong, Thbeng, Gurjun Keroeing, Nhang, Keruing Gaga, Keruing Bajak, Keruing Beras Yang, Kanyin Apitong Hora Yang Dau (Yaou), Tro

Pilot-name	Scientific names	Local names	
	Dipterocarpus costulatus V. Sl. *Dipterocarpus kerrii* King *Dipterocarpus verrucosus* Foxw. ex Slooten		
Kiasose	*Pentadesma butyracea* Sabine *Pentadesma lebrunii* Staner		
Kibakoko	*Anthonotha fragrans* (Baker f.) Exell & Hillc. (Syn. *Macrolobium fragrans* Baker f.)		
Pilot-name	**Scientific names**	**Local names**	
Kikenzi	*Ocotea usambarensis* Engl.		
Kokko	*Albizia lebbek* (L.) Benth.	Bangladesh Philippines	Sirish, Sirisha Aninapla,

Pilot-name	Scientific names	Local names	
			Langil
		India	Siris,
			Sirs
		Indonesia	Kitoke,
			Tarisi,
			Tekik
		Malaysia	Batai,
			Batai Batu,
			Kungkur,
			Oriang
		Nepal	Kalo Siris
		Thailand	Cha Kham,
			Chamchuri,
			Kampu,
			Phruek,
			Suek
		Vietnam	Lim Xanh
		France	Bois noir,
			Bois savane,
			Tcha Tcha
		Spain	Acacia Chachá,

Pilot-name	Scientific names	Local names	
		UK	Algarroba de Olor, Amor Plantónico, Aroma, Aroma Fracesca, Cabellos de Ángel, Faurestina, Florestina, Lengua de Mujer, Lengua Viperina Acacia Amarilla, East Indian Walnut, English Woman's Tongue, Fry wood, Indian Siris, Lebbeck, Siris Tree, Woman's Tongue Tree
Kondroti	*Rhodognaphalon brevicuspe* Roberty (Syn. *Bombax brevicuspe* Sprague)	Benin Cameroon Congo	Kpatin Dehun Ovong N'Demo

Pilot-name	Scientific names	Local names	
	Rhodognaphalon schumannianum A. Robyns (Syn. *Bombax rhodognaphalon* K. Schum.) *Bombax chevalieri* Pellegr.	Côte d'Ivoire Gabon Ghana Mozambique Nigeria Tanzania UK	Kondroti Alone, Ogumalanga Bombax Meguza, Mungusa Awori Mfume *East African Bombax*

Pilot-name	Scientific names	Local names	
Kosipo	*Entandrophragma candollei* Harms	Angola Cameroon Côte d'Ivoire Ghana Nigeria Dem. Rep. of the Congo	Lifuco Atom-Assie Kosipo Penkwa-Akowaa Omu, Heavy Sapelle Impompo *Kosipo-Mahagoni*

Pilot-name	Scientific names	Local names	
		Germany UK	Omu
Kotibé	*Nesogordonia spp.* *Nesogordonia kabingaensis* var. *kabingaensis* (K.Schum.) Capuron (Syn. *Nesogordonia papaverifera* R. Capuron Syn. *Cistanthera papaverifera* A. Chev.)	Angola Cameroon Central African Republic Côte d'Ivoire Gabon Ghana Nigeria Dem. Rep. of the Congo UK	Kissinhungo Ovoe, Ovoui Naouya Kotibé Aborbora Danta Otutu Kondofindo Danta
Koto	*Pterygota spp.* *Pterygota macrocarpa* K. Schum. *Pterygota bequaertii* De Wild.	Central African Republic Côte d'Ivoire Gabon	Kakende Koto Ake Kyere, Awari

Pilot-name	Scientific names	Local names	
		Ghana Nigeria Dem. Rep. of the Congo Germany UK	Kefe, Poroposo Ikame Anatolia African Pterygota, Pterygota
Kulim	*Scorodocarpus borneensis* (Baillon) Becc.	Malaysia	Bawang Hutan
Kumbi	*Lannea welwitschii* (Hiern) Engl.	Côte d'Ivoire Ghana Nigeria	Baiséguma, Kakoro, Loloti Kumenini Ekika
Kungkur	*Albizia saman* (Jacq.) Merr.		
Pilot-name	Scientific names	Local names	

Pilot-name	Scientific names	Local names	
Kurokaï	*Protium spp.*	Bolivia Brazil Colombia Ecuador French Guiana Guyana Peru Suriname Venezuela	Carano Almecega, Aruru, Breu Anime, Carano, Currucay Anime Blanco Encens Blanc, Gris Rouge Haiawa, Kurokay, Porokay Copal-Caspi Tinguimoni Anime, Carano, Azucarito
Landa	*Erythroxylum mannii* Oliv.	Cameroon Congo Côte	Landa Lukienzo

Pilot-name	Scientific names	Local names	
		d'Ivoire Gabon Dem. Rep. Of the Congo Sierra Leone	Dabe Landa Nkanza Bimini
Lati	*Amphimas spp.* *Amphimas pterocarpoides* Harms	Cameroon Côte d'Ivoire Ghana Congo	Edjin, Edzil Lati Edzui Muzui, Bokanga
Laurel, Indian	*Terminalia tomentosa* (Roxb.) Wight & Arn.	Cambodia Indonesia Laos	Chhlik Snaeng Arjun, Jaha, Jelawai, Talisai, Telinsi, Kumbuk Suak Dam

Pilot-name	Scientific names	Local names	
		Myanmar	Taukyan, Thinsein
		Philippines	Indian Laurel
		Thailand	Hok Fa
		Vietnam	Chieu-Lieu
Limba	*Terminalia superba* Engl. & Diels	Cameroon	
		Central African Republic	Akom N'Ganga
		Congo	Limba
		Côte d'Ivoire	Fraké Akom
		Equatorial Guinea	Ofram
		Ghana	Afara, White Afara
		Nigeria	Kojagei
		Sierra Leone	Limba
		Dem. Rep. of the Congo	Limbo, Fraké,
		France	Noyer du Mayombé Korina

Pilot-name	Scientific names	Local names	
		USA	

Pilot-name	Scientific names	Local names	
Limbali	*Gilbertiodendron spp.* *Gilbertiodendron dewevrei* (De Wild.) J. Léon (Syn. *Macrolobium dewevrei* De Wild.) *Gilbertiodendron preussii* J. Léon	Cameroon Central African Republic Congo Côte d'Ivoire Dem. Rep. of the Congo Gabon Ghana Liberia	Ekobem Molapa Epal Vaa Ditshipi, Ligudu Limbali Abeum Tetekon, Sehmeh
Limonaballi	*Chrysophyllum pomiferum* (Eyma) T.D.Penn.		
Loliondo	*Olea welwitschii* (Knobl.) Gilg. & G.Schellenb. (Syn. *Steganthus welwitschii* Knobl.)	*UK*	*Elgon olive*
Longhi	*Chrysophyllum spp.* (Syn. *Gambeya spp.*)	Cameroon Central African Republic	Abam Bopambu

Pilot-name	Scientific names	Local names	
	Chrysophyllum africanum G.Don, (Syn. *Gambeya africana* Pierre) *Chrysophyllum lacourtianum* De Wild.) (Syn. *Gambeya lacourtiana* Aubrev. & Pellegr.) *Chrysophyllum subnudum* Baker (Syn. *Gambeya subnuda* Pierre)	Congo Côte d'Ivoire Gabon Ghana Nigeria	Longhi Akatio, Anandio, Aningueri Rouge M'bebame Akasa Ekpiro, Osan
Lotofa	*Sterculia rhinopetala* Schum.	Cameroon Côte d'Ivoire Ghana Nigeria UK	N'Kanang Lotofa Wawabima Aye *Brown Sterculia*
Louro vermelho	*Ocotea rubra* Mez.	Brazil	Gamela, Louro Gamela,

Pilot-name	Scientific names	Local names	
		French Guiana Guyana Suriname UK	Louro Vermelho Grignon Franc Baaka, Determa, Red Louro, Wanu Teteroma Determa
Lupuna	*Chorisia spp.*	South America	Árbol botella, Árbol de lana, Paina de seda, Painera, Palo Borracho, Palo Barrigudo, Palo Botella
Pilot-name	**Scientific names**	**Local names**	
Lusambya	*Markhamia lutea* (Benth.) K. Schum. (Syn. *Markhamia platycalyx* Sprague)		

Pilot-name	Scientific names	Local names	
Maçaranduba	*Manilkara spp.* *Manilkara bidentata* A Chev. (Syn. *Manilkara surinamensis* (Miq.) Dubard) *Manilkara huberi* (Ducke) Standl. Dubard	Brazil Colombia French Guiana Guyana Panama Peru Suriname Venezuela UK USA	Maçaranduba, Maparajuba, Paraju Balata, Nispero Balata franc, Balata rouge, Balata gomme, Balata, Bulletwood, Beefwood Nispero Pamashto, Quinilla Colorada Bolletrie Balata Massarandu *Bulletwood* *Bulletwood,* *Beefwood*

Pilot-name	Scientific names	Local names	
Machang	*Mangifera spp.*	India Indonesia Malaysia Myanmar Pakistan Papua New Guinea Philippines Solomon Islands Thailand Vietnam *France* *UK*	Mangga, Mango Membacang Asam, Machang, Sepam Mangowood, Thayet Mango Mango Ailai, Asai, Pahutan Ma-Muang-Pa Ma-Muang-Pa, Pamutan Xoai *Manguier* *Mangowood*
Machiche	*Lonchocarpus lanceolatus* Benth.	Central America	Black Cabbagebark,

Pilot-name	Scientific names	Local names	
			Chaprerno, Sindjaplé
Mafu	*Clausena melioides* Hiern. *Fagaropsis angolensis* H.M.Gardn	Tanzania Kenya	Mfu, Mkunguni, Mtongoti Muyinja
Mafumati	*Newtonia buchananii* Gilb. & Bout (Syn. *Piptadenia buchananii* Bak.)		

Pilot-name	Scientific names	Local names	
Mahogany	*Swietenia macrophylla* King (Syn. *Swietenia candollei* Pitt. Syn. *Swietenia tessmannii* Harms. Syn. *Swietenia krukovii* Gleason) *Swietenia mahagoni* (L.) Jacq.	Bolivia Brazil Central America Colombia Cuba	Caoba, Mara Aguano, Mogno Araputanga Caoba, Caoba del Sur, Caoba del Atlantica Caoba Caoba

Pilot-name	Scientific names	Local names	
	Swietenia humilis Zucc.	Dominican Republic	Mahogani
		Guatemala	Chacalte
		Haiti	Mahogani
		Mexico	Zopilote,
			Baywood
		Nicaragua	Mahogani
		Peru	Aguano,
			Caoba
		Venezuela	Caoba,
			Orura
		France	*Acajou d'Amérique*
		Italy	*Mogano*
		Netherlands	*Mahonie*
		Spain	*Caoba*
		UK	*Mahogany,*
			Brazilian Mahogany
		USA	*Mahogany,*
			Brazilian Mahogany
Malagangai	*Eusideroxylon melagangai* (Symington) Kosterm.		

Pilot-name	Scientific names	Local names	
Malas	*Homalium spp.*	Indonesia Malaysia Philippines Myanmar Laos	Dlingsem, Gia, Melmas, Momala Banisian, Padang, Selimbar, Takaliu, Aranga Myaukchaw, Myaukugo Khen Nang Kha Nang
Manbodé	*Detarium macrocarpum* Harms *Detarium senegalense* J.F. Gmel.	West and Central Africa	Dankh, Petit Détar, Sweet Dattock
Mandioqueira	*Qualea spp.*	Brazil French Guiana	Mandio, Mandioqueira, Quaruba Gronfolo Gris

Pilot-name	Scientific names	Local names	
			Grignon Fou, Kouali
		Suriname	Gronfoeloe
		Venezuela	Florecillo

Pilot-name	Scientific names	Local names	
Manil	*Symphonia globulifera* L.f.	Bolivia	Azufre, Bolivia
		Brazil	Anani, Canadi, Mani
		Colombia	Azufre, Machare
		Ecuador	Machare, Puenga, Zaputi
		French Guiana	Manil, Manil Marecage
		Guyana	Manni
		Peru	Azufre, Brea-Caspi
		Suriname	Mani,

Pilot-name	Scientific names	Local names	
		Trinidad and Tobago Venezuela USA	Mataki Mangue Mani, Paraman, Peramancillo Boarwood
Manil Montagne	*Moronobea coccinea* Aubl.	Brazil French Guiana Guyana Suriname	Anani Da Terra Firme, Bacuri de Anta Manil Montagne, Manil Peou, Parcouri-Manil Coronobo, Morombo-Rai, Moronobo Manniballi, Matakkie
Marupa	*Simarouba amara* Aubl.	Bolivia Brazil	Chiriuana Marupa, Marupauba, Parahyba,

Pilot-name	Scientific names	Local names	
		Colombia Ecuador French Guiana Guyana Peru Suriname Venezuela UK	Paraiba, Tamanquiera Simaruba Cedro Amargo, Cuna, Guitarro Simarouba Simarupa Marupa Soemaroeba Cedro Blanco, Simarouba Bitterwood

Pilot-name	Scientific names	Local names	
Mata-Mata	*Eschweilera spp.* *Eschweilera amara* Mart. ex O. Berg	Brazil French Guiana	Mata-Mata, Matamata Preto Baakalaka, Baikaaki, Balibon, Kouanda,

Pilot-name	Scientific names	Local names	
		Guyana Suriname	Maho, Mahot Noir, Mahou Black Kakaralli, Kakaralli Hoogland Barklak, Manbarklak
Mata Ulat	*Kokoona spp.*		
Mecrussé	*Androstachys johnsonii* Prain	Mozambique South Africa	Cimbirre Lebombo Ironwood, Nsimbitsi
Medang	*Litsea spp.*	Australia Malaysia Myanmar Philippines Vietnam Indonesia Laos Myanmar	Bollywood Medang Padang Ondon Bagaoring, Batikuling Boi loi Huru Chick Dong Kyese

Pilot-name	Scientific names	Local names	
Melunak	*Pentace spp.*	Malaysia Myanmar Thailand	Baru Baran, Melunak, Takalis Baru Baran Sisiat
Mempening	*Lithocarpus spp.*		
Mengkulang	*Heritiera spp.* (Syn. *Tarrietia spp.*) *Heritiera albiflora* (Ridl.) Kosterm. *Heritiera borneensis* (Merr.) Kosterm. *Heritiera simplicifolia* (Mast.) Kosterm. *Heritiera javanica* (Bl.) Kosterm. *Heritiera kuenstleri* (King)	Cambodia Indonesia Malaysia Myanmar Philippines Thailand Vietnam *Australia*	Don-Chem Palapi, Teraling Mengkulang, Kembang Kanze Lumbayau Chumprag Huynh *Red or Brown Tulip Oak*

Pilot-name	Scientific names	Local names	
	Kosterm. *Heritiera sumatrana* (Miq.) Kosterm. *Tarrietia perakensis* King		
Pilot-name	**Scientific names**	**Local names**	
Mepepe	*Albizia adianthifolia* W.F. Wight *Albizia gummifera* A.C. Sm. (Syn. *Albizia fastigiata* Oliv.) *Albizia zygia* J.F. Macbr.		
Meransi	*Carallia spp.* *Carallia borneensis* Oliv.	Southeast Asia	Karibas Kemuning Hutan Magtungod
Meranti, Dark red	*Shorea spp.* *Shorea curtisii* Dyer ex King	Indonesia	Red Meranti, Red Mertih, Meranti Ketung, Meranti Bunga,

Pilot-name	Scientific names	Local names	
	Shorea pauciflora King	Malaysia	Meranti Merah-Tua
	Shorea platyclados Sloten ex Endert		Nemesu,
	Shorea argentifolia Sym.		Meranti Bukit,
	Shorea ovata Dyer ex King		Meranti Daun Basar,
	Shorea parvifolia King		Dark Red Seraya,
	Shorea singkawang (Miq.) Burck		Obar Suluk,
	Shorea pachyphylla Ridl. ex Sym.		Seraya Bukit,
	Shorea acuminata Dyer		Seraya Daun,
	Shorea hemsleyana King	Philippines	Binatoh,
	Shorea leprosula Miq.		Engbang-Chenak,
	Shorea macrantha Brandis		Meranti Bunga Sengawan
	Shorea hemsleyana (King) King ex Foxw.	UK	Tanguile,
	Shorea platycarpa Heim.	USA	Bataan,
	Shorea polysperma (Blanco)		Red Lauan
			Red Lauan,
			Dark Red Seraya
			Dark Meranti

Pilot-name	Scientific names	Local names	
	Merr.		

Pilot-name	Scientific names	Local names	
Meranti, Light red	*Shorea spp.* *Shorea acuminata* Dyer *Shorea dasyphylla* Foxw. *Shorea hemsleyana* (King) King ex Foxw. *Shorea macrantha* Brandis *Shorea johorensis* Foxw. *Shorea lepidota* (Korth.) Bl. *Shorea leprosula* Miq. *Shorea macroptera* Dyer *Shorea sandakanensis* Sym. *Shorea ovalis* (Korth.) Bl. *Shorea parvifolia* Dyer *Shorea palembanica* Miq.	Indonesia Malaysia	Red Meranti, Meranti Merah-Muda, Meranti Bunga Damar Siput, Meranti-Hantu, Meranti Kepong, Meranti Langgang, Meranti Melanthi, Meranti Paya, Meranti Rambai, Meranti Tembaga, Meranti Tengkawang, Meranti Sengkawang, Engkawang, Seraya Batu, Seraya Punai Seraya Bunga, Kawang Almon,

Pilot-name	Scientific names	Local names	
	Shorea platycarpa Heim. *Shorea teysmanniana* Dyer ex Brandis *Shorea revoluta* Ashton *Shorea argentifolia* Sym. *Shorea leptoclados* Sym. *Shorea smithiana* Sym. *Shorea albida* Sym. *Shorea macrophylla* (de Vriese) Ashton *Shorea quadrinervis* Slooten. *Shorea gysbertsiana* Burck *Shorea pachyphylla* Ridl. ex Sym.	Philippines Thailand	Light Red Luan Saya Khao, Saya Lueang, Chan Hoi
Pilot-name	**Scientific names**	**Local names**	
Meranti, White	*Shorea spp.* *Shorea agami* Ashton *Shorea assamica* Dyer	Cambodia Indonesia	Lumber, Koki Phnom Meranti Putih,

Pilot-name	Scientific names	Local names	
	Shorea bracteolata Dyer *Shorea dealbata* Foxw. *Shorea henryana* Lanessan *Shorea lamellata* Foxw. *Shorea resinosa* Foxw. *Shorea roxburghii* G. Don *Shorea stalura* Roxb. *Shorea hypochra* Hance *Shorea hentonyensis* Foxw. *Shorea sericeiflora* C.E.C. Fischer & Hutch. *Shorea farinosa* C.E.C. Fischer *Shorea gratissima* Dyer *Shorea ochracea* Sym. *Parashorea malaanonan* (Blco.) Merr. *Shorea polita* S. Vidal	Malaysia Myanmar Philippines Thailand Vietnam	Damar Puthi Meranti Jerit, Meranti Lapis, Meranti Pa'ang or Kebon Tang, Meranti Temak, Melapi, White Meranti Makai White Lauan, White Meranti Pendan, Pa Nong, Sual, Kabak Kau, Xen, Chai

Pilot-name	Scientific names	Local names

Pilot-name	Scientific names	Local names	
Meranti, Yellow	*Shorea spp.* *Shorea faguetiana* Heim. *Shorea dolichocarpa* Slooten. *Shorea maxima* (King) Sym. *Shorea longisperma* Roxb. *Shorea gibbosa* Brandis *Shorea multiflora* (Burck) Sym. *Shorea hopeifolia* (Heim.) Sym. *Shorea resina-nigra* Foxw. *Shorea peltata* Sym. *Shorea acuminatissima* Sym. *Shorea blumutensis* Foxw. *Shorea faguetioides* Ashton	Indonesia Malaysia Thailand	Meranti Kuning, Kunyit, Damar Hitam Meranti Telepok, Meranti Kelim, Yellow Meranti, Meranti Damar Hitam, Yellow Seraya, Seraya Kuning, Selangan Kuning, Selangan Kacha, Seraya Kuning, Lun Kuning, Lun Gajah, Lun Merat, Lun Siput Kalo
Meranti Bakau	*Shorea rugosa* F. Heim		

Pilot-name	Scientific names	Local names	
	Shorea uliginosa Foxw.		
Merawan	*Hopea spp.* *Hopea apiculata* Sym. *Hopea griffithii* Kurz *Hopea lowii* Dyer *Hopea mengarawan* Miq. *Hopea nervosa* King *Hopea odorata* Roxb. *Hopea papuana* Diels *Hopea sangal* Korth. *Hopea sulcata* Sym.	Cambodia Indonesia Malaysia Myanmar Papua New Guinea Philippines Thailand Vietnam	Koki Merawan/Sengal Merawan/Sengal Gagil Selangan, Selangan-Kasha Thingan Light Hopea Manggachapui Takhian Sao, Sau

Pilot-name	Scientific names	Local names	
Merbau	*Intsia palembanica* Miq. (Syn. *Intsia bakeri* Prain.) *Intsia palembanica* (Miq.) *Intsia bijuga* (Colebr.) Kuntze (Syn. *Intsia retusa* (Kurz.)	Fiji Indonesia Madagascar Malaysia New Caledonia Papua New Guinea Philippines	Vesi Merbau Hintsy Merbau Komu Kwila Ipil,

Pilot-name	Scientific names	Local names	
	O.Kuntze.)	Thailand Vietnam Australia China UK	Ipil Laut Lum-Paw, Gonuo Kwila Kalabau Moluccan Ironwood
Merpauh	*Swintonia spp.* *Swintonia floribunda* Griff. *Swintonia schwenkii* Teijsm. & Binn. ex Hook. f. *Swintonia penangiana* King *Swintonia pierrei* Hance *Swintonia spicifera* Hook. f.	Cambodia India Malaysia Myanmar Pakistan Vietnam	Muom Thayet-Kin Merpau Merpauh Taung Thayet Civit Taungthayet Civit Muom
Mersawa	*Anisoptera spp.* *Anisoptera curtisii* King *Anisoptera costata* Korth.	Cambodia Indonesia Laos Malaysia	Phdiek Mersawa Mai Bak Mersawa,

Pilot-name	Scientific names	Local names	
	(Syn. *Anisoptera oblonga* Dyer) *Anisoptera laevis* Ridl. *Anisoptera marginata* Korth. Anisoptera thurifera Blume	Myanmar Papua New Guinea Philippines Thailand *France* *UK* *USA*	Pengiran Kaunghmu Mersawa Palosapis Krabak, Pik *Ven-Ven* *Krabak* *Bella Rosa*
Messassa	*Brachystegia spiciformis* Benth.		
Metondo	*Cordyla africana* Lour.	Tanzania	Mroma, Mpachamu, Mgwata
Mirindiba-Doce	*Glycydendron amazonicum* Ducke	Brazil	Mirindiba-Doce, Pau-de-Casca-Doce
Mjombo	*Brachystegia boehmii* Taub.	Africa	Miombo

Pilot-name	Scientific names	Local names	
Moabi	*Baillonella toxisperma* Pierre (Syn. *Mimusops djave* Engl.)	Cameroon Congo Equatorial Guinea Gabon Dem. Rep. of the Congo UK	Adjap, Ayap Dimpampi Ayap M'Foi Muamba jaune *African Pearwood*
Moambé jaune	*Enantia spp.* *Enantia chlorantha* Oliv.	UK	*African whitewood*
Molave	*Vitex parviflora* Juss.	Indonesia Philippines	Fuli Kaa, Kayu Kula Amugauan, Molave, Sagat
Momoqui	*Caesalpinia pluviosa* DC.	South America	False Brazilwood, Sibipiruna

Pilot-name	Scientific names	Local names	
Monghinza	*Manilkara mabokeensis* Aubr. *Manilkara obovata* J.H. Hemsley *Manilkara sylvestris* Aubt. & Pellegr.		
Mopaani	*Colophospermum mopane* (J. Kirk ex Benth.) J. Léonard. (Syn. *Copaifera mopane* Kirk & Benth.)		
Mopé	*Spondias mombin* L.	South America	Coolie Plum Gully Plum, Hog Plum, Jobo, Mopé, Prunier Mombin, Spanish Plum
Mora	*Mora spp.*	South America	Alcornoque, Morabukea,

Pilot-name	Scientific names	Local names	
			Nato, Nato Rojo, Pracuba Branca, Pracuuba
Moral	*Maclura tinctoria* (L.) D. Don ex Steud. (Syn. *Chlorophora tinctoria* (L) Gaudich.)	Argentina Bolivia Brazil Colombia Costa Rica Mexico Trinidad and Tobago	Tatayiva-Saiyu Amarillo Amarello, Taiuva Dinde, Palo Amarillo Palo de Mora Barossa, Moral Bois d'Orange
Pilot-name	**Scientific names**	**Local names**	
Morototo	*Schefflera morototoni* (Aubl.) Maguire, Steyerm. & Frodin (Syn. *Didymopanax morototoni* (Aubl.) Decne. &	Argentina Brazil Colombia	Ambayguazu Mandioqueira Yarumero

Pilot-name	Scientific names	Local names		
	Planch)		Cuba Dominican Rep. Mexico Puerto Rico Suriname Venezuela	Yagrumo Macho Yagrumo Macho Chancaro Blanco Yagrumo Macho Kasavehout, Morototo Tinajero
Movingui	*Distemonanthus benthamianus* Baill.		Benin Cameroon Côte d'Ivoire Equatorial Guinea Gabon Ghana Nigeria UK	Ayan Eyen Barre Eyen Eyen, Movingui Ayan Ayan, Ayanran Ayan, *Distemonanthus*
Mtambara	*Cephalosphaera usambarensis* Warb.			

Pilot-name	Scientific names	Local names		
Mtandarusi	*Trachylobium verrucosum* Oliv.		UK	East African copal
Mubala	*Pentaclethra macrophylla* Benth.			
Mueri	*Prunus africana* (Hook.f.) Kalk. (Syn. *Pygeum africanum* Hook.f.)		UK	Red Stinkwood Bitter almond
Mugaita	*Rapanea rhododendroides* Mez.			
Mugonha	*Adina microcephala* Hiern.		Africa	Matumi Rhodesian Redwood
Muhimbi	*Cynometra alexandri* C.H. Wright		Africa	Angu Baira Bapa Bosengere Kahimbi Kampiniungu Lukuanga Mbombele Mubale Mubangu Mubindi Mudindi

Pilot-name	Scientific names	Local names	
			Muhindi Mupombe Tembwe Uganda Ironwood

Pilot-name	Scientific names	Local names	
Mühühü	*Brachylaena huillensis* O.Hoffm. (Syn. *Brachylaena hutchinsii* Hutch.)	Congo Kenya South Africa Tanzania	Mkalambaki, Mkarambati, Muhugu, Muhuhu, Mvumo Mkalambaki, Mkarambati, Muhugu, Muhuhu, Mvumo Laeveldvaalbos Mkalambaki, Mkarambati, Muhugu, Muhuhu,

Pilot-name	Scientific names	Local names	
		Uganda UK	Mvumo Mkalambaki, Mkarambati, Muhugu, Muhuhu, Mvumo Low Veld Brachyleana, Low Veld Silver Oak, Silver Oak
Muira-piranga	*Brosimum rubescens* Taub.	Brazil French Guiana Guyana Suriname	Amapa Rana, Conduru, Falso Pao Brasil, Muirapiranga, Pau Rainha Satine, Satine Rouge, Satine Rubaine, Siton Paya Satinwood Doekaliballi,

Pilot-name	Scientific names	Local names	
		Italy *Spain* *UK*	Satijnhout *Legno Satino,* *Ferolia* *Palo de Oro* *Bloodwood*
Muiratinga	*Maquira coriacea* (H.Karst.) C.C.Berg	Brazil	Capinuri, Muiratinga
Mukarati	*Burkea africana* Hook.		
Mukulungu	*Autranella congolensis* A. Chev. (Syn. *Mimusops congolensis* De Wild.)	Angola Cameroon Central African Republic Congo Dem. Rep. of the Congo Gabon Nigeria	Kungulu Elang, Elanzok Bouanga Mfua Mukulungu Akola Uku
Muninga	*Pterocarpus angolensis* DC.		
Muniridan	*Siparuna spp.*		

Pilot-name	Scientific names	Local names	
Musharagi	*Olea hochstetteri* Baker	UK	East African olive
Musine	*Croton megalocarpus* Hutch.		
Mussibi (Mutenyé)	*Guibourtia coleosperma* J. Léon (Syn. *Copaifera coleosperma* Benth.) *Guibourtia arnoldiana* J. Léon	Zimbabwe UK	*Muzaule* *African Rosewood,* *Copalier,* *False Mopane,* *Mushibi,* *Musibi,* *Mussive,* *Muzaule,* *Muxibe,* *Rhodesian copalwood*
Mutaco	*Entandrophragma spicatum* (C.DC.) Sprague (Syn. *Entandrophragma ekebergioides* (Harms) Sprague Syn. *Wulfhorstia ekebergioides* Harms)		
Mutondo	*Funtumia*		

Pilot-name	Scientific names	Local names	
	africana (Benth.) Stapf *Funtumia elastica* (P.Preuss) Stapf *Funtumia latifolia* (Stapf) Stapf		
Muziga	*Warburgia ugandensis* Sprague		
N'téné	*Copaifera religiosa* J. Léon.	Africa	Anzem, Bengi
Naga	*Brachystegia cynometroides* Harms *Brachystegia eurycoma* Harms. *Brachystegia leonensis* Hutch. & Davy *Brachystegia nigerica* Hoyle & A.P.D. Jones	Cameroon Côte d'Ivoire Gabon Liberia Nigeria Sierra Leone UK	Ekop-Naga Meblo Mendou Tebako Okwen Bogdei Okwen
Nargusta	*Terminalia amazonia* (J.F.Gmel.)	Brazil	Pau-Mulato Brancho

Pilot-name	Scientific names	Local names	
	Exell. *Terminalia guyanensis* Eichler	Colombia Honduras Mexico Panama Venezuela	Guayabo Leon Almendro Canshan Amarillo Carabazuelo Pardillo Negro

Pilot-name	Scientific names	Local names	
Nganga	*Cynometra spp.* *Cynometra hankei* Harms		
Niangon	*Tarrietia utilis* (Sprague) Sprague (Syn. *Heritiera utilis* (Sprague) Sprague) *Tarrietia densiflora* Aubr. & Normand (Syn. *Heritiera densiflora* (Pellegr.) Kosterm.	Côte d'Ivoire Gabon Ghana Liberia Sierra Leone	Niangon Ogoue Nyankom Whismore Yami
Nieuk	*Fillaeopsis discophora* Harms		

Pilot-name	Scientific names	Local names	
Niové	*Staudtia gabonensis* Warb. *Staudtia kamerunensis* Warb. *Staudtia stipitata* Warb.	Angola Cameroon Central African Republic Equatorial Guinea Gabon Dem. Rep. of the Congo	Menga-Menga M'Bonda, Menga-Menga Molanga Bokapi M'Boun, Niove Kamashi, Susumenga
Nyatoh	*Palaquium spp.* *Palaquium gutta* (Hook.) Burck (Syn. *Palaquium acuminatum* Burck) *Palaquium hexandrum* (Griff.) Baill. *Palaquium maingayi* Engl. *Palaquium rostratum* (Miq.) Burck *Palaquium xanthochymum* Pierre ex Burck *Payena spp.*	India Indonesia Malaysia Papua New Guinea Philippines Thailand Vietnam Netherlands	Pali Nyatoh Nyatoh, Mayang Taban, Riam Pencil Cedar Nato Kha-Nunnok Chay Balam

Pilot-name	Scientific names	Local names	
	Payena maingayi C.B. Clarke *Madhuca motleyana* (de Vriese) J.F.Macbr. (Syn. *Ganua motleyana* (de Vriese) Pierre ex Dubard)	UK	Padang
Obéro	*Picralima nitida* (Stapf) T.Durand (Syn. *Picralima klaineana* Pierre)		
Odzikouna	*Scytopetalum spp.*		

Pilot-name	Scientific names	Local names	
Okan	*Cylicodiscus gabunensis* Harms	Cameroon Congo Côte d'Ivoire Gabon Ghana	Adoum, African Greenheart, Bokoka N'Duma Bouemon Edoum, Oduma Adadua, Benya, Denya

Pilot-name	Scientific names	Local names	
		Nigeria	Okan
Okoué	*Baphia nitida* Lodd. *Baphia pubescens* Hook.f.		
Okoumé	*Aucoumea klaineana* Pierre	Congo Equatorial Guinea Gabon UK	N'Kumi Okumé, N'Goumi, Okoumé, Angouma Gaboon
Olon	*Fagara heitzii* Aubrev. & Pellegr.	Cameroon Congo Dem. Rep. of the Congo Equatorial Guinea Gabon	Bongo M'Banza Kamasumu Olong Olon
Olonvogo	*Zanthoxylum gilletii* (De Wild.) P.G.Waterman (Syn. *Fagara inaequalis* Engl. Syn. *Fagara macrophylla* Engl.		

Pilot-name	Scientific names	Local names	
	Syn. *Fagara tessmannii* Engl.)		
Onzabili	*Antrocaryon micraster* A. Chev.& Guill. *Antrocaryon klaineanum* Pierre *Antrocaryon nannanii* De Wild.	Angola Cameroon Côte d'Ivoire Equatorial Guinea Gabon Ghana Dem. Rep. of the Congo *Portugal*	N'Gongo Angonga Akoua Anguekong Onzabili Aprokuma Mugongo *Mongongo*
Orey	*Campnosperma panamense* Standl. *Campnosperma gummifera* (L). March.		
Osanga	*Pteleopsis hylodendron* Mildbr.	Cameroon Côte d'Ivoire Dem. Rep. of the Congo	Sikon Koframire Osanga
Ossimiale	*Newtonia leucocarpa* Gilb. & Bout. (Syn. *Piptadenia*		

Pilot-name	Scientific names	Local names	
	leucocarpa Harms)		

Pilot-name	Scientific names	Local names	
Ossoko	*Scyphocephalium ochocoa* Warb. *Scyphocephalium mannii* Warb.	Gabon	Ossoko, Sogho
Ovengkol	*Guibourtia ehie* (A.Chev.) J. Léonard	Côte d'Ivoire Equatorial Guinea Gabon Ghana USA	Amazakoue Palissandro Ovengkol Hyeduanini, Anokye *Mozambique*
Ovoga	*Poga oleosa* Pierre	Cameroon Gabon Nigeria	Ngale Afo, Ovoga Inoi
Ozigo	*Dacryodes buettneri* (Engl.) H.J. Lam. (Syn. *Pachylobus buettneri* Engl.)	Equatorial Guinea Gabon	Assia Ozigo, Assia

Pilot-name	Scientific names	Local names	
		Germany	Assia
Ozouga	*Sacoglottis gabonensis* Urb.	Cameroon Congo Côte d'Ivoire Gabon Ghana Nigeria Sierra Leone	Bedwa, Bidou, Bodoua, Edoue, Eloue Niuka Akouapo, Tougbi Essoua, Ozouga Ozouga, Atala, Tala, Ugu Kpowuli
Paco	*Ptaeroxylon obliquum* Radlk.		
Padauk Amboyna	*Pterocarpus indicus* Willd. (Syn. *Pterocarpus vidalianus* Rolfe)	India Indonesia	Andaman-Padauk Sena, Sonokembang

Pilot-name	Scientific names	Local names	
		Malaysia	Linggua Angsana Amboina Sena
		Myanmar	Pashu-Padauk
		Papua New Guinea	Png-Rosewood
		Philippines	Manila-Padouk, Narra Vitali
		France	Amboine/Amboyna or Padouk
		Germany	Amboine/Amboyna or Padouk Amboyna or Padouk Karin
		UK	
		Japan	

Pilot-name	Scientific names	Local names	
Padouk d'Afrique	*Pterocarpus osun* Craib. *Pterocarpus soyauxii* Taub. *Pterocarpus*	Angola	Tacula
		Cameroon	Mbel
		Congo	Kisese

Pilot-name	Scientific names	Local names	
	tinctorius Welw.	Equatorial Guinea Gabon Nigeria Central African Republic Dem. Rep. of the Congo Germany Belgium Italy Netherlands UK	Palo rojo Mbel Osun Padouk Mongola, Mukula, N'Gula Padauk Corail Paduk Padoek African Padauk, Barwood, Camwood, Padauk
Paldao	*Dracontomelon dao* (Blanco) Merr. & Rolfe *Dracontomelon*	Malaysia Philippines	Sengkulang Dao, Ulandug, Lamio

Pilot-name	Scientific names	Local names	
	edule Skeeis. *Dracontomelon sylvestre* Bl.		
Palissandre d'Asie	*Dalbergia bariensis* Pierre *Dalbergia cambodiana* Pierre *Dalbergia cochinchinensis* Pierre *Dalbergia latifolia* Roxb. *Dalbergia oliveri* Prain *Dalbergia sissoo* Roxb.	Cambodia Laos Thailand Vietnam	East Indian Palisander East Indian rosewood Neang Nuon Palissandre d'Asie Tamalan
Palissandre de Guatemala	*Dalbergia tucurensis* Donn. Sm.		
Palissandre de Madagascar	*Dalbergia spp.* *Dalbergia louveli* R.Vig.	*France*	*Bois de rose de Madagascar* *Madagascar rosewood*

Pilot-name	Scientific names	Local names	
	Dalbergia monticola Bosser & R. Rabev. *Dalbergia normandii* Bosser & R. Rabev. *Dalbergia purpurascens* Baill. *Dalbergia xerophila* Bosser & R. Rabev.	UK	
Palissandre de Rose	*Dalbergia decipularis* Rizz. & Matt.	Brazil French Guiana	Pau Rosa Bois de rose femelle

Pilot-name	Scientific names	Local names	
Palissandre de Santos	*Machaerium scleroxylon* Tul.	Brazil Bolivia French Guiana	Caviuna, Jacarand, Pau Ferro Morado Palissandre de Santos
Palissandre Honduras	*Dalbergia stevensonii* Standl.		
Palissandre	*Dalbergia darienensis* Rudd.		

Pilot-name	Scientific names	Local names	
Panama			
Palissandre Para	*Dalbergia spruceana* Benth.	Brazil France Germany Spain UK USA Japan	Caviuna We-We Jacaranda Palissandre Rio Palissander Palisandro Brazilian Rosewood Jacaranda Pardo Brazilian Rosewood Shitan
Palissandre Rio	*Dalbergia nigra* (Vell.) Allem. ex Benth.		
Panacoco	*Swartzia leiocalycina* Benth.	Brazil French Guiana	Carrapatinho, Coraçao de Negro, Gombeira Bois Perdrix, Ferreol, Panacoco Agui,

Pilot-name	Scientific names	Local names	
		Guyana Suriname Germany UK	Banya, Wamara Gandoe, Ijzerhart, Zwart Parelhout Wamara Ironwood, Wamara
Pao rosa	*Bobgunnia fistuloides* (Harms) J.H. Kirkbr. & Wiersema (Syn. *Swartzia fistuloides* Harms) *Bobgunnia madagascariensis* (Desv.) J.H. Kirkbr. & Wiers. (Syn. *Swartzia madagascariensis* Desv.)	Cameroon Congo Côte d'Ivoire Central African Republic Dem. Rep. of the Congo Gabon Mozambique Nigeria	Nom Nsas Kisasambra Boto N'Guessa Nsakala Oken Pau Ferro Udoghogho
Pilot-name	**Scientific names**	**Local names**	
Parapara	*Jacaranda copaia* Aubl.	Brazil	Carnauba da Matta,

Pilot-name	Scientific names	Local names	
		Colombia French Guiana Panama Suriname Venezuela	Para-Para Chingale Copaia, Faux Simarouba Gualandai Goebaja Abey, Cupay
Parcouri	*Platonia insignis* Mart.	Brazil Ecuador French Guiana Guyana Suriname	Bacuri, Bacuri-Açu, Bacuriuba Matazama Parcouri Pakuri Goelhart, Pakoeli
Pashaco	*Parkia velutina* Benoist		
Pau amarelo	*Euxylophora paraensis* Huber		
Pau marfim (Peroba rosa)	*Aspidosperma spp.*	Belize	My Lady

Pilot-name	Scientific names	Local names	
		Bolivia Brazil Colombia French Guiana Guatemala Guyana Honduras Mexico Panama Peru Suriname Venezuela	Gavetillo Araracanga, Ararauba, Jacamin Copachi Quillo Caspi Kiantioutiou, Koumanti Oudou Chichica Shibadan Chaperna, Chapel Volador Alcarreto Pumaquiro Kormanti kopi Nielillo Negro
Pau mulato	*Calycophyllum spruceanum* (Benth.) K. Schum.	Ecuador	Capirona
Pau rosapau	*Rhamnus zeyheri* Sond.	UK	Pink Ivory

Pilot-name	Scientific names	Local names

Pilot-name	Scientific names	Local names	
Pau Roxo	*Peltogyne maranhensis* Ducke	Brazil	Jatobazinho, Guarabu, Roxinho
		Colombia	Tananeo
		Guyana	Koroborelli, Merawayana, Saka
		Mexico	Palo de Rosa, Pau Morado
		Suriname	Dastan, Kocolorelli, Malako
		France	Bois Pourpre
			Bois Violet
		Netherlands	Purperhart
		UK	Amarant, Purpleheart, Violetwood
		USA	Amarant, Purpleheart, Violetwood

Pilot-name	Scientific names	Local names	
Penaga	*Mesua ferrea* L.	India Malaysia UK	Agacuram, Atha, Mallaynangai, Naga Sampige, Nagappu, Nangil, Nangu, Nangul, Suruli Churuli, Nagacampakam, Nagapoovu, Nanku, Vayanavu *Iron wood tree*
Pernambouc	*Caesalpinia echinata* Lam.	Brazil	Brasileto, Ibirapitanga, Orabutá, Pernambuco, Pau Brasil, Pau Rosado
Peruvian Pepper	*Schinus molle* L.	South America	Arveira

Pilot-name	Scientific names	Local names	
			Pimienta Pirul Poivre Rosé
		France UK	California Pepper Tree, Chilean Pepper Tree, Mastic Tree, Molle, Pepper Berry Tree, Pepper Tree, Peruvian Mastic, Peruvian Pepper Tree, Pink Pepper, Weeping Pepper
Pilot-name	**Scientific names**	**Local names**	
Pillarwood	*Cassipourea spp.* *Cassipourea malosana* (Baker) Alston (Syn. *Cassipourea elliottii* (Engl.) Alston)		
Pilon	*Hieronyma spp.*	Belize	Suradanni

Pilot-name	Scientific names	Local names	
		Brazil	Acuarana,
			Sangue De Boi,
			Urucurana
		Colombia	Mascarey
		Ecuador	Mascaré
		Honduras	Rosita
		Nicaragua	Nanciton
		Venezuela	Trompillo
Piquia	*Caryocar spp.*	Brazil	Piquia
		Colombia	Almendrillo,
			Almendron,
			Cagui
	Caryocar costaricense Donn. Sm.	Costa Rica	Aji,
			Ajillo
		Guyana	Pekia
		Suriname	Sawarie
Platano	*Pouteria spp.*		
Pombeira	*Citharexylum fruticosum* L.	Southeast Asia	Fiddlewood
Primavera	*Tabebuia donnell-smithii* Rose	UK	Gold Tree

Pilot-name	Scientific names	Local names	
Punah	*Tetramerista glabra* Miq.	Indonesia Malaysia	Punal, Bang Kalis, Paya Punam, Ponga, Peda, Entuyut, Amat, Tuyut
Pyinkado	*Xylia spp.*		
Quaruba	*Vochysia spp.* *Vochysia guatemalensis* Don. Sm. *Vochysia schomburgkii* Warm.	Guyana	Iteballi, San Juán

Pilot-name	Scientific names	Local names	
Ramin	*Gonystylus bancanus* (Miq.) Kurz *Gonystylus macrophyllus* (Miq.) Airy Shaw (Syn. *Gonystylus*	Indonesia Malaysia	Garu-Buaja, Akenia, Medang Keram Melawis,

Pilot-name	Scientific names	Local names	
	philippinensis Elm.) *Gonystylus reticulatus* (Elm.) Merr.	 Philippines Solomon Islands *Switzerland*	Ramin Batu, Ramin Telur, Ahmin Lantunan-Bagio Ainunura, Latareko, Petata, Fungunigalo *Akenia*
Rengas	*Gluta spp.*	Malaysia Myanmar Indonesia Thailand	Jalang, Kerbau, Rengas Thayet-Thitsi Rengas, Tembaga Rakban
Resak	*Vatica spp.*		
Rikio	*Uapaca spp.*	Cameroon	Borikio, Rikio,

Pilot-name	Scientific names	Local names	
	Uapaca guineensis Müll. Arg.	Côte d'Ivoire Nigeria	Rikio Riviere Borikio, Rikio, Rikio Riviere Abo Emido, Yeye
Rosawa	*Gmelina vitiensis* (Seem) A.C. Sm.		
Rose of the Mountain	*Brownea spp.*		
Sabicu	*Lysiloma latisiliquum (L.) Benth.*	Central America	False Tamarind, Tsalam, Tzalam
Saboarana	*Swartzia benthamiana* Miq.	Guyana	Guyana Rosewood, Wamara
Safukala	*Dacryodes pubescens* H.J. Lam (Syn. *Pachylobus pubescens* Engl.)		
Sal	*Shorea obtusa Wall.*	Asie du Sud-Est	Rang

Pilot-name	Scientific names	Local names	
	Shorea robusta C.F. Gaertn.		
Sali	*Tetragastris spp.*	Brazil Colombia French Guiana Guyana Nicaragua Puerto Rico	Almesca Aguarras, Palo de Cerdo Encens rouge, Gommier Haiawaballi Kerosen Masa, Palo de aceite
Sandalwood	*Santalum album* L.	Southeast Asia	Indian Sandalwood, Santal Blanc
Pilot-name	**Scientific names**	**Local names**	
Sapelli	*Entandrophragma cylindricum* Sprague	Angola Cameroon Central African Republic Congo	Undianuno Assié-Sapelli M'Boyo Undianuno Aboudikro

Pilot-name	Scientific names	Local names	
		Côte d'Ivoire Ghana Nigeria Uganda Dem. Rep. of the Congo Germany UK	Penkwa Sapele Muyovu Lifaki Sapelli-Mahagoni Sapele
Sapucaia	*Eschweilera grandiflora* (Aubl.) Sandwith (Syn. *Lecythis grandiflora* Aubl.) *Lecythis pisonis* Cambess.	South America	Sapucaia Sapukaina
Saqui-Saqui	*Bombacopsis quinata* (Jacq.) Dugand	Central America Colombia	Cedro Espino, Cedro Espinoso, Cedro Tolua, Pochote Cedro Tolua, Ceiba Tolua, Cedro Macho

Pilot-name	Scientific names	Local names	
		Venezuela	Saqui Saqui, Cedro Dulce, Murea
Satin Ceylan	*Chloroxylon swietenia* DC.	Asia	Buruta, Ceylon Satinwood, East Indian Satinwood
Sepetir	*Sindora spp.* *Sindora affinis* De Wit *Sindora coriacea* (Baker) Prain *Sindora echinocalyx* Prain *Sindora siamensis* Teijsm. ex Miq. *Sindora velutina* Baker (Syn. *Sindora parvifolia* Backer) *Pseudosindora palustris* Sym. (Syn. *Copaifera palustris* (Sym.) De Wit)	Cambodia Indonesia Malaysia Philippines Thailand	Krakas Sindur Sepetir, Meketil, Saputi, Sepeteh, Petir, Petir-Sepetir Pay or Swamp-Sepetir, Sepetir Nin-Yaki Supa Krathon, Maka-Tea

Pilot-name	Scientific names	Local names	
Seraya, white (White Lauan)	*Parashorea malaanonan* Merr. *Parashorea plicata* Brandis *Parashorea macrophylla* Wyatt-Smith ex Ashton *Parashorea tomentella* Sym. Meijer	Indonesia Malaysia Myanmar Philippines Vietnam	Pendan, Urat Mata, Belutu, White Seraya Urat Mata Thingadu Bagtikan, White Lauan Cho-Chi
Sesendok	*Endospermum spp.*	Fiji Indonesia Malaysia Philippines Papua New Guinea	Kauvula Bakota, Sendok-Sendok Ekor, Sendok-Sendok, Terbulan Gubas Basswood, Endospermum
Simpoh	*Dillenia spp.* *Dillenia aurea* Sm. *Dillenia eximia* Miq.	Indonesia Malaysia	Sempur, Simpur Simpor

Pilot-name	Scientific names	Local names	
		Myanmar Philippines Thailand	Mai-Masan, Zinbyum Katmon, Masan San,
Sipo	*Entandrophragma utile* Sprague	Angola Cameroon Côte d'Ivoire Equatorial Guinea Gabon Ghana Nigeria Uganda Dem. Rep. of the Congo Germany UK	Kalungi Asseng-Assié Sipo Abebay Assi Utile Utile Mufumbi Liboyo Sipo-Mahagoni Utile
Slangehout	*Loxopterygium sagotii* Hook f.	Suriname	Hububalli
Sobu	*Cleistopholis patens* Engl. & Diels. *Cleistopholis*		

Pilot-name	Scientific names	Local names	
	glauca Pierre ex Engl.& Diels.		
Sougué	*Parinari excelsa* A.Chev, ssp. *holsti* Engl. (Syn. *Parinari tenuifolia* A. Chev.)	Liberia Nigeria Senegal Tanzania Uganda	Kpar Esagko, Inyi Mampata Mubura Mubura

Pilot-name	Scientific names	Local names	
Sucupira	*Bowdichia nitida* Benth. *Diplotropis martiusii* Benth. *Diplotropis purpurea* (Rich.) Amsh.	Brazil Colombia French Guiana Guyana Peru Suriname Venezuela	Sucupira, Sapurira Arenillo, Zapan Negro Coeur dehors, Baaka Tatabu Chontaquiro, Huasai-Caspi Zwarte Kabbes Congrio, Alcornoque

Pilot-name	Scientific names	Local names	
Sumauma	*Ceiba pentandra* (L.) Gaertn. *Ceiba samauma* (Mart. & Zucc.) K.Schum.	Bolivia Brazil Central America Colombia Ecuador French Guiana Guyana Peru Suriname	Ceiba, Mapajo Toborochi, Sumauma Paneira Ceiba, Ceibon, Inup, Piton, Panya Ceiba, Bonga Ceiba Uchuputu, Guambush Mahot coton, Fromager, Bois coton Kumaka, Silk Cotton Ceiba, Huimba Kankantrie,

Pilot-name	Scientific names	Local names	
		Venezuela	Koemaka Ceiba Yucca, Ceiba
Suren	*Toona sureni* (Bl.) Merr. (Syn. Toona febrifuga Roem.) *Toona ciliata* M. Roem. (Syn. *Cedrela toona* (Roxb. ex Rottler) *Toona calantas* Merr. & Rolfe *Toona australis* (F. Muell.) Harms	Cambodia India Indonesia Malaysia Myanmar Papua New Guinea Philippines Thailand Vietnam *Australia* *UK* *USA*	Chomcha Toon Surian, Limpagna Surea-Bawang Thitkado Red Cedar Calantas, Toon, Yomham Xoan-Moc *Red Cedar,* *Moulmein Cedar,* *Burma Cedar* *Moulmein Cedar,* *Burma Cedar*

Pilot-name	Scientific names	Local names

Pilot-name	Scientific names	Local names	
Suya	*Pouteria speciosa* (Ducke) Baehni	Brazil Guyana	Pajura, Pajura de Obidos Chuya, Durban Pine, Por, Suya
Tali	*Erythrophleum spp.* *Erythrophleum suaveolens* Brenan (Syn. *Erythrophleum guineense* G. Don.) *Erythrophleum ivorense* A. Chev.	Cameroon Congo Côte d'Ivoire Dem. Rep. of the Congo Equatorial Guinea Gabon Ghana Guinea-Bissau Mozambique Nigeria Senegal Sierra	Elone N'Kassa Alui, Tali Eloun Elondo Eloun Potrodom Mancone Missanda Sasswood Tali Gogbei Mwavi Muave

Pilot-name	Scientific names	Local names	
		Leone Tanzania Zambia UK	Missandra
Tamboti	*Spirostachys africana* Sond.		
Tani	*Cryptosepalum staudtii* Harms		
Tanimbuca	*Buchenavia spp.*		
Tapiá	*Alchornea triplinervia* (Spreng.) Müll.Arg.	Brazil	Kanakudiballi
Tasua	*Aglaia spp.* (Syn. *Amoora spp.*)		
Tatajuba	*Bagassa guianensis* Aubl.	Brazil French Guiana Suriname	Amapa-Rana, Tatajuba Bagasse Jaune Gele Bagasse
Tauari	*Couratari spp.*	Brazil Guyana French Guiana	Imbirena Wadara Couatari,

Pilot-name	Scientific names	Local names	
		Suriname Venezuela	Inguipipa, Maho Cigare, Tabari Ingipipa Capa de Tabaco, Tampipio
Tchitola	*Oxystigma oxyphyllum* (Harms J. Léon.) (Syn. *Pterygopodium oxyphyllum* Harms)	Angola Cameroon Congo Dem. Rep. of the Congo Gabon Nigeria	Tola Chinfuta Nom Sinedon Kitola, Tchitola Akwakwa, Tshibudimbu Emola, M'Babou Lolagbola
Pilot-name	**Scientific names**	**Local names**	
Teak	*Tectona grandis* L.f.	India Indonesia Laos	Sagwan Jati, Tek May Sak

Pilot-name	Scientific names	Local names	
		Myanmar Thailand Vietnam France Germany	Kyun May Sak Giati, Teck Teck Burma-Rangoon-Java Teak
Tembusu	*Fagraea fragrans* Roxb.	Cambodia Fiji Malaysia Myanmar Philippines	Tatro, Trai Buabua Temasuk Anan, Ananma Urung
Tento	*Ormosia spp.* *Ormosia coutinhoi* Ducke	Brazil Colombia French Guiana	Buiucu, Tento Chocho, Choco Agui, Caconnier Rouge,

Pilot-name	Scientific names	Local names	
		Guyana Peru Puerto Rico Suriname Venezuela	Neko-Oudou Barakaro Huaryoro Palo de Matos Kokriki Peonia
Terminalia, brown	*Terminalia catappa* L.		
Terminalia, yellow	*Terminalia complanata* Schum. *Terminalia longispicata* V. Sl. *Terminalia sogerensis* Baker f.		
Thinwin	*Phaseolodes pendulum* (Benth.) Kuntze (Syn. *Millettia pendula* Benth.)		

Pilot-name	Scientific names	Local names	
Tiama	*Entandrophragma angolense* C. DC. *Entandrophragma congoense* A. Chev.	Angola Congo Côte	Acuminata, Livuité Kiluka Tiama

Pilot-name	Scientific names	Local names	
		d'Ivoire Equatorial Guinea Gabon Ghana Nigeria Uganda Dem. Rep. of the Congo Germany UK	Dongomanguila Abeubêgne Edinam Gêdu-Nohor Mukusu Lifaki, Vovo Tiama-Mahagoni Gêdu-Nohor
Timbo	*Enterolobium contortisiliquum* (Vell.) Morong	South America	Caro-Caro, Orejero, Pacara Earpod Tree, Tamboril, Timbo-Colorado, Timbo
Tipa	*Tipuana tipu* O. Ktze		

Pilot-name	Scientific names	Local names	
Tola (Oduma)	*Gossweilerodendron balsamiferum* Harms *Gossweilerodendron joveri* Normand ex Aubrev.	Angola Cameroon Congo Gabon Nigeria Dem. Rep. of the Congo Germany UK	Tola branca Sinedon Tola, Tola blanc Emolo Agba Ntola Agba, Tola branca Agba
Toubaouaté	*Didelotia brevipaniculata* J. Léon.		
Trebol	*Platymiscium spp.* *Platycyamus regnellii* Benth. *Platymiscium pinnatum* (Jacq.) Dugand *Platymiscium trinitatis* Benth. (Syn. *Platymiscium duckei* Hub.) *Platymiscium ulei* Harms.	Belize Brazil Colombia Costa Rica	Granadillo Jacaranda do Brejo, Macacauba Guayacan trebol, Trebol Coyote, Cristobal

Pilot-name	Scientific names	Local names	
		El Salvador Honduras Mexico Peru Venezuela	Granadillo Granadillo Granadillo Cumaseba Roble
Tsanya	*Pausinystalia macroceras* Pierre ex Beille (Syn. *Corynanthe bequaertii* De Wild.) *Corynanthe paniculata* Welw.		
Tualang	*Koompassia excelsa* (Becc.) Taub.	Southeast Asia	Honey Bee Tree, Mangaris, Mengaris, Toale
Pilot-name	**Scientific names**	**Local names**	
Umgusi	*Baikiaea plurijuga* Harms	East Africa	Mukusi, Rhodesian Teak, Zambian Teak, Zambesi Redwood
Umiri	*Humiria balsamifera* var. *floribunda* (Mart.) Cuatrec.	Brazil	Umiri

Pilot-name	Scientific names	Local names	
	(Syn. *Humiria floribunda* Mart.)	Colombia	Oloroso
		Ecuador	Chanul
		French Guiana	Bois Rouge,
			Houmiri
		Guyana	Bastard Bulletwood,
			Meri,
			Tauaranru,
			Tauroniro
		Peru	Quinilla Colorado
		Suriname	Basra Bolletrie,
			Blakaberi,
			Tawanonero
		Venezuela	Nina
Urunday	*Astronium balansae* Engl. *Astronium concinnum* Schott *Astronium graveolens* Jacq. *Astronium urundeuva* Engl.	Argentina	Urunday del Noroeste,
			Urunday-Mi,
			Urundel
		Bolivia	Cuchi
		Brazil	Arindeúva,
			Aroeira-do-Sertão,

Pilot-name	Scientific names	Local names	
		Paraguay Central and South America	Aroeira Preta, Urindeúva Urunde'y Mi Bois de Zèbre, Bossona Mura, Tigerwood, Urunday-Para, Zebrano Zebrawood, Zorrowood
Vene	*Pterocarpus erinaceus* Poir. (Syn. *Pterocarpus africanus* Hook.)	Burkina-Faso Equatorial Guinea Guinea Guinea-Bissau Mali	Goni, Guenin Pau Sangue Ven Pau Sangue Goni, Ven, Vene Vene

Pilot-name	Scientific names	Local names	
		Nigeria Senegal	Ven, Vene
Vésàmbata	*Oldfieldia africana* Benth. & Hook.f.		

Pilot-name	Scientific names	Local names	
Virola	*Virola spp.*	Central America Colombia Ecuador French Guiana Guyana Honduras	Banak, Sangre, Palo de Sangre, Bogamani, Cebo, Sangre Colorado Sebo, Nuanamo Chaliviande, Shempo Yayamadou, Moulomba Dalli Banak

Pilot-name	Scientific names	Local names	
		Peru Suriname Trinidad and Tobago Venezuela UK	Cumala Baboen, Pintri Cajuea Virola Cuajo, Sangrino, Camaticaro, Otivo Dalli
Wacapou	*Vouacapoua spp.*	Brazil French Guinea Guyana Suriname	Acapu, Ritangueira Bois Perdrix, Bounaati, Epi de Blé Sara, Sarabebeballi, Tatbu Bruinhart, Wacapoe

Pilot-name	Scientific names	Local names	
		UK USA	Tatbu Partridgewood
Walaba	*Eperua spp.*	Brazil French Guiana Guyana Suriname Venezuela	Apa, Apazeiro, Copaibarana, Espadeira Bioudou, Wapa Ituri Wallaba, Wallaba Walaba Uapa, Palo Machete
Wamara	*Bocoa prouacensis* Aubl.		
Wamba	*Tessmannia africana* Harms (Syn. *Tessmannia claessensii* De Wild.) *Tessmannia lescrauwaetii* (De Wild.) Harms		

Pilot-name	Scientific names	Local names	
Wengé	*Millettia laurentii* De Wild. *Millettia stuhlmannii* Taub.	Cameroon Congo Gabon Dem. Rep. of the Congo Mozambique Tanzania Germany France UK	Awoung Wenge Awong Wenge Jambire Mpande Panga-Panga, Panga-Panga, Panga-Panga
Xoan	*Melia azedarach* L.	Bangladesh Cambodia China India	Bakarjan, Ghora Nim, Mahanim, Mahnim Dak hien Mindi Kechil Bakain, Bakarja, Betain,

Pilot-name	Scientific names	Local names	
		Indonesia	Deikna, Dek, Drek, Mallan Nim Gringging, Marambung, Mindi
		Nepal	Bakaina, Bakaino, Bakena
		Philippines	Balalunga, Balagango, Paraiso
		Thailand	Khian, Lian, Lian-Baiyai
		Vietnam	Xaon

Pilot-name	Scientific names	Local names	
Yemane	*Gmelina arborea* Roxb.	Bangladesh	Gamar, Gamari,

Pilot-name	Scientific names	Local names	
		India	Gomari, Gumbar, Gumhar Gambhar, Gomari, Gumhar, Kambhari, Sewan
		Myanmar	Mai Saw, Yemane, Yemani, Yemari
		Nepal	Gamari, Gambari, Gumhari, Khamari
		Thailand	Gumari, Saw, So, So-maeo

Pilot-name	Scientific names	Local names	
		France Germany Spain UK	Gmelina, Melina, Peuplier d Afrique Gumar-Teak Gmelina, Melina Beechwood, Gmelina, Goomar Teak, Kashmir Tree, Malay Beechwood, White Teak, Yemane
Yungu	*Drypetes gossweileri* S. Moore		
Zingana	*Microberlinia spp.* *Microberlinia bisulcata* A. Chev. *Microberlinia brazzavillensis* A. Chev.	Cameroon Gabon Germany UK	Allen Ele Zingana Zebrano Zebrano, Zebrawood

Chapter 46

Manufactures of straw, of esparto or of other plaiting materials; basketware and wickerwork

Notes.

1.- In this Chapter the expression "plaiting materials" means materials in a state or form suitable for plaiting, interlacing or similar processes; it includes straw, osier or willow, bamboos, rattans, rushes, reeds, strips of wood, strips of other vegetable material (for example, strips of bark, narrow leaves and raffia or other strips obtained from broad leaves), unspun natural textile fibres, monofilament and strip and the like of plastics and strips of paper, but not strips of leather or composition leather or of felt or nonwovens, human hair, horsehair, textile rovings or yarns, or monofilament and strip and the like of Chapter 54.

2.- This Chapter does not cover :

(a) Wall coverings of heading 48.14;

(b) Twine, cordage, ropes or cables, plaited or not (heading 56.07);

(c) Footwear or headgear or parts thereof of Chapter 64 or 65;

(d) Vehicles or bodies for vehicles of basketware (Chapter 87); or

(e) Articles of Chapter 94 (for example, furniture, luminaires and lighting fittings).

3.- For the purposes of heading 46.01, the expression "plaiting materials, plaits and similar products of plaiting materials, bound together in parallel strands" means plaiting materials, plaits and similar products of plaiting materials, placed side by side and bound together, in the form of sheets, whether or not the binding materials are of spun textile materials.

GENERAL

In addition to articles of loofah, this Chapter covers semi-manufactured products (heading 46.01) and certain articles (headings 46.01 and 46.02) made by interlacing, weaving or by similar methods of assembling unspun materials, particularly :

(1) Straw, osier or willow, bamboos, rushes, rattans, reeds, chipwood (i.e., wood in thin strips), drawn wood, strips of other vegetable material (for example, strips of bark, narrow leaves and raffia or other strips obtained from broad leaves such as those of banana plants or palm trees), **provided** they are in a state or form suitable for plaiting, interlacing or similar processes.

(2) Unspun natural textile fibres.

(3) Monofilament and strip and the like of plastics of Chapter 39 (but **not** monofilament of which no cross-sectional dimension exceeds 1 mm **nor** strip or the like of an apparent width not exceeding 5 mm, of man-made textile materials, of **Chapter 54**).

(4) Strips of paper (including paper covered with plastics).

(5) Certain materials consisting of a textile core (unspun fibres, braid, etc.), wound or covered with strips of plastics, or thickly coated with plastics, so that the product no longer has the character of the fibres, braid, etc., forming the core.

Certain of these materials, particularly the vegetable products, may be prepared (e.g., by splitting, drawing, peeling, etc., or by impregnating with wax, glycerol, etc.) to render them more suitable for plaiting, interlacing or similar processes.

For the purposes of this Chapter, the following are **not** considered to be plaiting materials and articles or products made therefrom are **excluded** from the Chapter :

(i) Horsehair (**heading 05.11** or **Section XI**).

(ii) Monofilament of which no cross-sectional dimension exceeds 1 mm, or strip or flattened tubes (including strip and flattened tubes folded along the length), whether or not compressed or twisted (artificial straw and the like), of man-made textile materials, **provided** that the apparent width (i.e., in the folded, flattened, compressed or twisted state) does not exceed 5 mm **(Section XI)**.

(iii) Textile rovings (except when wholly covered with plastics as described in paragraph (5) above) **(Section XI)**.

(iv) Textile yarn impregnated, coated, covered or sheathed with plastics **(Section XI)**.

(v) Strips of leather or composition leather (generally **Chapter 41** or **42**) or of felt or nonwovens **(Section XI)** or human hair (**Chapter 5, 59, 65** or **67**).

In addition the Chapter **does not cover** :

(a) Saddlery and harness (**heading 42.01**).

(b) Products or articles of bamboo, of **Chapter 44**.

(c) Wall coverings of **heading 48.14**.

(d) Twine, cordage, rope or cables, even if plaited or of unspun fibres (**heading 56.07**).

(e) Narrow fabrics consisting of warp without weft assembled by means of an adhesive (bolducs) (**heading 58.06**).

(f) Footwear or parts thereof of **Chapter 64**.

(g) Headgear or parts of headgear, including hat-shapes, of **Chapter 65**.

(h) Whips (**heading 66.02**).

(ij) Artificial flowers (**heading 67.02**).

(k) Vehicles, or bodies for vehicles of basketware (**Chapter 87**).

(l) Articles of **Chapter 94** (for example, furniture, luminaires and lighting fittings).

(m) Articles of **Chapter 95** (for example, toys, games, sports requisites).

(n) Brooms or brushes (**heading 96.03**) or tailors' dummies, etc. (**heading 96.18**).

Section X

PULP OF WOOD OR OF OTHER FIBROUS CELLULOSIC MATERIAL; RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD; PAPER AND PAPERBOARD AND ARTICLES THEREOF

Section X

PULP OF WOOD OR OF OTHER FIBROUS CELLULOSIC MATERIAL; RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD; PAPER AND PAPERBOARD AND ARTICLES THEREOF

Chapter 47

Pulp of wood or of other fibrous cellulosic material; recovered (waste and scrap) paper or paperboard

Note.

1.- For the purposes of heading 47.02, the expression "chemical wood pulp, dissolving grades" means chemical wood pulp having by weight an insoluble fraction of 92 % or more for soda or sulphate wood pulp or of 88 % or more for sulphite wood pulp after one hour in a caustic soda solution containing 18 % sodium hydroxide (NaOH) at 20 °C, and for sulphite wood pulp an ash content that does not exceed 0.15 % by weight.

GENERAL

The pulp of this Chapter consists essentially of cellulose fibres obtained from various vegetable materials, or from waste textiles of vegetable origin.

The most important pulp in international trade is wood pulp, termed "mechanical wood pulp", "chemical wood pulp", "semi-chemical wood pulp" or "chemi-mechanical pulp", according to its method of preparation. The woods mostly used are pine, spruce, poplar and aspen, but harder woods such as beech, chestnut, eucalyptus and certain tropical woods are also used.

Other materials used for making pulp include :

(1) Cotton linters.

(2) Recovered (waste and scrap) paper or paperboard.

(3) Rags (particularly cotton, linen or hemp) and other textile wastes such as old ropes.

(4) Straw, esparto, flax, ramie, jute, hemp, sisal, bagasse, bamboo and various other grasses and reeds.

Wood pulp may be brown or white. It may be semi-bleached or bleached by chemicals or may be unbleached. A pulp should be regarded as semi-bleached or bleached if, after manufacture, it has been subjected to any treatment intended to increase its degree of whiteness (brightness).

Apart from their use in the paper industry, some pulps (especially bleached pulps) serve as a source of cellulose in the manufacture of various products such as artificial textile materials, plastics, varnishes and explosives; they may also be used in cattle fodder.

Pulp is generally presented in baled sheets (whether or not perforated), wet or dry, but may sometimes be in slabs, in rolls or in the form of powder or flakes.

The Chapter **does not cover** :

(a) Cotton linters (**heading 14.04**).

(b) Synthetic paper pulps consisting of sheets of non-coherent polyethylene or polypropylene fibres (**heading 39.20**).

(c) Fibreboard (**heading 44.11**).

(d) Filter blocks, slabs or plates, of paper pulp (**heading 48.12**).

(e) Other articles of paper pulp (**Chapter 48**).

Chapter 48

PAPER AND PAPERBOARD; ARTICLES OF PAPER PULP, OF PAPER OR OF PAPERBOARD

Notes.

1.- For the purposes of this Chapter, except where the context otherwise requires, a reference to "paper" includes references to paperboard (irrespective of thickness or weight per m^2).

2.- This Chapter does not cover :

(a) Articles of Chapter 30;

(b) Stamping foils of heading 32.12;

(c) Perfumed papers or papers impregnated or coated with cosmetics (Chapter 33);

(d) Paper or cellulose wadding impregnated, coated or covered with soap or detergent (heading 34.01), or with polishes, creams or similar preparations (heading 34.05);

(e) Sensitised paper or paperboard of headings 37.01 to 37.04;

(f) Paper impregnated with diagnostic or laboratory reagents (heading 38.22);

(g) Paper-reinforced stratified sheeting of plastics, or one layer of paper or paperboard coated or covered with a layer of plastics, the latter constituting more than half the total thickness, or articles of such materials, other than wall coverings of heading 48.14 (Chapter 39);

(h) Articles of heading 42.02 (for example, travel goods);

(ij) Articles of Chapter 46 (manufactures of plaiting material);

(k) Paper yarn or textile articles of paper yarn (Section XI);

(l) Articles of Chapter 64 or Chapter 65;

(m) Abrasive paper or paperboard (heading 68.05) or paper- or paperboard-backed mica (heading 68.14) (paper and paperboard coated with mica powder are, however, to be classified in this Chapter);

(n) Metal foil backed with paper or paperboard (generally Section XIV or XV);

(o) Articles of heading 92.09;

(p) Articles of Chapter 95 (for example, toys, games, sports requisites); or

(q) Articles of Chapter 96 (for example, buttons, sanitary towels (pads) and tampons, napkins (diapers) and napkin liners).

3.- Subject to the provisions of Note 7, headings 48.01 to 48.05 include paper and paperboard which have been subjected to calendering, super-calendering, glazing or similar finishing, false water-marking or surface sizing, and also paper, paperboard, cellulose wadding and webs of cellulose fibres, coloured or marbled throughout the mass by any method. Except where heading 48.03 otherwise requires, these headings do not apply to paper, paperboard, cellulose wadding or webs of cellulose fibres which have been otherwise processed.

4.- In this Chapter the expression "newsprint" means uncoated paper of a kind used for the printing of newspapers, of which not less than 50 % by weight of the total fibre content consists of wood fibres obtained by a mechanical or chemi-mechanical process, unsized or very lightly sized, having a surface roughness Parker Print Surf (1 MPa) on each side exceeding 2.5 micrometres (microns), weighing not less than 40 g/m^2 and not more than 65 g/m^2, and applies only to paper : (a) in strips or rolls of a width exceeding 28 cm; or (b) in rectangular (including square) sheets with one side exceeding 28 cm and the other side exceeding 15 cm in the unfolded state.

5.- For the purposes of heading 48.02, the expressions "paper and paperboard, of a kind used for writing, printing or other graphic purposes" and "non perforated punch-cards and punch tape paper" mean paper and paperboard made mainly from bleached pulp or from pulp obtained by a mechanical or chemi-mechanical process and satisfying any of the following criteria :

(A) For paper or paperboard weighing not more than 150 g/m^2 :

(a) containing 10 % or more of fibres obtained by a mechanical or chemi-mechanical process, and

1. weighing not more than 80 g/m^2, or

2. coloured throughout the mass; or

(b) containing more than 8 % ash, and

1. weighing not more than 80 g/m^2, or

2. coloured throughout the mass; or

(c) containing more than 3 % ash and having a brightness of 60 % or more; or

(d) containing more than 3 % but not more than 8 % ash, having a brightness less than 60 % , and a burst index equal to or less than 2.5 kPa m2/g; or

(e) containing 3 % ash or less, having a brightness of 60 % or more and a burst index equal to or less than 2.5 kPa m2/g.

(B) For paper or paperboard weighing more than 150 g/m^2 :

(a) coloured throughout the mass; or

(b) having a brightness of 60 % or more, and

1. a caliper of 225 micrometres (microns) or less, or

2. a caliper more than 225 micrometres (microns) but not more than 508 micrometres (microns) and an ash content more than 3 %; or

(c) having a brightness of less than 60 %, a caliper of 254 micrometres (microns) or less and an ash content more than 8 %.

Heading 48.02 does not, however, cover filter paper or paperboard (including tea-bag paper) or felt paper or paperboard.

6.- In this Chapter "kraft paper and paperboard" means paper and paperboard of which not less than 80 % by weight of the total fibre content consists of fibres obtained by the chemical sulphate or soda processes.

7.- Except where the terms of the headings otherwise require, paper, paperboard, cellulose wadding and webs of cellulose fibres answering to a description in two or more of the headings 48.01 to 48.11 are to be classified under that one of such headings which occurs last in numerical order in the Nomenclature.

8.- Headings 48.03 to 48.09 apply only to paper, paperboard, cellulose wadding and webs of cellulose fibres :

(a) in strips or rolls of a width exceeding 36 cm; or

(b) in rectangular (including square) sheets with one side exceeding 36 cm and the other side exceeding 15 cm in the unfolded state.

9.- For the purposes of heading 48.14, the expression "wallpaper and similar wall coverings" applies only to :

(a) Paper in rolls, of a width of not less than 45 cm and not more than 160 cm, suitable for wall or ceiling decoration :

(i) Grained, embossed, surface-coloured, design-printed or otherwise surface-decorated (for example, with textile flock), whether or not coated or covered with transparent protective plastics;

(ii) With an uneven surface resulting from the incorporation of particles of wood, straw, etc.;

(iii) Coated or covered on the face side with plastics, the layer of plastics being grained, embossed, coloured, design-printed or otherwise decorated; or

(iv) Covered on the face side with plaiting material, whether or not bound together in parallel strands or woven;

(b) Borders and friezes, of paper, treated as above, whether or not in rolls, suitable for wall or ceiling decoration;

(c) Wall coverings of paper made up of several panels, in rolls or sheets, printed so as to make up a scene, design or motif when applied to a wall.

Products on a base of paper or paperboard, suitable for use both as floor coverings and as wall coverings, are to be classified in heading 48.23.

10.- Heading 48.20 does not cover loose sheets or cards, cut to size, whether or not printed, embossed or perforated.

11.- Heading 48.23 applies, *inter alia*, to perforated paper or paperboard cards for Jacquard or similar machines and paper lace.

12.- Except for the goods of heading 48.14 or 48.21, paper, paperboard, cellulose wadding and articles thereof, printed with motifs, characters or pictorial representations, which are not merely subsidiary to the primary use of the goods, fall in Chapter 49.

Subheading Notes.

1.- For the purposes of subheadings 4804.11 and 4804.19, "kraftliner" means machine-finished or machine-glazed paper and paperboard, of which not less than 80 % by weight of the total fibre content consists of wood fibres obtained by the chemical sulphate or soda processes, in rolls, weighing more than 115 g/m^2 and having a minimum Mullen bursting strength as indicated in the following table or the linearly interpolated or extrapolated equivalent for any other weight.

Weight g/m^2	Minimum Mullen bursting streng
115	393

125	417
200	637
300	824
400	961

2.- For the purposes of subheadings 4804.21 and 4804.29, "sack kraft paper" means machine-finished paper, of which not less than 80 % by weight of the total fibre content consists of fibres obtained by the chemical sulphate or soda processes, in rolls, weighing not less than 60 g/m² but not more than 115 g/m² and meeting one of the following sets of specifications :

a) Having a Mullen burst index of not less than 3.7 kPa m²/g and a stretch factor of more than 4.5 % in the cross direction and of more than 2 % in the machine direction.

b) Having minima for tear and tensile as indicated in the following table or the linearly interpolated equivalent for any other weight :

Weight g/m²	Minimum tear mN		Minimum tensile	
	Machine direction	Machine direction plus cross direction	Cross direction	Machine dir di
60	700	1,510	1.9	
70	830	1,790	2.3	
80	965	2,070	2.8	
100	1,230	2,635	3.7	
115	1,425	3,060	4.4	

3.- For the purposes of subheading 4805.11, "semi-chemical fluting paper" means paper, in rolls, of which not less than 65 % by weight of the total fibre content consists of unbleached hardwood fibres obtained by a combination of mechanical and chemical pulping processes, and having a

CMT 30 (Corrugated Medium Test with 30 minutes of conditioning) crush resistance exceeding 1.8 newtons/g/m² at 50 % relative humidity, at 23 °C.

4.- Subheading 4805.12 covers paper, in rolls, made mainly of straw pulp obtained by a combination of mechanical and chemical processes, weighing 130 g/m² or more, and having a cmT 30 (Corrugated Medium Test with 30 minutes of conditioning) crush resistance exceeding 1.4 newtons/g/m² at 50 % relative humidity, at 23 °C.3.- For the purposes of subheading 4805.11, "semi-chemical fluting paper" means paper, in rolls, of which not less than 65 % by weight of the total fibre content consists of unbleached hardwood fibres obtained by a combination of mechanical and chemical pulping processes, and having a cmT 30 (Corrugated Medium Test with 30 minutes of conditioning) crush resistance exceeding 1.8 newtons/g/m² at 50 % relative humidity, at 23 °C.

5.- Subheadings 4805.24 and 4805.25 cover paper and paperboard made wholly or mainly of pulp of recovered (waste and scrap) paper or paperboard. Testliner may also have a surface layer of dyed paper or of paper made of bleached or unbleached non-recovered pulp. These products have a Mullen burst index of not less than 2 kPa m²/g.

6.- For the purposes of subheading 4805.30, "sulphite wrapping paper" means machine-glazed paper, of which more than 40 % by weight of the total fibre content consists of wood fibres obtained by the chemical sulphite process, having an ash content not exceeding 8 % and having a Mullen burst index of not less than 1.47 kPa m²/g.

7.- For the purposes of subheading 4810.22, "light-weight coated paper" means paper, coated on both sides, of a total weight not exceeding 72 g/m², with a coating weight not exceeding 15 g/m² per side, on a base of which not less than 50 % by weight of the total fibre content consists of wood fibres obtained by a mechanical process.

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Subheading Explanatory Notes.

Subheading Note 1

In this Note the minimum Mullen bursting strength is expressed in kilopascals (kPa). The g/cm² equivalents are as follows :

Weight g/m²		kPa		g/cm²
115		393		4,030

125		417		4,250
200		637		6,500
300		824		8,400
400		961		9,800

The calculation of the intermediate values (interpolation) or of values of more than 400 g (extrapolation) should be based on the following formulae :

Basis weight	Minimum Mullen bursting strength g/cm^2
Not exceeding 125 g/m^2	Basis weight (g/m^2) x 22 + 1,500
Exceeding 125 g/m^2 but not exceeding 200 g/m^2	Basis weight (g/m^2) x 30 + 500
Exceeding 200 g/m^2 but not exceeding 300 g/m^2	Basis weight (g/m^2) x 19 + 2,700
Exceeding 300 g/m^2	Basis weight (g/m^2) x 14 + 4,200

Subheading Note 2

For papers of weights per m^2 falling between the values indicated in this Note, the minima could be calculated (with an error not exceeding 2 %) on the basis of the following table :

	Minimum
Tear, machine direction (mN) (rounded to nearest 0 or 5 millinewton)	Basis weight (g/m^2) x 13.23 – 94.64
Tear, machine direction plus cross direction (mN) (rounded as indicated above)	Basis weight (g/m^2) x 28.22 – 186.2

Tensile, cross direction (kN/m)	Basis weight (g/m^2) x 0.0449 – 0.8186
Tensile, machine direction plus cross direction (kN/m)	Basis weight (g/m^2) x 0.1143 – 0.829

GENERAL

In the Explanatory Notes to this Chapter, except where the context otherwise requires, a reference to "paper" includes references to paperboard (irrespective of thickness or weight).

Paper consists essentially of the cellulosic fibres of the pulps of Chapter 47 felted together in sheet form. Many products, such as certain tea-bag materials, consist of a mixture of these cellulose fibres and of textile fibres (in particular man-made fibres as defined in Note 1 to Chapter 54). Where the textile fibres predominate by weight, the products are not regarded as paper and are classified as nonwovens (**heading 56.03**).

To avoid discrepancies which can result from the use of different methods, it is highly desirable that all administrations use the International Organization for Standardization (ISO) test methods to determine the physical properties of paper and paperboard of Chapter 48. Whenever the following analytical and physical criteria are mentioned throughout this Chapter, the ISO Standards listed below should be used :

Ash Content :

ISO 2144 Paper and board – – Determination of ash

Brightness :

ISO 2470 Paper and board – – Measurement of diffuse blue reflectance factor (ISO brightness)

Bursting strength and burst index :

ISO 2758 Paper – – Determination of bursting strength

ISO 2759 Board – – Determination of bursting strength

CMT 60 (crush resistance) :

ISO 7263 Corrugating medium – – Determination of the flat crush resistance after laboratory fluting

Fibre composition :

ISO 9184/1-3 Paper, board and pulps - - Fibre furnish analysis

Grammage (weight) :

ISO 536 Paper and board - - Determination of grammage

Parker Print-Surf surface roughness :

ISO 8791/4 Paper and board - - Determination of roughness/smoothness (air leak methods)

Single sheet thickness (caliper) :

ISO 534 Paper and board - - Determination of thickness and apparent bulk density or apparent sheet density

Tearing resistance :

ISO 1974 Paper - - Determination of tearing resistance (Elmendorf method)

Tensile strength and stretch :

ISO 1924/2 Paper and board - - Determination of tensile properties - - Part 2 : Constant rate of elongation method.

The manufacture of paper, whether by machine or by hand, may be considered as being in three stages, the preparation of the pulp, formation of the sheet or web, and finishing.

PREPARATION OF THE PULP

The pulp is prepared by blending if necessary, mixing with fillers, size, or colouring matter as required, and reduction to a suitable consistency by dilution in water and mechanical beating.

The fillers, which are generally of inorganic origin (e.g., kaolin (China clay), titanium dioxide, calcium carbonate) are used in order to increase opacity, improve printability or economise pulp. Size (e.g., rosin mixed with alum) is used to render the paper less absorbent to ink, etc.

FORMATION OF THE SHEET OR WEB

(A) Machine-made paper and paperboard.

The most commonly used method of making paper by machine is the Fourdrinier process. In this process the pulp, after being prepared as above, is fed through the head box onto a large endless

band of man-made monofilaments or brass or bronze wire moving forward, generally with a vibratory movement; the pulp loses most of its water by gravity and by table rolls, foils or suction boxes placed along the underside of the wire. The fibres become felted and assume the form of a limp web. In some machines this web then passes under a wire-covered roll (dandy-roll) where it is consolidated and smoothed and, if required, is given a watermark produced, e.g., by an embossed design or line effect applied to the surface of the dandy roll cover. The web next passes to an endless belt of felt and so to the press section where it is further consolidated; it is then dried by passing over heated cylinders.

An alternative method is the twin wire former (used particularly in newsprint manufacture). The pulp passes between two forming rolls and is carried between two "wires". Water is deflected from both wires, aided by suction boxes and suction rolls, and the web is formed. The newly formed web is drawn to the pressing and dryer sections. The twin wires forming both sides of the paper are alike, thus eliminating the felt side and wire side which characterise paper produced by the Fourdrinier process.

In other types of machines the Fourdrinier wire is replaced by a large cylinder ("mould") covered with wire gauze revolving partly immersed in the prepared pulp. The cylinder takes up a layer of pulp and forms it into a paper web which is transferred to drying felts either in continuous lengths or, by dividing the surface of the roll, in sheet form. In a variation of the process, layers are allowed to build up around a large diameter roll to be cut off when the required thickness is reached.

Machines with multiple wires or cylinder moulds (or a combination of Fourdrinier wire and cylinder moulds) are used to make boards composed of layers (sometimes of different colour or quality) produced simultaneously and rolled together in the wet state without the use of adhesive.

(B) Hand-made paper and paperboard.

In the manufacture of hand-made paper and paperboard the essential operation of moulding the pulp fibres into sheet form is performed by hand, even though other operations may be performed by machine.

Hand-made paper and paperboard may be made from any paper-making material but generally best grade linen or cotton rags are used.

In forming the sheet, a quantity of pulp is agitated on a sieve-like mould until most of the water is removed and the fibres felted. The sheet is then removed from the mould, pressed between felts and hung up to dry.

The hand mould on which the fibres are felted together may consist either of parallel-laid wires or of woven wire cloth which produce watermarks on the paper. Watermark designs may also be affixed to the wire.

The characteristic properties of hand-made paper are strength and durability and the quality of the grain. These properties render it suitable for special uses, e.g., banknote paper, document paper, drawing paper, etching paper, special filter papers, ledger paper, mounting paper, high class printing or stationery papers. It is also used for making wedding cards, letterheads, calendars, etc.

Hand-made paper is normally made to size as used and has four deckled edges with marked feathering; these may, however, sometimes be trimmed and in any case are not a reliable distinguishing feature since some machine-made papers, particularly mould-made paper, also have deckled edges which are not, however, so markedly feathered.

FINISHING OPERATIONS

Paper may be finished by calendering or supercalendering (being first moistened if necessary), either by calenders integral with the paper-making machine or separate from it; this gives a more or less polished or glazed surface on either one or both faces. A similar surface on one side of the paper may be obtained by machine glazing using a heated cylinder. The paper may also receive a kind of false watermarking at this stage. Almost all ordinary writing, printing and drawing papers are also surface sized, for example, with some kind of glue or starch solution, generally in order to increase their surface strength and their resistance to the penetration and spreading of aqueous liquids, for example, writing ink.

Coated paper and paperboard

This term applies to paper or paperboard which has been given a coating on one or both sides either to produce a specially glossy finish or to render the surface suitable for particular requirements.

Coating products generally consist of mineral substances, binding agents and other additives necessary for the coating operation, such as hardeners and dispersing agents.

Carbon paper, self-copy and other copying or transfer papers, in rolls or sheets of particular dimensions, fall in heading 48.09.

Paper and paperboard, coated with kaolin (China clay) or other inorganic substances, with or without a binder, in rolls or sheets, fall in heading 48.10. In addition to kaolin, the inorganic substances used for coating include barium sulphate, calcium carbonate, calcium sulphate, magnesium silicate, zinc oxide, and powdered metal. These coating materials are generally applied by means of a binding agent such as glue, gelatin, amylaceous substances (e.g., starch, dextrin), shellac, albumin, synthetic latex. Products are coated with kaolin, etc., to attain a glossy, dull or matte finish. Examples of products coated with kaolin or other inorganic substances are : coated printing papers and paperboard (including coated art or chromo papers), coated folding carton stock, papers coated with metal powder (**other than** stamping foils of **heading 32.12**) or mica powder, enamel papers (used largely for labels and for covering boxes). It may be noted that the

binding agents used for fixing the coating, such as glue or starch, are also used for surface sizing but in the case of an uncoated surface sized paper, the coating pigments are absent.

Subject to the exceptions mentioned in the heading, paper and paperboard with a coating of tar, bitumen, asphalt, plastics or other organic materials such as wax, stearin, textile dust, sawdust, granulated cork, shellac, in rolls or sheets, fall in heading 48.11. These coating materials may not require a binding agent for their application. The coatings are used to obtain the physical characteristics for a broad range of end uses, for example, for waterproof packages, release paper and paperboard. Such coated papers and paperboards include gummed or adhesive paper, flock papers (coated with textile dust and used for box coverings and wallpaper), paper coated with granulated cork (used as packing material), graphite paper, tarred wrapping paper.

Colouring materials are also frequently added to the coating medium.

Many coated papers and paperboards are finished with a high gloss by super-calendering, or the coating may be varnished in order to protect it from moisture (as in the case of washable papers, for example).

It is possible to distinguish between surface sizing and coating by using a combination of chemical and physical methods. In most cases, differentiation can easily be made either on the basis of the nature or quantity of the material present or on the basis of the overall physical characteristics. In general, in the case of surface sizing, the appearance and texture of the natural surface of the paper or paperboard are maintained, whereas, in the case of coated paper or paperboard, the irregularities of the natural surface are substantially eliminated by the coating material.

Problems may arise in borderline cases, particularly for the following reasons : low coated papers may have had the coating applied in the size press; certain substances present in coatings also exist in paper itself (e.g., filler); and fibres may be visible in the case of papers coated with material which does not contain a pigment, e.g., an aqueous dispersion of poly(vinyl chloride). However, it should be possible to deal with these cases by one or more of the methods indicated below.

Many coated papers, such as mineral-coated art printing papers, cannot easily be distinguished by the eye from highly finished uncoated papers. The coating, however, may sometimes be seen by scraping the surface or be removed by immersion in water.

One method of testing which may determine whether or not a paper is coated (particularly with inorganic substances) involves sticking the paper to an adhesive tape. When the tape is peeled off most of the coating adheres to the tape. It is then necessary to dissolve the wood fibres and any starch present on the tape with cupriethylene diamine. The presence or absence of a coating is indicated by comparing the weights of the tape before and after these operations. This method can also be used for papers coated with organic substances.

Among other methods used for identifying coated paper and paperboard are scanning electron microscopy (SEM), X-ray diffraction and infra-red spectrophotometry. These can be used for identifying products of both headings 48.10 and 48.11.

Coloured or printed paper and paperboard

These include papers printed by any process with one or several colours, stripes, motifs, designs, etc., and also surface marbled or jaspé papers. These papers are used for various purposes such as box covering and bookbinding.

Paper may be surface-printed in ink of any colour with lines, whether parallel, convergent, or at an angle. Such paper is used, *inter alia*, for account books and book-keeping, school exercise books, drawing books, manuscript music sheets and books, writing paper, graphpaper and note books.

This Chapter includes printed papers (such as wrapping papers for individual traders, printed with names of traders, trade marks and devices, directions for use of merchandise) **provided** that the printing is merely subsidiary to the use of the paper for wrapping, writing, etc., and that the goods do not constitute printed matter of **Chapter 49** (see Note 12 to this Chapter).

Impregnated paper and paperboard

Most of these papers and paperboards are obtained by treatment with oils, waxes, plastics, etc., in such a manner as to permeate them and give them special qualities (e.g., to render them waterproof, greaseproof, and sometimes translucent or transparent). They are used largely for protective wrapping or as insulating materials.

Impregnated papers and paperboards include, oiled wrapping paper, oiled or waxed manifold paper, stencil paper, insulating paper and paperboard impregnated, e.g., with plastics, rubberised paper, paper and paperboard merely impregnated with tar or bitumen.

Certain papers such as wallpaper base may be impregnated with insecticides or chemicals.

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This Chapter also includes **cellulose wadding and webs of cellulose fibres** which consist of a variable number of very thin layers of loosely felted cellulose fibres rolled together when in a damp condition so that the layers tend to separate on drying.

SCOPE OF THE CHAPTER

This Chapter covers :

(I) Paper, paperboard, cellulose wadding and webs of cellulose fibres, of all kinds, in rolls or sheets :

(A) Headings 48.01, 48.02, 48.04 and 48.05 relate to machine-made uncoated papers subjected, if required, to sizing and simple finishing processes (e.g., calendering, glazing). Heading 48.02 also covers uncoated hand-made papers, which may be subjected to those same processes. Heading 48.03 relates to uncoated papers of a kind used for household or sanitary purposes, cellulose wadding and webs of cellulose fibres, which may be subjected to processes mentioned in the heading. Note 3 to this Chapter specifies the processes permitted for paper, paperboard, cellulose wadding and webs of cellulose fibres, of headings 48.01 to 48.05.

The processes admissible in headings 48.01 to 48.05 are performed as a part of the continuous paper-manufacturing run. A characteristic of the papers of these headings is that the appearance and texture of their natural surface are maintained. In the case of coated papers, the irregularities of the natural surface are substantially eliminated by the coating material which forms a new, superior, non-cellulosic surface.

(B) Headings 48.06 to 48.11 relate to certain special papers or paperboards, (for example, parchment, greaseproof, composite) or paper, paperboard or cellulose wadding and webs of cellulose fibres which have been subjected to various treatments, such as coating, design printing, ruling, impregnating, corrugation, creping, embossing, and perforation.

Heading 48.11 also includes certain floor coverings on a base of paper or paperboard.

*

* *

Except where the terms of the headings otherwise require, when paper or paperboard answers to a description in two or more of the above-mentioned headings it is classified in that heading which occurs last in numerical order in the Nomenclature (Note 7 to this Chapter).

It should also be noted that headings 48.03 to 48.09 apply only to paper, paperboard, cellulose wadding and webs of cellulose fibres, which are :

(1) in strips or rolls of a width exceeding 36 cm; or

(2) in rectangular (including square) sheets with one side exceeding 36 cm and the other side exceeding 15 cm in the unfolded state.

On the other hand, headings 48.02, 48.10 and 48.11 cover paper and paperboard, in rolls or rectangular (including square) sheets, of any size. However, hand-made paper and paperboard in any size or shape as made directly and having all its edges deckled remains classified in heading 48.02, subject to Note 7 to this Chapter.

(II) Filter blocks, slabs and plates, of paper pulp (heading 48.12), cigarette paper, whether or not cut to size or in the form of booklets or tubes (heading 48.13), wallpaper and similar wall coverings (as defined in Note 9 to this Chapter) and window transparencies (heading 48.14).

(III) Paper, paperboard, cellulose wadding and webs of cellulose fibres, (but not the kinds falling in headings 48.02, 48.10 and 48.11, or in (II) above), in rolls or sheets cut to sizes below those stated in (I) above or cut to shapes other than rectangular (including square) and articles of paper pulp, paper, paperboard, cellulose wadding or webs of cellulose fibres. These fall in one or other of the headings 48.16 to 48.23.

For the purposes of headings 48.12, 48.18, 48.22 and 48.23 and of the relevant Explanatory Notes, the term "paper pulp" means all the products of headings 47.01 to 47.06, that is to say pulp of wood or of other fibrous cellulosic material.

The Chapter **does not cover**, however, goods excluded by Notes 2 and 12 to this Chapter.

Chapter 49

Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans

Notes.

1.- This Chapter does not cover :

(a) Photographic negatives or positives on transparent bases (Chapter 37);

(b) Maps, plans or globes, in relief, whether or not printed (heading 90.23);

(c) Playing cards or other goods of Chapter 95; or

(d) Original engravings, prints or lithographs (heading 97.02), postage or revenue stamps, stamp-postmarks, first-day covers, postal stationery or the like of heading 97.04, antiques of an age exceeding one hundred years or other articles of Chapter 97.

2.- For the purposes of Chapter 49, the term "printed" also means reproduced by means of a duplicating machine, produced under the control of an automatic data processing machine, embossed, photographed, photocopied, thermocopied or typewritten.

3.- Newspapers, journals and periodicals which are bound otherwise than in paper, and sets of newspapers, journals or periodicals comprising more than one number under a single cover are to be classified in heading 49.01, whether or not containing advertising material.

4.- Heading 49.01 also covers :

(a) A collection of printed reproductions of, for example, works of art or drawings, with a relative text, put up with numbered pages in a form suitable for binding into one or more volumes;

(b) A pictorial supplement accompanying, and subsidiary to, a bound volume; and

(c) Printed parts of books or booklets, in the form of assembled or separate sheets or signatures, constituting the whole or a part of a complete work and designed for binding.

However, printed pictures or illustrations not bearing a text, whether in the form of signatures or separate sheets, fall in heading 49.11.

5.- Subject to Note 3 to this Chapter, heading 49.01 does not cover publications which are essentially devoted to advertising (for example, brochures, pamphlets, leaflets, trade catalogues, year books published by trade associations, tourist propaganda). Such publications are to be classified in heading 49.11.

6.- For the purposes of heading 49.03, the expression "children's picture books" means books for children in which the pictures form the principal interest and the text is subsidiary.

GENERAL

With the few **exceptions** referred to below, this Chapter covers all printed matter of which the essential nature and use is determined by the fact of its being printed with motifs, characters or pictorial representations.

On the other hand, besides the goods of **headings 48.14** or **48.21**, paper, paperboard or cellulose wadding, or articles thereof, in which the printing is merely subsidiary to their primary use (e.g., printed wrapping paper and printed stationery) fall in **Chapter 48**. Also, printed textile articles such as scarves or handkerchiefs, in which the printing is mainly for decorative or novelty purposes and does not affect the essential character of the goods, embroidery fabrics and prepared tapestry canvases bearing printed designs fall in **Section XI**.

Goods of **headings 39.18, 39.19, 48.14** or **48.21** are also **excluded** from this Chapter, even if they are printed with motifs, characters or pictorial representations, which are not merely subsidiary to the primary use of the goods.

For the purposes of this Chapter, the term "printed" includes not only reproduction by the several methods of ordinary hand printing (e.g., prints from engravings or woodcuts, other than originals) or mechanical printing (letterpress, offset printing, lithography, photogravure, etc.), but also reproduction by duplicating machines, production under the control of an automatic data processing machine, embossing, photography, photocopying thermocopying or typewriting (see Note 2 to this

Chapter), irrespective of the form of the characters in which the printing is executed (e.g., letters of any alphabet, figures, shorthand signs, Morse or other code symbols, Braille characters, musical notations, pictures, diagrams). The term **does not,** however, **include** coloration or decorative or repetitive-design printing.

The Chapter also includes similar products executed by hand (including hand-drawn maps and plans), as well as carbon copies of hand-written or typewritten texts.

In general the goods of this Chapter are executed on paper but the goods may be on other materials provided they have the characteristics described in the first paragraph of this General Explanatory Note. However, letters, numbers, sign-plates and similar motifs for shop signs and shop windows, bearing a printed picture or text, of ceramics, of glass, or of base metal are classifiable in **headings 69.14**, **70.20** and **83.10** respectively, or in **heading 94.05** if illuminated.

In addition to the more common forms of printed products (e.g., books, newspapers, pamphlets, pictures, advertising matter), this Chapter covers such articles as : printed transfers (decalcomanias); printed or illustrated postcards, greeting cards; calendars, maps, plans and drawings; postage, revenue or similar stamps. Microcopies on opaque bases, of articles of this Chapter, are classified in heading 49.11. Microcopies are obtained by means of an optical device which greatly reduces the dimensions of the documents photographed; microcopies normally need to be read by means of a magnifying device.

This Chapter also **excludes** :

(a) Photographic negatives or positives on transparent bases (for example, microfilms) of **Chapter 37**.

(b) Goods of **Chapter 97**.

Section XI

TEXTILES AND TEXTILE ARTICLES

Notes.

1.- This Section does not cover :

(a) Animal brush-making bristles or hair (heading 05.02); horsehair or horsehair waste (heading 05.11);

(b) Human hair or articles of human hair (heading 05.01, 67.03 or 67.04), except filtering or straining cloth of a kind commonly used in oil presses or the like (heading 59.11);

(c) Cotton linters or other vegetable materials of Chapter 14;

(d) Asbestos of heading 25.24 or articles of asbestos or other products of heading 68.12 or 68.13;

(e) Articles of heading 30.05 or 30.06; yarn used to clean between the teeth (dental floss), in individual retail packages, of heading 33.06;

(f) Sensitised textiles of headings 37.01 to 37.04;

(g) Monofilament of which any cross-sectional dimension exceeds 1 mm or strip or the like (for example, artificial straw) of an apparent width exceeding 5 mm, of plastics (Chapter 39), or plaits or fabrics or other basketware or wickerwork of such monofilament or strip (Chapter 46);

(h) Woven, knitted or crocheted fabrics, felt or nonwovens, impregnated, coated, covered or laminated with plastics, or articles thereof, of Chapter 39;

(ij) Woven, knitted or crocheted fabrics, felt or nonwovens, impregnated, coated, covered or laminated with rubber, or articles thereof, of Chapter 40;

(k) Hides or skins with their hair or wool on (Chapter 41 or 43) or articles of furskin, artificial fur or articles thereof, of heading 43.03 or 43.04;

(l) Articles of textile materials of heading 42.01 or 42.02;

(m) Products or articles of Chapter 48 (for example, cellulose wadding);

(n) Footwear or parts of footwear, gaiters or leggings or similar articles of Chapter 64;

(o) Hair-nets or other headgear or parts thereof of Chapter 65;

(p) Goods of Chapter 67;

(q) Abrasive-coated textile material (heading 68.05) and also carbon fibres or articles of carbon fibres of heading 68.15;

(r) Glass fibres or articles of glass fibres, other than embroidery with glass thread on a visible ground of fabric (Chapter 70);

(s) Articles of Chapter 94 (for example, furniture, bedding, luminaires and lighting fittings);

(t) les of Chapter 95 (for example, toys, games, sports requisites and nets);

(u) Articles of Chapter 96 (for example, brushes, travel sets for sewing, slide fasteners, typewriter ribbons, sanitary towels (pads) and tampons, napkins (diapers) and napkin liners); or

(v) Articles of Chapter 97.

2.- (A) Goods classifiable in Chapters 50 to 55 or in heading 58.09 or 59.02 and of a mixture of two or more textile materials are to be classified as if consisting wholly of that one textile material which predominates by weight over any other single textile material.

When no one textile material predominates by weight, the goods are to be classified as if consisting wholly of that one textile material which is covered by the heading which occurs last in numerical order among those which equally merit consideration.

(B) For the purposes of the above rule :

(a) Gimped horsehair yarn (heading 51.10) and metallised yarn (heading 56.05) are to be treated as a single textile material the weight of which is to be taken as the aggregate of the weights of its components; for the classification of woven fabrics, metal thread is to be regarded as a textile material;

(b) The choice of appropriate heading shall be effected by determining **first** the Chapter and **then** the applicable heading within that Chapter, disregarding any materials not classified in that Chapter;

(c) When both Chapters 54 and 55 are involved with any other Chapter, Chapters 54 and 55 are to be treated as a single Chapter;

(d) Where a Chapter or a heading refers to goods of different textile materials, such materials are to be treated as a single textile material.

(C) The provisions of paragraphs (A) and (B) above apply also to the yarns referred to in Note 3, 4, 5 or 6 below.

3.- (A) For the purposes of this Section, and subject to the exceptions in paragraph (B) below, yarns (single, multiple (folded) or cabled) of the following descriptions are to be treated as "twine, cordage, ropes and cables" :

(a) Of silk or waste silk, measuring more than 20,000 decitex;

(b) Of man-made fibres (including yarn of two or more monofilaments of Chapter 54), measuring more than 10,000 decitex;

(c) Of true hemp or flax :

(i) Polished or glazed, measuring 1,429 decitex or more; or

(ii) Not polished or glazed, measuring more than 20,000 decitex;

(d) Of coir, consisting of three or more plies;

(e) Of other vegetable fibres, measuring more than 20,000 decitex; or

(f) Reinforced with metal thread.

(B) Exceptions :

(a) Yarn of wool or other animal hair and paper yarn, other than yarn reinforced with metal thread;

(b) Man-made filament tow of Chapter 55 and multifilament yarn without twist or with a twist of less than 5 turns per metre of Chapter 54;

(c) Silk worm gut of heading 50.06, and monofilaments of Chapter 54;

(d) Metallised yarn of heading 56.05; yarn reinforced with metal thread is subject to paragraph (A) (f) above; and

(e) Chenille yarn, gimped yarn and loop wale-yarn of heading 56.06.

4.- (A) For the purposes of Chapters 50, 51, 52, 54 and 55, the expression "put up for retail sale" in relation to yarn means, subject to the exceptions in paragraph (B) below, yarn (single, multiple (folded) or cabled) put up :

(a) On cards, reels, tubes or similar supports, of a weight (including support) not exceeding :

(i) 85 g in the case of silk, waste silk or man-made filaments; or

(ii) 125 g in other cases;

(b) In balls, hanks or skeins of a weight not exceeding :

(i) 85 g in the case of man-made filament yarn of less than 3,000 decitex, silk or silk waste;

(ii) 125 g in the case of all other yarns of less than 2,000 decitex; or

(iii) 500 g in other cases.

(c) In hanks or skeins comprising several smaller hanks or skeins separated by dividing threads which render them independent one of the other, each of uniform weight not exceeding :

(i) 85 g in the case of silk, waste silk or man-made filaments; or

(ii) 125 g in other cases.

(B) Exceptions :

(a) Single yarn of any textile material, except :

(i) Single yarn of wool or fine animal hair, unbleached; and

(ii) Single yarn of wool or fine animal hair, bleached, dyed or printed, measuring more than 5,000 decitex;

(b) Multiple (folded) or cabled yarn, unbleached :

(i) Of silk or waste silk, however put up; or

(ii) Of other textile material except wool or fine animal hair, in hanks or skeins;

(c) Multiple (folded) or cabled yarn of silk or waste silk, bleached, dyed or printed, measuring 133 decitex or less; and

(d) Single, multiple (folded) or cabled yarn of any textile material :

(i) In cross-reeled hanks or skeins; or

(ii) Put up on supports or in some other manner indicating its use in the textile industry (for example, on cops, twisting mill tubes, pirns, conical bobbins or spindles, or reeled in the form of cocoons for embroidery looms).

5.- For the purposes of headings 52.04, 54.01 and 55.08, the expression "sewing thread" means multiple (folded) or cabled yarn :

(a) Put up on supports (for example, reels, tubes) of a weight (including support) not exceeding 1,000 g;

(b) Dressed for use as sewing thread; and

(c) With a final "Z" twist.

6.- For the purposes of this Section, the expression "high tenacity yarn" means yarn having a tenacity, expressed in cN/tex (centinewtons per tex), greater than the following :

Single yarn of nylon or other polyamides, or of polyesters ..... 60 cN/tex

Multiple (folded) or cabled yarn of nylon or other polyamides, or of polyesters ..... 53 cN/tex

Single, multiple (folded) or cabled yarn of viscose rayon ..... 27 cN/tex.

7.- For the purposes of this Section, the expression "made up" means :

(a) Cut otherwise than into squares or rectangles;

(b) Produced in the finished state, ready for use (or merely needing separation by cutting dividing threads) without sewing or other working (for example, certain dusters, towels, table cloths, scarf squares, blankets);

(c) Cut to size and with at least one heat-sealed edge with a visibly tapered or compressed border and the other edges treated as described in any other subparagraph of this Note, but excluding fabrics the cut edges of which have been prevented from unravelling by hot cutting or by other simple means;

(d) Hemmed or with rolled edges, or with a knotted fringe at any of the edges, but excluding fabrics the cut edges of which have been prevented from unravelling by whipping or by other simple means;

(e) Cut to size and having undergone a process of drawn thread work;

(f) Assembled by sewing, gumming or otherwise (other than piece goods consisting of two or more lengths of identical material joined end to end and piece goods composed of two or more textiles assembled in layers, whether or not padded);

(g) Knitted or crocheted to shape, whether presented as separate items or in the form of a number of items in the length.

8.- For the purposes of Chapters 50 to 60 :

(a) Chapters 50 to 55 and 60 and, except where the context otherwise requires, Chapters 56 to 59 do not apply to goods made up within the meaning of Note 7 above; and

(b) Chapters 50 to 55 and 60 do not apply to goods of Chapters 56 to 59.

9.- The woven fabrics of Chapters 50 to 55 include fabrics consisting of layers of parallel textile yarns superimposed on each other at acute or right angles. These layers are bonded at the intersections of the yarns by an adhesive or by thermal bonding.

10.- Elastic products consisting of textile materials combined with rubber threads are classified in this Section.

11.- For the purposes of this Section, the expression "impregnated" includes "dipped".

12.- For the purposes of this Section, the expression "polyamides" includes "aramids".

13.- For the purposes of this Section and, where applicable, throughout the Nomenclature, the expression "elastomeric yarn "means filament yarn, including monofilament, of synthetic textile material, other than textured yarn, which does not break on being extended to three times its original length and which returns, after being extended to twice its original length, within a period of five minutes, to a length not greater than one and a half times its original length.

14.- Unless the context otherwise requires, textile garments of different headings are to be classified in their own headings even if put up in sets for retail sale. For the purposes of this Note, the expression "textile garments" means garments of headings 61.01 to 61.14 and headings 62.01 to 62.11.

15.- Subject to Note 1 to Section XI, textiles, garments and other textile articles, incorporating chemical, mechanical or electronic components for additional functionality, whether incorporated as built-in components or within the fibre or fabric, are classified in their respective headings in Section XI provided that they retain the essential character of the goods of this Section.

Subheading Notes.

1.- In this Section and, where applicable, throughout the Nomenclature, the following expressions have the meanings hereby assigned to them :

(a) **Unbleached yarn**

Yarn which :

(i) has the natural colour of its constituent fibres and has not been bleached, dyed (whether or not in the mass) or printed; or

(ii) is of indeterminate colour ("grey yarn"), manufactured from garnetted stock.

Such yarn may have been treated with a colourless dressing or fugitive dye (which disappears after simple washing with soap) and, in the case of man-made fibres, treated in the mass with delustring agents (for example, titanium dioxide).

(b) **Bleached yarn**

Yarn which :

(i) has undergone a bleaching process, is made of bleached fibres or, unless the context otherwise requires, has been dyed white (whether or not in the mass) or treated with a white dressing;

(ii) consists of a mixture of unbleached and bleached fibres; or

(iii) is multiple (folded) or cabled and consists of unbleached and bleached yarns.

(c) **Coloured (dyed or printed) yarn**

Yarn which :

(i) is dyed (whether or not in the mass) other than white or in a fugitive colour, or printed, or made from dyed or printed fibres;

(ii) consists of a mixture of dyed fibres of different colours or of a mixture of unbleached or bleached fibres with coloured fibres (marl or mixture yarns), or is printed in one or more colours at intervals to give the impression of dots;

(iii) is obtained from slivers or rovings which have been printed; or

(iv) is multiple (folded) or cabled and consists of unbleached or bleached yarn and coloured yarn.

The above definitions also apply, *mutatis mutandis*, to monofilament and to strip or the like of Chapter 54.

(d) **Unbleached woven fabric**

Woven fabric made from unbleached yarn and which has not been bleached, dyed or printed. Such fabric may have been treated with a colourless dressing or a fugitive dye.

(e) **Bleached woven fabric**

Woven fabric which :

(i) has been bleached or, unless the context otherwise requires, dyed white or treated with a white dressing, in the piece;

(ii) consists of bleached yarn; or

(iii) consists of unbleached and bleached yarn.

(f) **Dyed woven fabric**

Woven fabric which :

(i) is dyed a single uniform colour other than white (unless the context otherwise requires) or has been treated with a coloured finish other than white (unless the context otherwise requires), in the piece; or

(ii) consists of coloured yarn of a single uniform colour.

(g) **Woven fabric of yarns of different colours**

Woven fabric (other than printed woven fabric) which :

(i) consists of yarns of different colours or yarns of different shades of the same colour (other than the natural colour of the constituent fibres);

(ii) consists of unbleached or bleached yarn and coloured yarn; or

(iii) consists of marl or mixture yarns.

(In all cases, the yarn used in selvedges and piece ends is not taken into consideration.)

(h) **Printed woven fabric**

Woven fabric which has been printed in the piece, whether or not made from yarns of different colours.

(The following are also regarded as printed woven fabrics : woven fabrics bearing designs made, for example, with a brush or spray gun, by means of transfer paper, by flocking or by the batik process.)

The process of mercerisation does not affect the classification of yarns or fabrics within the above categories.

The definitions at (d) to (h) above apply, mutatis mutandis, to knitted or crocheted fabrics.

(ij) **Plain weave**

A fabric construction in which each yarn of the weft passes alternately over and under successive yarns of the warp and each yarn of the warp passes alternately over and under successive yarns of the weft.

2.- (A) Products of Chapters 56 to 63 containing two or more textile materials are to be regarded as consisting wholly of that textile material which would be selected under Note 2 to this Section for the classification of a product of Chapters 50 to 55 or of heading 58.09 consisting of the same textile materials.

(B) For the application of this rule :

(a) where appropriate, only the part which determines the classification under Interpretative Rule 3 shall be taken into account;

(b) in the case of textile products consisting of a ground fabric and a pile or looped surface no account shall be taken of the ground fabric;

(c) in the case of embroidery of heading 58.10 and goods thereof, only the ground fabric shall be taken into account. However, embroidery without visible ground, and goods thereof, shall be classified with reference to the embroidering threads alone.

GENERAL

In general, Section XI covers raw materials of the textile industry (silk, wool, cotton, man-made fibres, etc.), semi-manufactured products (such as yarns and woven fabrics) and the made up articles made from those products. However, it **excludes** a certain number of materials and products such as those mentioned in Note 1 to Section XI, the Notes to certain Chapters or in the following Explanatory Notes on headings in the Section. In particular, the following **are not classified** in Section XI :

(a) Human hair and articles thereof (generally **heading 05.01**, **67.03** or **67.04**), **except** filtering or straining cloth of a kind used in oil presses or the like (**heading 59.11**).

(b) Asbestos fibres and articles (yarns, fabrics, clothing, etc.) of asbestos (**heading 25.24**, **68.12** or **68.13**).

(c) Carbon fibres and other non-metallic mineral fibres (e.g., silicon carbide, rock wool) and articles of such fibres (**Chapter 68**).

(d) Glass fibres, yarns, fabrics, and articles made therefrom, and composite articles of glass fibres and textile fibres having the character of articles of glass fibres (**Chapter 70**), **other than** embroidery with glass thread on a visible ground of fabric.

Section XI is divided into fourteen Chapters which may be considered in two parts, the first (Chapters 50 to 55) being divided according to the nature of the textile material, and the second (Chapters 56 to 63), with the exception of headings 58.09 and 59.02, covering products without distinction, at heading level, as to the nature of the textile.

(I) CHAPTERS 50 TO 55

Chapters 50 to 55 each deal with one or more textile materials, alone or mixed, at their various stages of manufacture, up to and including their conversion into woven fabrics as described in Part (I) (C) below. They cover, in most cases, the raw material, recovered waste (including garnetted

stock but **not** unpulled rags), carded or combed fibres in the form of slivers, rovings, etc., yarns and woven fabrics.

(A) Classification of products composed of mixed textile materials

(See Note 2 to Section XI)

A textile product classifiable in any heading in Chapters 50 to 55 (waste, yarn, woven fabric, etc.) or in heading 58.09 or 59.02 and of a mixture of two or more different textile materials is to be classified as if consisting wholly of that one textile material which predominates by weight over any other single textile material.

When no one textile material predominates by weight, the goods are to be classified as if consisting wholly of that one textile material which is covered by the heading which occurs last in numerical order among those which equally merit consideration.

The textile materials may be mixed :

- prior to or during spinning;
- during twisting;
- during weaving.

In the case of products (other than those of heading 58.11) consisting of two or more textile fabrics of different composition assembled in layers by sewing, gumming, etc., classification is determined in accordance with Interpretative Rule 3. Accordingly, Note 2 to Section XI applies only where it is necessary to determine the textile material which predominates by weight in the fabric taken into consideration for the classification of the product as a whole.

Similarly, the provisions of Note 2 to Section XI apply to mixed products composed of textile and non-textile materials **only** if, by virtue of the General Rules for the Interpretation of the Nomenclature, they are classified as textile products.

It should be noted that, for the application of Note 2 to the Section :

(1) When a Chapter or a heading refers to products composed of textile materials of different kinds, those materials are aggregated together for the purpose of classifying similar products containing those materials mixed with others; the choice of appropriate heading shall be effected by determining **first** the Chapter and **then** the applicable heading within that Chapter, disregarding any materials not classified in that Chapter.

Examples :

(a) A woven fabric composed of :

40 % by weight of synthetic staple fibres,

35 % by weight of combed wool, and

25 % by weight of combed fine animal hair

is not classified in heading 55.15 (other woven fabrics of synthetic staple fibres) but comes under **heading 51.12** (woven fabrics of combed wool or of combed fine animal hair), since the proportions of wool and of fine animal hair must, in this case, be taken in the aggregate.

(b) A woven fabric weighing 210 g/m^2 composed of :

40 % by weight of cotton,

30 % by weight of artificial staple fibres, and

30 % by weight of synthetic staple fibres

is not classified in heading 52.11 (woven fabrics of cotton, containing less than 85 % by weight of cotton, mixed mainly or solely with man-made fibres, weighing more than 200 g/m^2), or in heading 55.14 (woven fabrics of synthetic staple fibres, containing less than 85 % by weight of such fibres, mixed mainly or solely with cotton, of a weight exceeding 170 g/m^2), but comes under **heading 55.16** (woven fabrics of artificial staple fibres). This classification is reached by determining first the relevant Chapter (in this case Chapter 55 since the proportion of synthetic staple fibres and artificial staple fibres must, in this case, be taken in the aggregate) and then the applicable heading within that Chapter which, in this example, is heading 55.16, the heading which occurs last in numerical order among those which equally merit consideration.

(c) A woven fabric composed of :

35 % by weight of flax,

25 % by weight of jute,

40 % by weight of cotton

is not classified in heading 52.12 (other woven fabrics of cotton) but in **heading 53.09** (woven fabrics of flax). This classification is reached by determining first the relevant Chapter (in this case Chapter 53 since the proportions of flax and jute must be taken in the aggregate) and then the applicable heading within that Chapter which, in this example, is **heading 53.09** since flax predominates over jute, the cotton content being disregarded in accordance with Section Note 2 (B) (b).

(2) Gimped horsehair yarn and metallised yarn are treated as single textile materials, and their weight is taken as the aggregate of the weights of the components.

(3) In classifying woven fabrics, metal thread is treated as a textile material.

(4) When both Chapters 54 and 55 are involved with any other Chapter, Chapters 54 and 55 are to be treated as a single Chapter.

Example :

A woven fabric composed of :

35 % by weight of synthetic filaments,

25 % by weight of synthetic staple fibres, and

40 % by weight of combed wool

is not classified in heading 51.12 (woven fabrics of combed wool) but comes under **heading 54.07** (woven fabrics of synthetic filament yarn), since the proportions of synthetic filaments and synthetic staple fibres must, in this case, be taken in the aggregate.

(5) Sizings or dressings (e.g., weighting (loading) in the case of silk) and also products for impregnating, coating, covering or sheathing, incorporated in textile fibres are not deemed to be non-textile materials; in other words, the weight of the textile fibres is calculated on the basis of their weight in the state in which they are presented.

When deciding if an admixture is **mainly** a particular textile material, regard is to be taken to the textile material which predominates by weight over any other single textile material in the admixture.

Example :

A woven fabric weighing not more than 200 g/m^2 and consisting of :

55 % by weight of cotton,

22 % by weight of man-made fibres,

21 % by weight of wool, and

2 % by weight of silk

does not fall in heading 52.12 (other woven fabrics of cotton), but in **heading 52.10** (woven fabrics of cotton, containing less than 85 % by weight of cotton, mixed mainly or solely with man-made fibres, weighing not more than 200 g/m²).

(B) Yarns

(1) **General**.

Textile yarns may be single, multiple (folded) or cabled. For the purposes of the Nomenclature :

(i) **Single yarns** means yarns composed **either of** :

(a) Staple fibres, usually held together by twist (**spun yarns**); **or of**

(b) One filament (**monofilament**) of headings 54.02 to 54.05, or two or more filaments (**multifilament**) of heading 54.02 or 54.03, held together, with or without twist (**continuous yarns**).

(ii) **Multiple (folded) yarns** means yarns formed from two or more single yarns, including those obtained from monofilaments of heading 54.04 or 54.05 (twofold, threefold, fourfold, etc. yarns) twisted together in one folding operation. However, yarns composed solely of monofilaments of heading 54.02 or 54.03, held together by twist, are not to be regarded as multiple (folded) yarns.

The **ply** (''fold'') of a multiple (folded) yarn means each of the single yarns with which it is formed.

(iii) **Cabled yarns** means yarns formed from two or more yarns, at least one of which is multiple (folded), twisted together in one or more folding operations.

The **ply** (''fold'') of a cabled yarn means each of the single or multiple (folded) yarns with which it is formed.

The above yarns are sometimes called **multiple wound** (assembled) yarns when they are obtained by juxtaposition of two or more single, multiple (folded) or cabled yarns. These are to be regarded as single, multiple (folded) or cabled yarns according to the type of the yarns of which they are composed.

Single, multiple (folded) or cabled yarns may have loops or slubs at intervals (**bouclé** or **looped**, **slub** or **flammé yarn**). They may also be composed of two or more yarns one of which is folded back on itself at intervals to give the effect of a loop or swelling.

Polished or **glazed** yarns are those which have been treated with preparations based on natural substances (wax, paraffin, etc.) or on synthetic substances (acrylic resins in particular). They are then made glossy by means of polishing rollers.

Yarns are designated according to their measurement. Various systems of numbering or counting are still in use. The Nomenclature, however, uses the universal "Tex" system, which is a unit for expressing linear density, equal to the weight in grams of one kilometre of yarn, filament, fibre, or other textile strand. Decitex is 0.1 Tex. The following formula for the conversion of metric numbers into decitex numbers is applied :

10,000	= Decitex.
Metric number	

Yarns may be unbleached, scoured, bleached, creamed, dyed, printed, marled, etc. They may also have been gassed (i.e., singed to remove fibres which give them a hairy appearance), mercerised (i.e., treated under tension with sodium hydroxide), oiled, etc.

However, Chapters 50 to 55 **do not include** :

(a) Rubber thread, textile covered, and textile yarns impregnated (including dipped), coated, covered or sheathed with rubber or plastics, of **heading 56.04**.

(b) Metallised yarn (**heading 56.05**).

(c) Gimped yarn, chenille yarn and loop wale-yarn (**heading 56.06**).

(d) Braided textile yarns (**heading 56.07** or **58.08**, as the case may be).

(e) Textile yarns reinforced with metal thread (**heading 56.07**).

(f) Yarns, monofilaments or textile fibres laid parallel and bonded with an adhesive (bolduc) (**heading 58.06**).

(g) Textile yarns laid parallel and agglomerated with rubber of **heading 59.06**.

(2) **Distinction between single, multiple (folded) or cabled yarns of Chapters 50 to 55, twine, cordage, rope or cables of heading 56.07 and braids of heading 58.08.**

(See Note 3 to Section XI)

Chapters 50 to 55 do not cover all yarns. Yarns are classified according to their characteristics (measurement, whether or not polished or glazed, number of plies) in those headings of Chapters 50

to 55 relating to yarns, as twine, cordage, rope or cables under heading 56.07, or as braids under heading 58.08. Table I below shows the correct classification in each individual case :

TABLE I

Classification of yarns, twine, cordage, rope and cables of textile material.

Type (*)	Characteristics determining classification	Classification
Reinforced with metal thread	In all cases	Heading 56.07
Of metallised yarn	In all cases	Heading 56.05
Gimped yarn, other than those of headings 51.10 and 56.05, chenille yarn and loop wale yarn	In all cases	Heading 56.06
Braided textile yarn	(1) Tightly plaited and with a compact structure (2) Other	Heading 56.07 Heading 58.08
Other : - Of silk or waste silk (**)	(1) Measuring 20,000 decitex or less (2) Measuring more than 20,000 decitex	Chapter 50 Heading 56.07
- Of wool or other animal hair	In all cases	Chapter 51
- Of flax or true hemp	(1) Polished or glazed : (a) Measuring 1,429 decitex or more (b) Measuring less than 1,429 decitex	Heading 56.07 Chapter 53 Chapter 53 Heading

	(2) Neither polished nor glazed : (a) Measuring 20,000 decitex or less (b) Measuring more than 20,000 decitex	56.07

Type (*)	Characteristics determining classification	Classification
- Of coir	(1) Of one or two plies (2) Of three or more plies	Heading 53.08 Heading 56.07
- Of paper	In all cases	Heading 53.08
- Of cotton or other vegetable fibres	(1) Measuring 20,000 decitex or less (2) Measuring more than 20,000 decitex	Chapter 52 or 53 Heading 56.07
- Of man-made fibres (including those yarns of two or more monofilaments of Chapter 54 (**))	(1) Measuring 10,000 decitex or less (2) Measuring more than 10,000 decitex	Chapter 54 or 55 Heading 56.07

Footnotes.

(*) References to the various textiles materials apply also to such mixtures as are classified therewith under the provisions of Note 2 to Section XI (see Part (I) (A) of this General Explanatory Note).

(**) Silk worm gut of heading 50.06, multifilament yarn without twist or with a twist of less than 5 turns per metre, and monofilament, of Chapter 54, and man-made filament tow of Chapter 55 do not in any circumstances fall in heading 56.07.

(3) **Yarns put up for retail sale.**

(See Note 4 to Section XI)

Certain headings of Chapters 50, 51, 52, 54 and 55 make provision for textile yarns put up for retail sale. To be classified in those headings yarns must meet the criteria set out in Table II below.

However, the following yarns are **never** deemed to be put up for retail sale :

(a) Single yarn of silk, waste silk, cotton or man-made fibres, however put up.

(b) Single yarn of wool or of fine animal hair, bleached, dyed or printed, measuring 5,000 decitex or less, however put up.

(c) Multiple (folded) or cabled yarn of silk or waste silk, unbleached, however put up.

(d) Multiple (folded) or cabled yarn of cotton or man-made fibres, unbleached, in hanks or skeins.

(e) Multiple (folded) or cabled yarn of silk or waste silk, bleached, dyed or printed, measuring 133 decitex or less.

(f) Single, multiple (folded) or cabled yarn of any textile material, in cross-reeled hanks or skeins.(*)

(g) Single, multiple (folded) or cabled yarn of any textile material, put up on supports (e.g., cops, twisting mill tubes, pirns, conical bobbins or spindles) or in some other manner (for example, in the form of cocoons for embroidery looms, cakes made by centrifugal spinning) indicating its use in the textile industry.

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Footnote

(*) Cross-reeling indicates that in building up the hank the thread crosses diagonally as the hank is being wound, preventing the hank from being split. Cross-reeling is the method usually adopted when the hanks are for dyeing.

"Not cross-reeled"	**"Cross-reeled"**

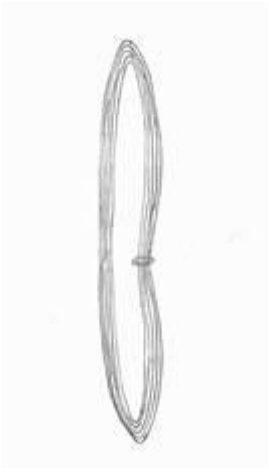	

TABLE II

Yarns put up for retail sale (subject to the above-mentioned exceptions).

Way in which put up	Type of yarn (*)	Conditions under which the yarn is to be regarded as put up for retail sale
On cards, reels, tubes or similar supports	(1) Silk, waste silk or man-made filament yarns	Weighing 85 g or less (including support)
	(2) Wool, fine animal hair, cotton or man-made staple yarns	Weighing 125 g or less (including support)
In balls, hanks or skeins	(1) Man-made filament yarn of less than 3,000 decitex, silk or waste silk yarns	Weighing 85 g or less
	(2) Other yarns of less than 2,000 decitex	Weighing 125 g or less
	(3) Other yarns	Weighing 500 g or less
In hanks or skeins comprising several smaller hanks or skeins separated by dividing threads which render them	(1) Silk, waste silk, or man-made filament yarns	Each of the smaller skeins to be of a uniform weight of 85 g or less

independent one of the other (**)	(2) Wool, fine animal hair, cotton or man-made staple fibre yarns	Each of the smaller skeins to be of a weight of 125 g or less

Footnotes

(*) References to the various textile materials apply also to such mixtures as are classified therewith under the provisions of Note 2 to Section XI (see Part (I) (A) of this General Explanatory Note).

(**) The hanks or skeins comprising several smaller hanks or skeins separated by one or more dividing threads are formed of one continuous length of yarn which, on being cut, allows the component hanks or skeins to be readily separated. One or more dividing threads pass between the skeins and keep them separate from each other. These hanks and skeins are often wrapped round with paper bands. Other hanks and skeins of one continuous length, or yarn with dividing threads which do not separate the main hank or skein into smaller hanks or skeins of uniform weight, but are simply intended to prevent tangling during processing (e.g., dyeing), are not regarded as hanks or skeins comprising several smaller hanks or skeins separated by one or more dividing threads and are not regarded as put up for retail sale.

(4) **Sewing thread.**

(See Note 5 to Section XI)

For the purposes of headings 52.04, 54.01 and 55.08 the expression "sewing thread" means multiple (folded) or cabled yarn :

(a) Put up on supports (for example, reels, tubes) of a weight (including support) not exceeding 1,000 g;

(b) Dressed for use as sewing thread; and

(c) With a final "Z" twist.

The term "dressed" means given a finishing treatment. This treatment is designed to facilitate the use of textile yarn as a sewing thread, for example, by giving it antifriction properties or thermal resistance, preventing the formation of static electricity or improving its appearance. Such treatment involves the use of substances based on silicones, starch, wax, paraffin, etc.

The length of sewing thread is generally indicated on the support.

(5) **High tenacity yarn.**

(See Note 6 to Section XI)

In Chapters 54 and 59 there are provisions for "high tenacity yarn" and for fabrics made from such yarn.

The expression "high tenacity yarn" means yarn having a tenacity, expressed in cN/tex (centinewtons per tex), greater than the following :

Single yarn of nylon or other polyamides, or of polyesters ..... 60 cN/tex

Multiple (folded) or cabled yarn of nylon or other polyamides, or of polyesters 53 cN/tex

Single, multiple (folded) or cabled yarn of viscose rayon ..... 27 cN/tex.

(6) **Elastomeric and textured yarns.**

(See Note 13 to Section XI)

Elastomeric yarn is defined in Note 13 to this Section. It should be noted that the textured yarn referred to therein is defined in the Subheading Explanatory Note to subheadings 5402.31 to 5402.39.

(C) Woven fabrics.

The **woven fabrics** of Chapters 50 to 55 are products obtained by interlacing textile yarns (whether of the kinds classified in Chapters 50 to 55 or those regarded as twine, cordage, etc., of heading 56.07), rovings, monofilament or strip and the like of Chapter 54, loop wale-yarn, narrow ribbons, braids or narrow fabrics (consisting of warp without weft assembled by means of an adhesive, etc.), on warp and weft looms. Certain woven fabrics are, however, **excluded**, for example :

(a) Carpets and other floor coverings (**Chapter 57**).

(b) Pile fabrics or chenille fabrics of **heading 58.01**, terry towelling and similar woven terry fabrics of **heading 58.02**, gauze of **heading 58.03**, tapestries of **heading 58.05**, narrow woven fabrics of **heading 58.06** and woven fabrics of metal thread or metallised yarn of **heading 58.09**.

(c) Coated, impregnated, etc., fabrics of **headings 59.01** and **59.03 to 59.07**; tyre cord fabrics of **heading 59.02** or textile fabrics for technical uses of **heading 59.11**.

(d) Goods which have been made up within the meaning of Note 7 to Section XI (see Part (II) of this General Explanatory Note).

Subject tothe provisions of (a) to (d) above the woven fabrics of Chapters 50 to 55, by application of Note 9 to Section XI, include, for example, fabrics consisting of :

- one layer of parallel "warp" yarns with a layer of parallel "weft" yarns superimposed at acute or right angles;

- two layers of parallel "warp" yarns between which a layer of "weft" yarns is inserted at acute or right angles.

The essential characteristic of these fabrics is that the yarns are not interlaced as in conventional woven fabrics but are bonded at the intersections with an adhesive or by thermal bonding.

These fabrics are sometimes referred to as **mesh scrims**; their uses include the reinforcement of other materials (plastics, paper, etc.). They are also used, for example, for the protection of agricultural crops.

The woven fabrics of Chapters 50 to 55 may be unbleached, scoured, bleached, dyed, made from yarns of different colours, printed, clouded, mercerised, glazed, moiré, raised (napped), goffered, fulled, gassed (singed), etc. They include unfigured and figured fabrics, and broché fabrics in which designs are produced by additional warp or weft threads introduced during weaving. These fabrics are not regarded as embroidered fabrics.

Chapters 50 to 55 also cover fabrics with their weft threads dissolved in places to give the effect of designs where both the warp and weft threads remain (e.g., certain fabrics which have warp threads of viscose rayon and weft threads of acetate fibres, the weft threads having been partially removed by means of a solvent).

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Subheading Explanatory Notes.

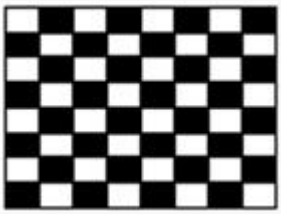
Woven fabric of yarns of different colours

Woven fabrics consisting either wholly or partly of printed yarns of different colours or of printed yarns of different shades of the same colour are regarded as "woven fabrics of yarns of different colours" and not as "dyed woven fabrics" or "printed woven fabrics".

Weaves

Plain weave is defined by Subheading Note 1 (ij) to Section XI as "a fabric construction in which each yarn of the weft passes alternately over and under successive yarns of the warp and each yarn of the warp passes alternately over and under successive yarns of the weft".

This weave pattern is shown diagrammatically below :



Plain weave

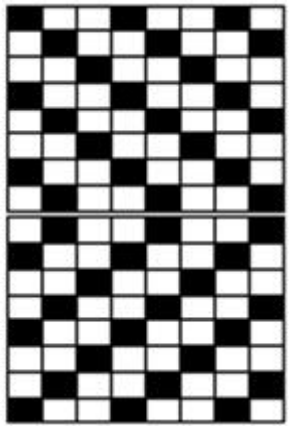
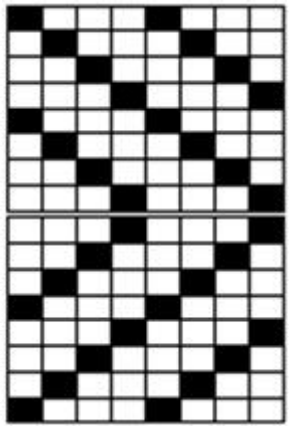
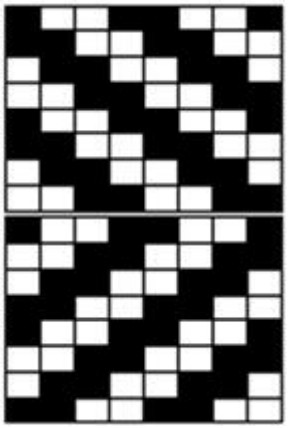
Plain weave is the simplest and most commonly used weave. The two surfaces of plain weave fabrics are always identical (double-faced fabrics) because an equal proportion of warp and weft threads is visible on each side.

In **twill weave**, the first warp thread (end) is bound by the first weft thread (pick), the second warp thread by the second weft thread, the third warp thread by the third weft thread, and so on. The step number for this kind of weave is one for both warp and weft. The weave repeat, i.e. the number of warp threads and weft threads required to repeat the pattern, is always greater than two. The closest twill weave is that in which the weft thread passes (floats) over two warp threads. This is a three-thread twill. In a four-thread twill, the weft thread passes over three warp threads.

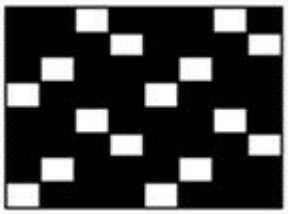
In twill weave, diagonal lines of ribbing formed by the stepped nature of the interlacing points, extend from one selvedge to the other, forming ridges and giving the impression that the weave is diagonal. The ribs may run from right to left or from left to right. A distinction is made between weft-faced twill, in which the weft thread is more apparent, and warp-faced twill, in which the warp thread is more apparent. Both these twills present a different appearance on the face (the right side) from the reverse (the wrong side). However, there is one category of twill, called double-faced twill or cross twill, which has the same appearance on both sides.

Double-faced twill or cross twill always has an even weave repeat. The warp or weft floats are the same on both faces; only the direction of the ribs is reversed. The simplest design is four-thread cross twill : each warp thread is raised on two consecutive picks, and depressed on the following two.

It should be noted that in headings 52.08, 52.09, 52.10, 52.11, 55.13 and 55.14, the subheadings relating to "3-thread or 4-thread twill, including double-faced twill or cross twill", because of their restrictive wording, cover only those twills whose weave patterns are given below :

		
3-thread twill	4-thread twill	4-thread double-faced twill or cross twill

Denim fabrics of subheadings 5209.42 and 5211.42, however, do not include 4-thread double-faced twill or cross twill, since these subheadings cover only warp faced fabrics (see Subheading Note 1 to Chapter 52). In addition to warp faced 3-thread twill and warp faced 4-thread twill, these subheadings also cover warp faced 4-thread broken twill, whose weave pattern is reproduced below :



Warp faced 4-thread broken twill

(II) CHAPTERS 56 TO 63

Chapters 56 to 63 cover certain kinds of textile fabrics and other textile articles **not** covered by Chapters 50 to 55 (e.g., pile fabrics; narrow woven fabrics; chenille yarn, gimped yarn, braids, galloons and other trimmings of heading 56.06 or 58.08; tulles and other net fabrics; lace; embroidery on woven fabrics or other textile materials; knitted or crocheted goods). They also include (subject to **exclusions** regarding certain articles classified elsewhere than in Section XI) made up textile articles.

Made up articles.

Under Note 7 to this Section, the expression "made up" in Chapters 56 to 63 means :

(1) **Merely cut, otherwise than into squares or rectangles**, for example, dress patterns of textile material; articles with their edges pinked (e.g., certain dusters) are also regarded as made up.

(2) **Produced in the finished state, ready for use** (or merely needing separation by cutting dividing threads) without sewing or other working. Goods of this kind include products knitted or crocheted directly to shape and certain dusters, towels, table cloths, scarf squares, blankets, etc., with threads along the warp left unwoven or the weft edges cut to form a fringe. Such articles may have been woven separately on the loom, but may also have been simply cut from lengths of fabric which have bands of unwoven threads (generally warp threads) at regular intervals. These lengths of fabric, from which ready-made articles of the types described above may be obtained by simply cutting the dividing threads, are also considered as "made up" articles.

However, rectangular (including square) articles simply cut out from larger pieces without other working and not incorporating fringes formed by cutting dividing threads are not regarded as "produced in the finished state" within the meaning of this Note. The fact that these articles may be presented folded or put up in packings (e.g., for retail sale) does not affect their classification.

(3) **Cut to size and with at least one heat-sealed edge** with a visibly tapered or compressed border and the other edges treated as described in any other subparagraph of this Note, but excluding fabrics the cut edges of which have been prevented from unravelling by hot cutting or by other simple means.

(4) **Hemmed or with rolled edges or with a knotted fringe** (whether or not incorporating added threads) at any of the edges (e.g., handkerchiefs with rolled edges and table covers with knotted fringes), but **excluding** fabrics the cut edges of which have been prevented from unravelling by whipping or by other simple means.

(5) **Cut to size and incorporating drawn-thread work**. In this connection "drawn-thread work" means simply the withdrawing of certain warp or weft threads after weaving without further operation (e.g., by embroidery) on the material. The pieces of material so treated are often intended for further manufacture into lingerie.

(6) **Assembled by sewing, gumming or otherwise**. These articles, which are very numerous, include garments. It should be noted, however, that piece goods consisting of two or more lengths of identical material joined end to end, or composed of two or more textiles assembled in layers, are not regarded as "made-up". Nor are textile products in the piece composed of one or more layers of textile materials assembled with padding by stitching or otherwise.

(7) **Knitted or crocheted to shape**, whether presented as separate items or in the form of a number of items in the length.

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Subheading Explanatory Note.

Products of Chapters 56 to 63 having a pile or looped surface

The provisions of Subheading Note 2 (B) (b) to Section XI apply whether or not the ground fabric is partly visible on the pile or looped side.

(III) TEXTILE PRODUCTS COMBINED WITH RUBBER THREADS

Under Note 10 to this Section, elastic products consisting of textile materials combined with rubber threads are classified in Section XI.

Rubber thread and cord, textile covered, are included in heading 56.04.

Other textile products combined with rubber threads are classified, in particular, in Chapters 50 to 55, 58 or 60 to 63, as the case may be.

(IV) TEXTILE ARTICLES INCORPORATING CHEMICAL, MECHANICAL OR ELECTRONIC COMPONENTS

For the purposes of Note 15 to this Section, textiles, garments and other textile articles, incorporating chemical, mechanical or electronic components for additional functionality, whether incorporated as built-in components or within the fibre or fabric, are classified in Section XI, **provided that** they retain the essential character of the goods of this Section. The textile articles may or may not be wearable. These include, for example:

- Garments with integrated LED lighting and/or audio device;

- Garments with integrated head phones, including a docking station for a mobile phone or similar article;

- Garments with integrated body functions monitoring equipment (e.g., sports bras with heart rate and temperature monitoring);

- Carpet with pressure or movement detection (man down detection or fall detection);

- Heated gloves or socks;

- Paraseismic wall covering, sometimes referred to as 'seismic wallpaper', integrating electronic components, such as optical sensors or fibres, and used in the construction or renovation of buildings for strengthening and monitoring the structures built ; and

- Geotextiles incorporating sensors or fully integrated optical fibres for the purpose of measuring the deformations and strains resulting, for example, from earthworks.

(V) STANDARD ATMOSPHERES FOR CONDITIONING AND TESTING OF TEXTILES

(A) **Scope and field of application.**

The characteristics and use of standard atmospheres for conditioning and for determining the physical and mechanical properties of textiles are set out hereafter for guidance.

(B) **Definitions.**

(a) **Relative humidity** : The ratio of the actual pressure of the water vapour in the atmosphere to the saturation vapour pressure at the same temperature. The ratio is usually expressed as a percentage.

(b) **Standard temperate atmosphere** : An atmosphere which has a relative humidity of 65 % and a temperature of 20 °C.

(c) **Standard temperate atmosphere for testing** : An atmosphere which has a relative humidity of 65 % and a temperature of 20 °C.

NOTE – The adjective "temperate" as used above has been chosen for the limited use of the textile industry.

(C) **Pre-conditioning.**

Before conditioning a textile, pre-conditioning may be required. If so, the textile shall be brought approximately to equilibrium in an atmosphere having a relative humidity of between 10 and 25 % and a temperature not exceeding 50 °C.

These conditions may be obtained by heating air at 65 % relative humidity and 20 °C to a temperature of 50 °C.

(D) **Conditioning.**

Before a textile is tested to determine a physical or mechanical property, it shall be conditioned by placing it in the standard temperate atmosphere for testing, in such a way that the air flows freely through the textile, and keeping it there for the time required to bring it into equilibrium with the atmosphere.

Unless otherwise specified in the method of test, the textile should be considered to be in equilibrium when successive weighings, at intervals of 2 hours, of the textile freely exposed to the moving air show no progressive change in weight greater than 0.25 %.

(E) **Testing.**

Except for special cases (for example wet tests), physical and mechanical tests of textiles are carried out in the conditioned state in the standard temperate atmosphere for testing.

Chapter 50

Silk

GENERAL

The General Explanatory Note to Section XI should be taken into account in reading the Explanatory Notes to this Chapter.

For the purposes of this Chapter the term "silk" covers not only the fibrous matter secreted by the *Bombyx mori* (mulberry feeding silk-worm), but also the products of the secretion of similar insects (e.g., *Bombyx textor*) known as wild silk. Among the wild varieties, so named because the producing worm has only very rarely been domesticated, the most important is tussah silk obtained from a silk-worm that feeds on oak. Spider silk and marine or byssus silk (the filaments by which certain shellfish of the *Pinna* family cling to rocks) are also classified in this Chapter.

Generally speaking, this Chapter covers silk, including mixed textile materials classified as silk, at its various stages of manufacture, from the raw material to the woven fabric. It also includes silk-worm gut.

Chapter 51

Wool, fine or coarse animal hair; horsehair yarn and woven fabric

Note.

1.- Throughout the Nomenclature :

(a) "Wool" means the natural fibre grown by sheep or lambs;

(b) "Fine animal hair" means the hair of alpaca, llama, vicuna, camel (including dromedary), yak, Angora, Tibetan, Kashmir or similar goats (but not common goats), rabbit (including Angora rabbit), hare, beaver, nutria or musk-rat;

(c) "Coarse animal hair" means the hair of animals not mentioned above, excluding brush-making hair and bristles (heading 05.02) and horsehair (heading 05.11).

GENERAL

The General Explanatory Note to Section XI should be taken into account in reading the Explanatory Notes to this Chapter.

In general, this Chapter covers wool and fine or coarse animal hair, including mixed textile materials classified as wool or animal hair, at the various stages from the raw materials to their transformation into woven fabrics. It also includes yarns and fabrics of horsehair, but **excludes** horsehair and horsehair waste of **heading 05.11**. As stated in Note 4 to Chapter 5, the expression "horsehair" means hair of the manes or tails of equine or bovine animals.

Chapter 52

Cotton

Subheading Note.

1.- For the purposes of subheadings 5209.42 and 5211.42, the expression "denim" means fabrics of yarns of different colours, of 3-thread or 4-thread twill, including broken twill, warp faced, the warp yarns of which are of one and the same colour and the weft yarns of which are unbleached, bleached, dyed grey or coloured a lighter shade of the colour of the warp yarns.

GENERAL

The General Explanatory Note to Section XI should be taken into account in reading the Explanatory Notes to this Chapter.

In general, the Chapter covers cotton fibres at the various stages of their conversion from raw material to woven fabrics, and includes mixed textile materials classified as cotton.

Chapter 53

Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn

GENERAL

The General Explanatory Note to Section XI should be taken into account in reading the Explanatory Notes to this Chapter.

In general, and with certain **exceptions** referred to in the Explanatory Note to heading 53.05, this Chapter deals with vegetable textile materials (**other than** cotton) at the various stages from the raw materials to their transformation into woven fabrics.

It also includes paper yarns and woven fabrics of paper yarn, and products of mixed textile materials assimilated to the products of this Chapter under the provisions of Note 2 to Section XI.

Chapter 54

Man-made filaments; strip and the like of man-made textile materials

Notes.

1.- Throughout the Nomenclature, the term "man-made fibres" means staple fibres and filaments of organic polymers produced by manufacturing processes, either :

a) By polymerisation of organic monomers to produce polymers such as polyamides, polyesters, polyolefins or polyurethanes, or by chemical modification of polymers produced by this process (for example, poly(vinyl alcohol) prepared by the hydrolysis of poly(vinyl acetate)); or

b) By dissolution or chemical treatment of natural organic polymers (for example, cellulose) to produce polymers such as cuprammonium rayon (cupro) or viscose rayon, or by chemical modification of natural organic polymers (for example, cellulose, casein and other proteins, or alginic acid), to produce polymers such as cellulose acetate or alginates.

The terms "synthetic" and "artificial", used in relation to fibres, mean : synthetic : fibres as defined at (a); artificial : fibres as defined at (b). Strip and the like of heading 54.04 or 54.05 are not considered to be man-made fibres.

The terms "man-made", "synthetic" and "artificial" shall have the same meanings when used in relation to "textile materials".

2.- Headings54.02 and 54.03 do not apply to synthetic or artificial filament tow of Chapter 55.

GENERAL

The General Explanatory Note to Section XI should be taken into account in reading the Explanatory Note to this Chapter.

Under Note 1 to Chapter 54, the term "man-made fibres", when used in Chapters 54 and 55 or elsewhere in the Nomenclature, means filaments or staple fibres composed of organic polymers produced by manufacturing processes, either by :

(1) Polymerisation of organic monomers or chemical modification of the resulting polymers (see the General Explanatory Note to Chapter 39) (synthetic fibres); or by

(2) Dissolution or chemical treatment of natural organic polymers, or chemical modification of natural organic polymers (artificial fibres).

(I) SYNTHETIC FIBRES

The basic materials for the manufacture of these fibres are generally derived from coal or oil distillation products or from natural gas. The substances produced by polymerisation are either melted or dissolved in a suitable solvent and then extruded through spinnerets (jets) into air or into a suitable coagulating bath where they solidify on cooling or evaporation of the solvent, or they may be precipitated from their solution in the form of filaments.

At this stage their properties are normally inadequate for direct use in subsequent textile processes, and they must then undergo a drawing process which orientates the molecules in the direction of the filament, thus considerably improving certain technical characteristics (e.g., strength).

The main **synthetic fibres** are :

(1) **Acrylic** : Fibres composed of linear macromolecules having in the macromolecular composition at least 85 % by weight of the acrylonitrilic unit.

(2) **Modacrylic** : Fibres composed of linear macromolecules having in the macromolecular composition at least 35 % but less than 85 % by weight of the acrylonitrilic unit.

(3) **Polypropylene** : Fibres composed of acyclic saturated hydrocarbon linear macromolecules having in the macromolecular composition at least 85 % by weight of units with every other carbon atom carrying a methyl side group in an isotactic position and without further substitution.

(4) **Nylon or other polyamides** : Fibres composed of synthetic linear macromolecules having in the macromolecular composition either at least 85 % of recurring amide linkages joined to acyclic or cyclic groups or at least 85 % of aromatic groups joined by amide linkages directly to two aromatic rings and in which imide groups may be substituted for up to 50 % of the amide groups.

The term "nylon or other polyamides" includes **aramids** (see Note 12 to the Section).

(5) **Polyester** : Fibres composed of linear macromolecules having in the macromolecular composition at least 85 % by weight of an ester of a diol and terephthalic acid.

(6) **Polyethylene** : Fibres composed of linear macromolecules having in the macromolecular composition at least 85 % by weight of the ethylene unit.

(7) **Polyurethane** : Fibres resulting from the polymerisation of polyfunctional isocyanates with polyhydroxy compounds, such as, castor oil, butane-1,4-diol, polyether polyols, polyester polyols.

Other synthetic fibres include : chlorofibre, fluorofibre, polycarbamide, trivinyl and vinylal.

Where the constituent matter of the fibres is a copolymer or a mixture of homopolymers as understood for Chapter 39, e.g., a copolymer of ethylene and propylene, for the classification of the fibres, the respective percentages of each of the constituents must be taken into consideration. With the exception of polyamides these percentages refer to weight.

(II) ARTIFICIAL FIBRES

The basic materials for the manufacture of these fibres are organic polymers extracted from natural raw materials by processes which may involve dissolution or chemical treatment, or chemical modification.

The main **artificial fibres** are :

(A) **Cellulosic fibres**, namely :

(1) **Viscose rayon**, which is produced by treating cellulose (generally in the form of sulphite wood pulp) with sodium hydroxide; the resulting alkali-cellulose is then treated with carbon disulphide and transformed into sodium cellulose xanthate. The latter is in turn transformed into a thick solution known as viscose by dissolving it in dilute sodium hydroxide.

After purification and maturing, the viscose is then extruded through spinnerets into a coagulating acid bath to form filaments of regenerated cellulose. **Viscose rayon** also covers modal fibres, which are produced from regenerated cellulose by a modified viscose process.

(2) **Cuprammonium rayon (cupro)**, obtained by dissolving cellulose (generally in the form of linters or chemical wood pulp) in a cuprammonium solution; the resulting viscous solution is extruded into a bath where filaments of precipitated cellulose are formed.

(3) **Cellulose acetate (including tri-acetate)** : Fibres obtained from cellulose acetate wherein at least 74 % of the hydroxyl groups are acetylated. These are manufactured by treating cellulose (in the form of cotton linters or chemical wood pulp) with a mixture of acetic anhydride, acetic acid and sulphuric acid. The resulting primary cellulose acetate is modified to a soluble form and dissolved in a volatile solvent such as acetone, then extruded (generally into warm air); the solvent then evaporates leaving filaments of cellulose acetate.

(B) **Protein fibres** of animal or vegetable origin, including :

(1) Those produced by dissolving milk casein in an alkali (generally sodium hydroxide); after maturing, the solution is extruded into an acid coagulating bath. The resulting filaments are subsequently hardened by treatment with formaldehyde, tannin, chromium salts or other chemical compounds.

(2) Other fibres produced in similar manner from the proteins of ground-nuts, soya beans, maize (zein), etc.

(C) **Alginate fibres**. Chemical treatment of various types of seaweed gives a viscous solution, generally of sodium alginate; this is extruded into a bath which converts it into certain metallic alginates. These include :

(1) Calcium chromium alginate fibres; these are non-inflammable.

(2) Calcium alginate fibres. These are readily soluble in a weak alkaline solution of soap; this makes them unsuitable for ordinary textile use, and they are most often used as temporary threads in certain manufacturing operations.

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The Chapter covers man-made filaments and yarns and woven fabrics of such filaments, including yarns and woven fabrics of mixed textile fibres classified by application of Note 2 to Section XI as yarns and woven fabrics of man-made filaments. It also covers monofilament and other products of heading 54.04 or 54.05 and woven fabrics of such products.

Filament tow, **other than** that defined in Note 1 to Chapter 55, is included. This is generally used for the manufacture of cigarette filters, whereas filament tow of Chapter 55 is used for the manufacture of staple fibres.

This Chapter **excludes** :

(a) Yarn used to clean between the teeth (dental floss), in individual retail packages, of **heading 33.06**.

(b) Products of **Chapter 40**, in particular thread and cord of **heading 40.07**.

(c) Products of **Chapter 55**, in particular staple fibres, yarns and woven fabrics of staple fibres and waste (including noils, yarn waste and garnetted stock) of man-made filaments.

(d) Carbon fibres and articles of carbon fibres, of **heading 68.15**.

(e) Glass fibres and articles of glass fibres, of **heading 70.19**.

Chapter 55

Man-made staple fibres

Note.

1.- Headings 55.01 and 55.02 apply only to man-made filament tow, consisting of parallel filaments of a uniform length equal to the length of the tow, meeting the following specifications :

(a) Length of tow exceeding 2 m;

(b) Twist less than 5 turns per metre;

(c) Measuring per filament less than 67 decitex;

(d) Synthetic filament tow only : the tow must be drawn, that is to say, be incapable of being stretched by more than 100 % of its length;

(e) Total measurement of tow more than 20,000 decitex.

Tow of a length not exceeding 2 m is to be classified in heading 55.03 or 55.04.

GENERAL

The General Explanatory Note to Section XI should be taken into account in reading the Explanatory Notes to this Chapter.

The Chapter covers the man-made fibres described in the General Explanatory Note to Chapter 54 when in the form of staple fibres (i.e., discontinuous fibres) or of certain filament tow; it also covers the products arising at the various stages of working these fibres or tow, up to and including yarn and woven fabrics. It further includes mixed textile products classified as products of man-made staple fibres by application of Note 2 to Section XI.

Man-made staple fibres are usually manufactured by extrusion through spinnerets (jets) having a large number of holes (sometimes several thousand); the filaments from a large number of spinnerets (jets) are then collected together in the form of a tow. This tow may be stretched and then cut into short lengths, either immediately or after having undergone various processes (washing, bleaching, dyeing, etc.) while in the tow form. The length into which the fibres are cut is usually between 25 mm and 180 mm and varies according to the particular man-made fibre concerned, the type of yarn to be manufactured and the nature of any other textile fibres with which they are to be mixed.

Waste (including noils, yarn waste and garnetted stock) of man-made filaments or staple fibres is also included in this Chapter.

This Chapter **does not include** :

(a) Textile fibres, not exceeding 5 mm in length (flock), of **heading 56.01**.

(b) Asbestos of **heading 25.24** and articles of asbestos and other products of **heading 68.12** or **68.13**.

(c) Carbon fibres and articles of carbon fibres, of **heading 68.15**.

(d) Glass fibres and articles of glass fibres, of **heading 70.19**.

Chapter 56

Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof

Notes.

1.- This Chapter does not cover :

(a) Wadding, felt or nonwovens, impregnated, coated or covered with substances or preparations (for example, perfumes or cosmetics of Chapter 33, soaps or detergents of heading 34.01, polishes, creams or similar preparations of heading 34.05, fabric softeners of heading 38.09) where the textile material is present merely as a carrying medium;

(b) Textile products of heading 58.11;

(c) Natural or artificial abrasive powder or grain, on a backing of felt or nonwovens (heading 68.05);

(d) Agglomerated or reconstituted mica, on a backing of felt or nonwovens (heading 68.14);

(e) Metal foil on a backing of felt or nonwovens (generally Section XIV or XV); or

(f) Sanitary towels (pads) and tampons, napkins (diapers) and napkin liners and similar articles of **heading 96.19**.

2.- The term "felt" includes needleloom felt and fabrics consisting of a web of textile fibres the cohesion of which has been enhanced by a stitch-bonding process using fibres from the web itself.

3.- Headings 56.02 and 56.03 cover respectively felt and nonwovens, impregnated, coated, covered or laminated with plastics or rubber whatever the nature of these materials (compact or cellular).

Heading 56.03 also includes nonwovens in which plastics or rubber forms the bonding substance.

Headings 56.02 and 56.03 do not, however, cover :

(a) Felt impregnated, coated, covered or laminated with plastics or rubber, containing 50 % or less by weight of textile material or felt completely embedded in plastics or rubber (Chapter 39 or 40);

(b) Nonwovens, either completely embedded in plastics or rubber, or entirely coated or covered on both sides with such materials, provided that such coating or covering can be seen with the naked eye with no account being taken of any resulting change of colour (Chapter 39 or 40); or

(c) Plates, sheets or strip of cellular plastics or cellular rubber combined with felt or nonwovens, where the textile material is present merely for reinforcing purposes (Chapter 39 or 40).

4.- Heading 56.04 does not cover textile yarn, or strip or the like of heading 54.04 or 54.05, in which the impregnation, coating or covering cannot be seen with the naked eye (usually Chapters 50 to 55); for the purpose of this provision, no account should be taken of any resulting change of colour.

GENERAL

This Chapter covers a number of textile products of a special character, e.g., wadding, felt, nonwovens, special yarns, cordage and certain articles of these materials.

Chapter 59

Impregnated, coated, covered or laminated textile fabrics;

textile articles of a kind suitable for industrial use

Notes.

1.- Except where the context otherwise requires, for the purposes of this Chapter the expression "textile fabrics" applies only to the woven fabrics of Chapters 50 to 55 and headings 58.03 and 58.06, the braids and ornamental trimmings in the piece of heading 58.08 and the knitted or crocheted fabrics of headings 60.02 to 60.06.

2.- Heading 59.03 applies to :

(a) Textile fabrics, impregnated, coated, covered or laminated with plastics, whatever the weight per square metre and whatever the nature of the plastic material (compact or cellular), other than :

(1) Fabrics in which the impregnation, coating or covering cannot be seen with the naked eye (usually Chapters 50 to 55, 58 or 60); for the purpose of this provision, no account should be taken of any resulting change of colour;

(2) Products which cannot, without fracturing, be bent manually around a cylinder of a diameter of 7 mm, at a temperature between 15 °C and 30 °C (usually Chapter 39);

(3) Products in which the textile fabric is either completely embedded in plastics or entirely coated or covered on both sides with such material, provided that such coating or covering can be seen with the naked eye with no account being taken of any resulting change of colour (Chapter 39);

(4) Fabrics partially coated or partially covered with plastics and bearing designs resulting from these treatments (usually Chapters 50 to 55, 58 or 60);

(5) Plates, sheets or strip of cellular plastics, combined with textile fabric, where the textile fabric is present merely for reinforcing purposes (Chapter 39); or

(6) Textile products of heading 58.11;

(b) Fabrics made from yarn, strip or the like, impregnated, coated, covered or sheathed with plastics, of heading 56.04.

3.- For the purposes of heading 59.03, "textile fabrics laminated with plastics" means products made by the assembly of one or more layers of fabrics with one or more sheets or film of plastics which are combined by any process that bonds the layers together, whether or not the sheets or film of plastics are visible to the naked eye in the crosssection.

4.- For the purposes of heading 59.05, the expression "textile wall coverings" napplies to products in rolls, of a width of not less than 45 cm, suitable for wall or ceiling decoration, consisting of a textile surface which has been fixed on a backing or has been treated on the back (impregnated or coated to permit pasting).

This heading does not, however, apply to wall coverings consisting of textile flock or dust fixed directly on a backing of paper (heading 48.14) or on a textile backing (generally heading 59.07).

5.- For the purposes of heading 59.06, the expression "rubberised textile fabrics" means :

(a) Textile fabrics impregnated, coated, covered or laminated with rubber,

(i) Weighing not more than 1,500 g/m^2; or

(ii) Weighing more than 1,500 g/m^2 and containing more than 50 % by weight of textile material;

(b) Fabrics made from yarn, strip or the like, impregnated, coated, covered or sheathed with rubber, of heading 56.04; and

(c) Fabrics composed of parallel textile yarns agglomerated with rubber, irrespective of their weight per square metre.

This heading does not, however, apply to plates, sheets or strips of cellular rubber, combined with textile fabric, where the textile fabric is present merely for reinforcing purposes (Chapter 40), or textile products of heading 58.11.

6.- Heading 59.07 does not apply to :

(a) Fabrics in which the impregnation, coating or covering cannot be seen with the naked eye (usually Chapters 50 to 55, 58 or 60); for the purpose of this provision, no account should be taken of any resulting change of colour;

(b) Fabrics painted with designs (other than painted canvas being theatrical scenery, studio back-cloths or the like);

(c) Fabrics partially covered with flock, dust, powdered cork or the like and bearing designs resulting from these treatments; however, imitation pile fabrics remain classified in this heading;

(d) Fabrics finished with normal dressings having a basis of amylaceous or similar substances;

(e) Wood veneered on a backing of textile fabrics (heading 44.08);

(f) Natural or artificial abrasive powder or grain, on a backing of textile fabrics (heading 68.05);

(g) Agglomerated or reconstituted mica, on a backing of textile fabrics (heading 68.14); or

(h) Metal foil on a backing of textile fabrics (generally Section XIV or XV).

7.- Heading 59.10 does not apply to :

(a) Transmission or conveyor belting, of textile material, of a thickness of less than 3 mm; or

(b) Transmission or conveyor belts or belting of textile fabric impregnated, coated, covered or laminated with rubber or made from textile yarn or cord impregnated, coated, covered or sheathed with rubber (heading 40.10).

8.- Heading 59.11 applies to the following goods, which do not fall in any other heading of Section XI :

(a) Textile products in the piece, cut to length or simply cut to rectangular (including square) shape (other than those having the character of the products of headings 59.08 to 59.10), the following only :

(i) Textile fabrics, felt and felt-lined woven fabrics, coated, covered or laminated with rubber, leather or other material, of a kind used for card clothing, and similar fabrics of a kind used for other technical purposes, including narrow fabrics made of velvet impregnated with rubber, for covering weaving spindles (weaving beams);

(ii) Bolting cloth;

(iii) Filtering or straining cloth of a kind used in oil presses or the like, of textile material or of human hair;

(iv) Flat woven textile fabrics with multiple warp or weft, whether or not felted, impregnated or coated, of a kind used in machinery or for other technical purposes;

(v) Textile fabrics reinforced with metal, of a kind used for technical purposes;

(vi) Cords, braids and the like, whether or not coated, impregnated or reinforced with metal, of a kind used in industry as packing or lubricating materials;

(b) Textile articles (other than those of headings 59.08 to 59.10) of a kind used for technical purposes (for example, textile fabrics and felts, endless or fitted with linking devices, of a kind used in paper-making or similar machines (for example, for pulp or asbestos-cement), gaskets, washers, polishing discs and other machinery parts).

Chapter 60

Knitted or crocheted fabrics

Notes.

1.- This Chapter does not cover :

(a) Crochet lace of heading 58.04;

(b) Labels, badges or similar articles, knitted or crocheted, of heading 58.07; or

(c) Knitted or crocheted fabrics, impregnated, coated, covered or laminated, of Chapter 59. However, knitted or crocheted pile fabrics, impregnated, coated, covered or laminated, remain classified in heading 60.01.

2.- This Chapter also includes fabrics made of metal thread and of a kind used in apparel, as furnishing fabrics or for similar purposes.

3.- Throughout the Nomenclature any reference to "knitted" goods includes a reference to stitch-bonded goods in which the chain stitches are formed of textile yarn.

Subheading Note.

1.- Subheading 6005.35 covers fabrics of polyethylene monofilament or of polyester multifilament, weighing not less than 30 g/m^2 and not more than 55 g/m^2, having a mesh size of not less than 20 holes/cm^2 and not more than 100 holes/cm^2, and impregnated or coated with alpha-cypermethrin (ISO), chlorfenapyr (ISO), deltamethrin (INN, ISO), lambda-cyhalothrin (ISO), permethrin (ISO) or pirimiphos-methyl (ISO).

GENERAL

This Chapter covers textile fabrics which are manufactured, not like woven fabrics by interlacing warp and weft threads, but by the production of a series of interlinking loops. In general, these goods comprise :

(A) **Knitted fabrics** (weft knits and warp knits)

(I) Weft knits consist of a continuously winding thread, forming rows of loops lying in the same direction across the fabric, the loops in adjacent rows interlocking to form the mesh. There is free play between the stitches of these fabrics which allows them to stretch easily in all directions; when a thread is broken they tend to "ladder".

(II) Warp knits consist of a number of threads running in the direction of the warp (i.e., along the length of the fabric) each thread forming loops interlocking alternatively with loops in rows to the left and right. The loops in warp knits usually appear to be across the width of the fabric. In certain warp knitted fabrics the warp threads are in two series running diagonally in opposite directions to and from across the fabric. These fabrics do not "ladder". If a small square is cut from a warp knit fabric, yarns cannot easily be pulled from any side; when yarns can be pulled from the sample, they pull out in the warp direction (at right angles to the apparent rows of loops).

The warp knits further include :

(1) Stitch-bonded goods, **provided** they have chain stitches formed by textile yarn.

The stitch-bonding process uses a machine similar to a warp knitting machine which operates with pointed, open-hooked needles (sliding needles) and heald wire. These needles make it possible to form stitches with textile yarns which produce fabrics from a web of textile fibres or one or more layers of textile yarns, or from a ground of, for example, a

woven fabric or a sheet of plastics. In some cases, the stitches may form or fix a pile (whether or not cut). Quilted products assembled by stitch-bonding are **excluded** (**heading 58.11**).

(2) Fabrics made on a warp knitting machine so that the warp consists of a chain of crocheted loops which hold the weft yarns in position, sometimes forming a pattern.

All the fabrics of paragraphs (I) and (II) above may be of simple or more or less complex stitches; in certain cases they produce an open-work effect similar to lace, but nevertheless remain classified here. They can generally be distinguished from lace by their characteristic knitting stitch (particularly in the solid parts).

(B) **Crocheted fabrics**, formed by a continuous thread worked by hand with a crochet hook to produce a series of loops pulled one through the other and forming, according to the manner of grouping the loops, either a plain or an ornamental fabric of close or open-work design. Certain open-work fabrics have chains of loops formed into squares, hexagons or other ornamental patterns.

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The products of this Chapter may be made by hand on two or more knitting needles or with a crochet hook. They may also be made on rectilinear or circular knitting machines fitted with small specially shaped, hooked needles (bearded or spring needles, hosiery latch needles and tubular needles).

The headings of this Chapter cover knitted or crocheted fabrics, **regardless of which of the textiles of Section XI** are used to make the goods and whether or not they incorporate elastomeric yarn or rubber thread. It also includes knitted or crocheted fabrics made from **fine metallic threads provided** that such fabrics are clearly of a kind used for clothing, furnishing or similar purposes.

This Chapter covers knitted or crocheted fabrics in the piece (including tubular pieces) or simply cut to rectangular (including square) shape. These fabrics include plain and ribbed fabrics, and double fabrics assembled by sewing or gumming.

All these fabrics may be dyed, printed or made of different coloured yarns. The fabrics of headings 60.02 to 60.06 are sometimes teased so that the nature of the fabric is masked.

The Chapter **does not cover** :

(a) Stitch-bonded fabrics obtained by picking up textile fibres from a web of such fibres (**heading 56.02**).

(b) Nets and netting of **heading 56.08**.

(c) Knitted carpets and carpeting (**heading 57.05**).

(d) Net fabrics and crochet lace (**heading 58.04**).

(e) Pieces of fabric cut to rectangular (including square) shape which have been subjected to a further operation (e.g., hemming), articles produced in the finished state ready for use (e.g., mufflers) and fabrics knitted or crocheted to shape, whether presented as separate items or in the form of a number of items in the length (made up articles of **Chapters 61, 62** and **63**, in particular).

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Subheading Explanatory Note.

Subheadings 6005.21 to 6005.44 and 6006.21 to 6006.44

Knitted or crocheted fabrics, unbleached, bleached, dyed, of yarns of different colours, or printed

The provisions of Subheading Note 1 to Section XI, (d) to (h), apply *mutatis mutandis* to knitted or crocheted fabrics, unbleached, bleached, dyed, of yarns of different colours, or printed.

Fabrics consisting either wholly or partly of printed yarns of different colours or of printed yarns of different shades of the same colour are regarded as **fabrics of yarns of different colours** and not as dyed fabrics or printed fabrics.

Chapter 61

Articles of apparel and clothing accessories,

knitted or crocheted

Notes.

1.- This Chapter applies only to made up knitted or crocheted articles.

2.- This Chapter does not cover :

(a) Goods of heading 62.12;

(b) Worn clothing or other worn articles of heading 63.09; or

(c) Orthopaedic appliances, surgical belts, trusses or the like (heading 90.21).

3.- For the purposes of headings 61.03 and 61.04 :

(a) The term "suit" means a set of garments composed of two or three pieces made up, in respect of their outer surface, in identical fabric and comprising :

- one suit coat or jacket the outer shell of which, exclusive of sleeves, consists of four or more panels, designed to cover the upper part of the body, possibly with a tailored waistcoat in addition whose front is made from the same fabric as the outer surface of the other components of the set and whose back is made from the same fabric as the lining of the suit coat or jacket; and

- one garment designed to cover the lower part of the body and consisting of trousers, breeches or shorts (other than swimwear), a skirt or a divided skirt, having neither braces nor bibs.

All of the components of a "suit" must be of the same fabric construction, colour and composition; they must also be of the same style and of corresponding or compatible size. However, these components may have piping (a strip of fabric sewn into the seam) in a different fabric.

If several separate components to cover the lower part of the body are presented together (for example, two pairs of trousers or trousers and shorts, or a skirt or divided skirt and trousers), the constituent lower part shall be one pair of trousers or, in the case of women's or girls' suits, the skirt or divided skirt, the other garments being considered separately.

The term "suit" includes the following sets of garments, whether or not they fulfil all the above conditions :

- morning dress, comprising a plain jacket (cutaway) with rounded tails hanging well down at the back and striped trousers;

- evening dress (tailcoat), generally made of black fabric, the jacket of which is relatively short at the front, does not close and has narrow skirts cut in at the hips and hanging down behind;

- dinner jacket suits, in which the jacket is similar in style to an ordinary jacket (though perhaps revealing more of the shirt front), but has shiny silk or imitation silk lapels.

(b) The term "ensemble" means a set of garments (other than suits and articles of heading 61.07, 61.08 or 61.09), composed of several pieces made up in identical fabric, put up for retail sale, and comprising :

- one garment designed to cover the upper part of the body, with the exception of pullovers which may form a second upper garment in the sole context of twin sets, and of waistcoats which may also form a second upper garment, and

– one or two different garments, designed to cover the lower part of the body and consisting of trousers, bib and brace overalls, breeches, shorts (other than swimwear), a skirt or a divided skirt.

All of the components of an ensemble must be of the same fabric construction, style, colour and composition; they also must be of corresponding or compatible size. The term "ensemble" does not apply to track suits or ski suits, of heading 61.12.

4.- Headings 61.05 and 61.06 do not cover garments with pockets below the waist, with a ribbed waistband or other means of tightening at the bottom of the garment, or garments having an average of less than 10 stitches per linear centimeter in each direction counted on an area measuring at least 10 cm x 10 cm. Headings 61.05 does not cover sleeveless garments.

"Shirts" and "shirt-blouses" are garments designed to cover the upper part of the body, having long or short sleeves and a full or partial opening starting at the neckline. "Blouses" are loose-fitting garments also designed to cover the upper part of the body but may be sleeveless and with or without an opening at the neckline. "Shirts", "shirt-blouses" and "blouses" may also have a collar.

5.- Heading 61.09 does not cover garments with a drawstring, ribbed waistband or other means of tightening at the bottom of the garment.

6.- For the purposes of heading 61.11 :

(a) The expression "babies' garments and clothing accessories" means articles for young children of a body height not exceeding 86 cm;

(b) Articles which are, *prima facie*, classifiable both in heading 61.11 and in other headings of this Chapter are to be classified in heading 61.11.

7.- For the purposes of heading 61.12, "ski suits" means garments or sets of garments which, by their general appearance and texture, are identifiable as intended to be worn principally for skiing (cross-country or alpine). They consist either of :

(a) a "ski overall", that is, a one-piece garment designed to cover the upper and the lower parts of the body; in addition to sleeves and a collar the ski overall may have pockets or footstraps; or

(b) a "ski ensemble", that is, a set of garments composed of two or three pieces, put up for retail sale and comprising :

– one garment such as an anorak, wind-cheater, wind-jacket or similar article, closed by a slide fastener (zipper), possibly with a waistcoat in addition, and

– one pair of trousers whether or not extending above waist-level, one pair of breeches or one bib and brace overall.

The "ski ensemble" may also consist of an overall similar to the one mentioned in paragraph (a) above and a type of padded, sleeveless jacket worn over the overall.

All the components of a "ski ensemble" must be made up in a fabric of the same texture, style and composition whether or not of the same colour; they also must be of corresponding or compatible size.

8.- Garments which are, *prima facie*, classifiable both in heading 61.13 and in other headings of this Chapter, excluding heading 61.11, are to be classified in heading 61.13.

9.- Garments of this Chapter designed for left over right closure at the front shall be regarded as men's or boys' garments, and those designed for right over left closure at the front as women's or girls' garments. These provisions do not apply where the cut of the garment clearly indicates that it is designed for one or other of the sexes.

Garments which cannot be identified as either men's or boys' garments or as women's or girls' garments are to be classified in the headings covering women's or girls' garments.

10.- Articles of this Chapter may be made of metal thread.

GENERAL

This Chapter covers made up knitted or crocheted men's boys', women's or girls' articles of apparel and made up knitted or crocheted accessories for articles of apparel. It also includes made up knitted or crocheted parts of apparel or clothing accessories. However, it **does not include** brassières, girdles, corsets, braces, suspenders, garters or similar articles or parts thereof, knitted or crocheted (**heading 62.12**).

The classification of goods in this Chapter is not affected by the presence of parts or accessories of, for example, woven fabrics, furskin, feathers, leather, plastics or metal. Where, however, the presence of these materials constitutes **more than mere trimming** the articles are classified in accordance with the relative Chapter Notes (particularly Note 4 to Chapter 43 and Note 2 (b) to Chapter 67, relating to the presence of furskin and feathers, respectively), or failing that, according to the General Interpretative Rules.

Electrically heated articles remain in this Chapter.

By application of the provisions of Note 9 to this Chapter garments having a front opening which fastens or overlaps left over right are considered to be garments for men or boys. When the opening fastens or overlaps right over left these garments are considered to be garments for women or girls.

These provisions do not apply where the cut of the garment clearly indicates that it is designed for one or the other of the sexes. Garments which cannot be identified as either men's or boys' garments or women's or girls' garments are to be classified in the headings covering women's or girls' garments.

By application of Note 14 to Section XI, garments of different headings are to be classified in their own headings even if put up in sets for retail sale. This, however, does not apply to garments put up in sets which are specifically mentioned in the heading texts, for example, suits, pyjamas, swimwear. It should be noted that, for the application of Note 14 to Section XI, the expression "textile garments" means garments of headings 61.01 to 61.14.

This Chapter also covers unfinished or incomplete articles of the kind described therein, including shaped knitted or crocheted fabric for making such articles. Provided these products have the essential character of the articles concerned, they fall in the same headings as the finished articles. However, crocheted parts of garments or of clothing accessories (**other than** those of **heading 62.12**) are classified in **heading 61.17**.

Garments, clothing, accessories, or parts thereof, knitted or crocheted to shape, whether presented as separate items or in the form of a number of items in the length, are regarded as made up articles (Notes 7 (b) and 7 (g) to Section XI).

The Chapter also **excludes** :

(a) Articles of apparel and clothing accessories of **heading 39.26, 40.15, 42.03** or **68.12**.

(b) Pieces of knitted or crocheted fabric which have undergone some working (such as hemming or the formation of necklines), intended for the manufacture of garments but not yet sufficiently completed to be identifiable as garments or parts of garments (**heading 63.07**).

(c) Worn clothing and other worn articles of **heading 63.09**.

(d) Garments for dolls (**heading 95.03**).

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Subheading Explanatory Note.

Classification of articles made from quilted textile products in the piece of heading 58.11

Articles made from the quilted textile products in the piece of heading 58.11 are to be classified within the subheadings of the headings of this Chapter under the provisions of Subheading Note 2 to Section XI. For the purposes of their classification, it is the textile material of the outer fabric which

gives these articles their essential character. This means that where, for example, a man's quilted anorak has a knitted outer fabric of 60 % cotton and 40 % polyester, the garment falls in subheading 6101.20. It should be noted that, even if the outer fabric by itself falls in heading 59.03, 59.06 or 59.07, the garment does not fall in heading 61.13.

Chapter 62

Articles of apparel and clothing accessories, not knitted or crocheted

Notes.

1.- This Chapter applies only to made up articles of any textile fabric other than wadding, excluding knitted or crocheted articles (other than those of heading 62.12).

2.- This Chapter does not cover :

(a) Worn clothing or other worn articles of heading 63.09; or

(b) Orthopaedic appliances, surgical belts, trusses or the like (heading 90.21).

3.- For the purposes of headings 62.03 and 62.04 :

(a) The term "suit" means a set of garments composed of two or three pieces made up, in respect of their outer surface, in identical fabric and comprising :

- one suit coat or jacket the outer shell of which, exclusive of sleeves, consists of four or more panels, designed to cover the upper part of the body, possibly with a tailored waistcoat in addition whose front is made from the same fabric as the outer surface of the other components of the set and whose back is made from the same fabric as the lining of the suit coat or jacket; and

- one garment designed to cover the lower part of the body and consisting of trousers, breeches or shorts (other than swimwear), a skirt or a divided skirt, having neither braces nor bibs.

All of the components of a "suit" must be of the same fabric construction, colour and composition; they must also be of the same style and of corresponding or compatible size. However, these components may have piping (a strip of fabric sewn into the seam) in a different fabric.

If several separate components to cover the lower part of the body are presented together (for example, two pairs of trousers or trousers and shorts, or a skirt or divided skirt and trousers), the constituent lower part shall be one pair of trousers or, in the case of women's or girls' suits, the skirt or divided skirt, the other garments being considered separately.

The term "suit" includes the following sets of garments, whether or not they fulfil all the above conditions :

- morning dress, comprising a plain jacket (cutaway) with rounded tails hanging well down at the back and striped trousers;

- evening dress (tailcoat), generally made of black fabric, the jacket of which is relatively short at the front, does not close and has narrow skirts cut in at the hips and hanging down behind;

- dinner jacket suits, in which the jacket is similar in style to an ordinary jacket (though perhaps revealing more of the shirt front), but has shiny silk or imitation silk lapels.

(b) The term "ensemble" means a set of garments (other than suits and articles of heading 62.07 or 62.08) composed of several pieces made up in identical fabric, put up for retail sale, and comprising :

- one garment designed to cover the upper part of the body, with the exception of waistcoats which may also form a second upper garment, and

- one or two different garments, designed to cover the lower part of the body and consisting of trousers, bib and brace overalls, breeches, shorts (other than swimwear), a skirt or a divided skirt.

All of the components of an ensemble must be of the same fabric construction, style, colour and composition; they also must be of corresponding or compatible size. The term "ensemble" does not apply to track suits or ski suits, of heading 62.11.

4.- Headings 62.05 and 62.06 do not cover garments with pockets below the waist, with a ribbed waistband or other means of tightening at the bottom of the garment. Heading 62.05 does not cover sleeveless garments.

"Shirts" and "shirt-blouses" are garments designed to cover the upper part of the body, having long or short sleeves and a full or partial opening starting at the neckline. "Blouses" are loose-fitting garments also designed to cover the upper part of the body but may be sleeveless and with or without an opening at the neckline. "Shirts", "shirt-blouses" and "blouses" may also have a collar.

5.- For the purposes of heading 62.09 :

(a) The expression "babies' garments and clothing accessories" means articles for young children of a body height not exceeding 86 cm;

(b) Articles which are, *prima facie*, classifiable both in heading 62.09 and in other headings of this Chapter are to be classified in heading 62.09.

6.- Garments which are, *prima facie*, classifiable both in heading 62.10 and in other headings of this Chapter, excluding heading 62.09, are to be classified in heading 62.10.

7.- For the purposes of heading 62.11, "ski suits" means garments or sets of garments which, by their general appearance and texture, are identifiable as intended to be worn principally for skiing (cross-country or alpine). They consist either of :

(a) a "ski overall", that is, a one-piece garment designed to cover the upper and the lower parts of the body; in addition to sleeves and a collar the ski overall may have pockets or footstraps; or

(b) a "ski ensemble", that is, a set of garments composed of two or three pieces, put up for retail sale and comprising :

- one garment such as an anorak, wind-cheater, wind-jacket or similar article, closed by a slide fastener (zipper), possibly with a waistcoat in addition, and

- one pair of trousers whether or not extending above waist-level, one pair of breeches or one bib and brace overall.

The "ski ensemble" may also consist of an overall similar to the one mentioned in paragraph (a) above and a type of padded, sleeveless jacket worn over the overall.

All the components of a "ski ensemble" must be made up in a fabric of the same texture, style and composition whether or not of the same colour; they also must be of corresponding or compatible size.

8.- Scarves and articles of the scarf type, square or approximately square, of which no side exceeds 60 cm, are to be classified as handkerchiefs (heading 62.13). Handkerchiefs of which any side exceeds 60 cm are to be classified in heading 62.14.

9.- Garments of this Chapter designed for left over right closure at the front shall be regarded as men's or boys' garments, and those designed for right over left closure at the front as women's or girls' garments. These provisions do not apply where the cut of the garment clearly indicates that it is designed for one or other of the sexes.

Garments which cannot be identified as either men's or boys' garments or as women's or girls' garments are to be classified in the headings covering women's or girls' garments.

10.- Articles of this Chapter may be made of metal thread.

GENERAL

This Chapter covers men's, women's or children's articles of apparel, clothing accessories and parts of apparel or of clothing accessories, made up of the fabrics (excluding wadding but including felt or nonwovens) of Chapters 50 to 56, 58 and 59. With the **exception** of the articles of heading 62.12, articles of apparel, clothing accessories and parts made of knitted or crocheted material are **excluded** from this Chapter.

The classification of goods in this Chapter is not affected by the presence of parts or accessories of, for example, knitted or crocheted fabrics, furskin, feather, leather, plastics or metal. Where, however, the presence of such materials constitutes **more than mere trimming** the articles are classified in accordance with the relative Chapter Notes (particularly Note 4 to Chapter 43 and Note 2 (b) to Chapter 67, relating to the presence of furskin and feathers, respectively), or failing that, according to the General Interpretative Rules.

Electrically heated articles remain in this Chapter.

By application of the provisions of Note 9 to this Chapter garments having a front opening which fastens or overlaps left over right are considered to be garments for men or boys. When the opening fastens or overlaps right over left these garments are considered to be garments for women or girls.

These provisions do not apply where the cut of the garment clearly indicates that it is designed for one or the other of the sexes. Garments which cannot be identified as either men's or boys' garments or women's or girls' garments are to be classified in the headings covering women's or girls' garments.

By application of Note 14 to Section XI, garments of different headings are to be classified in their own headings even if put up in sets for retail sale. This, however, does not apply to garments put up in sets which are specifically mentioned in the heading texts, for example, suits, pyjamas, swimwear. It should be noted that, for the application of Note 14 to Section XI, the expression "textile garments" means garments of headings 62.01 to 62.11.

This Chapter also covers unfinished or incomplete articles of the kind described therein, including shaped textile fabric for making such articles and shaped knitted or crocheted fabrics for making articles or parts of articles of heading 62.12. Provided these products have the essential character of the articles concerned, they are classified in the same headings as the finished articles. However, parts of garments or of clothing accessories, not knitted or crocheted (**other than** those of **heading 62.12**) are classified in **heading 62.17**.

The Chapter also **excludes** :

(a) Articles of apparel and clothing accessories of **heading 39.26**, **40.15**, **42.03** or **68.12**.

(b) Pieces of textile fabric which have undergone some working (such as hemming or the formation of necklines), intended for the manufacture of garments but not yet sufficiently completed to be identifiable as garments or parts of garments (**heading 63.07**).

(c) Worn clothing and other worn articles of **heading 63.09**.

(d) Garments for dolls (**heading 95.03**).

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Subheading Explanatory Note.

Classification of articles made from quilted textile products in the piece of heading 58.11

Articles made from the quilted textile products in the piece of heading 58.11 are to be classified within the subheadings of the headings of this Chapter under the provisions of Subheading Note 2 to Section XI. For the purposes of their classification, it is the textile material of the outer fabric which gives these articles their essential character. This means that where, for example, a man's quilted anorak has an outer fabric of 60 % cotton and 40 % polyester, the garment falls in subheading 6201.30. It should be noted that, even if this outer fabric by itself falls in heading 59.03, 59.06 or 59.07, the garment does not fall in heading 62.10.

Chapter 63

Other made up textile articles; sets; worn clothing and worn textile articles; rags

Notes.

1.- Sub-Chapter I applies only to made up articles, of any textile fabric.

2.- Sub-Chapter I does not cover :

(a) Goods of Chapters 56 to 62; or

(b) Worn clothing or other worn articles of heading 63.09.

3.- Heading 63.09 applies only to the following goods :

(a) Articles of textile materials :

(i) Clothing and clothing accessories, and parts thereof;

(ii) Blankets and travelling rugs;

(iii) Bed linen, table linen, toilet linen and kitchen linen;

(iv) Furnishing articles, other than carpets of headings 57.01 to 57.05 and tapestries of heading 58.05;

(b) Footwear and headgear of any material other than asbestos.

In order to be classified in this heading, the articles mentioned above must comply with both of the following requirements :

(i) they must show signs of appreciable wear, and

(ii) they must be presented in bulk or in bales, sacks or similar packings.

Subheading Note.

1.- Subheading 6304.20 covers articles made from warp knit fabrics, impregnated or coated with alpha-cypermethrin (ISO), chlorfenapyr (ISO), deltamethrin (INN, ISO), lambda-cyhalothrin (ISO), permethrin (ISO) or pirimiphos-methyl (ISO).

GENERAL

This Chapter includes :

(1) Under headings 63.01 to 63.07 (sub-Chapter I) made up textile articles of any textile fabric (woven or knitted fabric, felt, nonwovens, etc.) which are **not** more specifically described in other Chapters of Section XI or elsewhere in the Nomenclature. (The expression "made up textile articles" means articles made up in the sense defined in Note 7 to Section XI (see also Part (II) of the General Explanatory Note to Section XI.)

This sub-Chapter includes articles of tulles or other net fabrics, lace or embroidery, whether made directly to shape or made up from the tulles or other net fabrics, lace or embroidered fabrics of heading 58.04 or 58.10.

The classification of articles in this sub-Chapter is not affected by the presence of minor trimmings or accessories of furskin, metal (including precious metal), leather, plastics, etc.

Where, however, the presence of these other materials constitutes **more than** mere trimming or accessories, the articles are classified in accordance with the relative Section or Chapter Notes (General Interpretative Rule 1), or in accordance with the other General Interpretative Rules as the case may be.

In particular, this sub-Chapter **does not include** :

(a) Articles of wadding of **heading 56.01**.

(b) Nonwovens merely cut into squares or rectangles (e.g., disposable bed sheets) (**heading 56.03**).

(c) Made up nets of **heading 56.08**.

(d) Motifs of lace or embroidery of **heading 58.04** or **58.10**.

(e) Articles of apparel and clothing accessories of **Chapter 61** or **62**.

(2) Under heading 63.08 (sub-Chapter II) certain sets consisting of woven fabric and yarn, whether or not with accessories, for making up into rugs, tapestries, embroidered table cloths or serviettes, or similar textile articles, put up in packings for retail sale.

(3) Under heading 63.09 or 63.10 (sub-Chapter III) worn clothing and other worn articles as defined in Chapter Note 3, and used or new rags, scrap twine, etc.

Chapter 64

Footwear, gaiters and the like; parts of such articles

Notes.

1.- This Chapter does not cover :

(a) Disposable foot or shoe coverings of flimsy material (for example, paper, sheeting of plastics) without applied soles. These products are classified according to their constituent material;

(b) Footwear of textile material, without an outer sole glued, sewn or otherwise affixed or applied to the upper (Section XI);

(c) Worn footwear of heading 63.09;

(d) Articles of asbestos (heading 68.12);

(e) Orthopaedic footwear or other orthopaedic appliances, or parts thereof (heading 90.21); or

(f) Toy footwear or skating boots with ice or roller skates attached; shin-guards or similar protective sportswear (Chapter 95).

2.- For the purposes of heading 64.06, the term "parts" does not include pegs, protectors, eyelets, hooks, buckles, ornaments, braid, laces, pompons or other trimmings (which are to be classified in their appropriate headings) or buttons or other goods of heading 96.06.

3.- For the purposes of this Chapter :

(a) the terms "rubber" and "plastics" include woven fabrics or other textile products with an external layer of rubber or plastics being visible to the naked eye; for the purpose of this provision, no account should be taken of any resulting change of colour; and

(b) the term "leather" refers to the goods of headings 41.07 and 41.12 to 41.14.

4.- Subject to Note 3 to this Chapter :

(a) The material of the upper shall be taken to be the constituent material having the greatest external surface area, no account being taken of accessories or reinforcements such as ankle patches, edging, ornamentation, buckles, tabs, eyelet stays or similar attachments;

(b) The constituent material of the outer sole shall be taken to be the material having the greatest surface area in contact with the ground, no account being taken of accessories or reinforcements such as spikes, bars, nails, protectors or similar attachments.

Subheading Note.

1.- For the purposes of subheadings 6402.12, 6402.19, 6403.12, 6403.19 and 6404.11, the expression "sports footwear" applies only to :

(a) Footwear which is designed for a sporting activity and has, or has provision for the attachment of, spikes, sprigs, stops, clips, bars or the like;

(b) Skating boots, ski-boots and cross-country ski footwear, snowboard boots, wrestling boots, boxing boots and cycling shoes.

GENERAL

With certain **exceptions** (see particularly those mentioned at the end of this General Note) this Chapter covers, under headings 64.01 to 64.05, various types of footwear (including overshoes) irrespective of their shape and size, the particular use for which they are designed, their method of manufacture or the materials of which they are made.

For the purposes of this Chapter, the term "footwear" **does not**, however, **include** disposable foot or shoe coverings of flimsy material (paper, sheeting of plastics, etc.) without applied soles. These products are classified according to their constituent material.

(A) Footwear may range from sandals with uppers consisting simply of adjustable laces or ribbons to thigh-boots (the uppers of which cover the leg and thigh, and which may have straps, etc., for fastening the uppers to the waist for better support). The Chapter includes :

(1) Flat or high-heeled shoes for ordinary indoor or outdoor wear.

(2) Ankle-boots, half-boots, knee-boots and thigh-boots.

(3) Sandals of various types, "espadrilles" (shoes with canvas uppers and soles of plaited vegetable material), tennis shoes, jogging shoes, bathing slippers and other casual footwear.

(4) Special sports footwear which is designed for a sporting activity and has, or has provision for, the attachment of spikes, sprigs, stops, clips, bars or the like and skating boots, ski-boots and cross-country ski footwear, snowboard boots, wrestling boots, boxing boots and cycling shoes (see Subheading Note 1 to the Chapter).

Roller-skating or ice-skating boots with skates fixed to the soles, are, however, **excluded** (**heading 95.06**).

(5) Dancing slippers.

(6) House footwear (e.g., bedroom slippers).

(7) Footwear obtained in a single piece, particularly by moulding rubber or plastics or by carving from a solid piece of wood.

(8) Other footwear specially designed to protect against oil, grease, chemicals or cold.

(9) Overshoes worn over other footwear; in some cases, they are heel-less.

(10) Disposable footwear, with applied soles, generally designed to be used only once.

(B) The footwear covered by this Chapter may be of any material (rubber, leather, plastics, wood, cork, textiles including felt and nonwovens, furskin, plaiting materials, etc.) **except** asbestos, and may contain, in any proportion, the materials of Chapter 71.

Within the limits of the Chapter itself, however, it is the constituent material of the outer sole and of the upper which determines classification in headings 64.01 to 64.05.

(C) The term "outer sole" as used in headings 64.01 to 64.05 means that part of the footwear (other than an attached heel) which, when in use, is in contact with the ground. The constituent material of the outer sole for purposes of classification shall be taken to be the material having the greatest surface area in contact with the ground. In determining the constituent material of the outer sole, no account should be taken of attached accessories or reinforcements which partly cover the sole (see Note 4 (b) to this Chapter). These accessories or reinforcements include spikes,

bars, nails, protectors or similar attachments (including a thin layer of textile flocking (e.g., for creating a design) or a detachable textile material, applied to but not embedded in the sole).

In the case of footwear made in a single piece (e.g., clogs) without applied soles, no separate outer sole is required; such footwear is classified with reference to the constituent material of its lower surface.

(D) For the purposes of the classification of footwear in this Chapter, the constituent material of the uppers must also be taken into account. The upper is the part of the shoe or boot above the sole. However, in certain footwear with plastic moulded soles or in shoes of the American Indian moccasin type, a single piece of material is used to form the sole and either the whole or part of the upper, thus making it difficult to identify the demarcation between the outer sole and the upper. In such cases, the upper shall be considered to be that portion of the shoe which covers the sides and top of the foot. The size of the uppers varies very much between different types of footwear, from those covering the foot and the whole leg, including the thigh (for example, fishermen's boots), to those which consist simply of straps or thongs (for example, sandals).

If the upper consists of two or more materials, classification is determined by the constituent material which has the greatest external surface area, no account being taken of accessories or reinforcements such as ankle patches, protective or ornamental strips or edging, other ornamentation (e.g., tassels, pompons or braid), buckles, tabs, eyelet stays, laces or slide fasteners. The constituent material of any lining has no effect on classification.

(E) It should be noted that for the purposes of this Chapter, the terms "rubber" and "plastics" include woven fabrics or other textile products with an external layer of rubber or plastics being visible to the naked eye, no account being taken of any resulting change of colour.

(F) Subject to the provisions of (E) above, for the purposes of this Chapter the expression "textile materials" covers the fibres, yarns, fabrics, felts, nonwovens, twine, cordage, ropes, cables, etc., of Chapters 50 to 60.

(G) For the purposes of this Chapter, the term "leather" refers to the goods of headings 41.07 and 41.12 to 41.14.

(H) Boot or shoe bottoms, consisting of an outer sole affixed to an incomplete or unfinished upper, which do not cover the ankle are to be regarded as footwear (and not as parts of footwear). These articles may be finished simply by trimming their top edge with a border and adding a fastening device.

This Chapter also **excludes** :

(a) Footwear of textile material, without an outer sole glued, sewn or otherwise affixed or applied to the upper (**Section XI**).

(b) Footwear showing signs of appreciable wear and presented in bulk or in bales, sacks or similar packings (**heading 63.09**).

(c) Footwear of asbestos (**heading 68.12**).

(d) Orthopaedic footwear (**heading 90.21**).

(e) Toy footwear and skating boots with ice or roller skates attached; shin-guards and similar protective sportswear (**Chapter 95**).

Chapter 65

Headgear and parts thereof

Notes.

1.- This Chapter does not cover :

(a) Worn headgear of heading 63.09;

(b) Asbestos headgear (heading 68.12); or

(c) Dolls' hats, other toy hats or carnival articles of Chapter 95.

2.- Heading 65.02 does not cover hat-shapes made by sewing other than those obtained simply by sewing strips in spirals.

GENERAL

With the **exception** of the articles listed below this Chapter covers hat-shapes, hat-forms, hat bodies and hoods, and hats and other headgear of all kinds, irrespective of the materials of which they are made and of their intended use (daily wear, theatre, disguise, protection, etc.).

It also covers hair-nets of any material and certain specified fittings for headgear.

The hats and other headgear of this Chapter may incorporate trimmings of various kinds and of any material, including trimmings made of the materials of Chapter 71.

This Chapter **does not include** :

(a) Headgear for animals (**heading 42.01**).

(b) Shawls, scarves, mantillas, veils and the like (**heading 61.17** or **62.14**).

(c) Headgear showing signs of appreciable wear and presented in bulk, bales, sacks or similar bulk packings (**heading 63.09**).

(d) Wigs and the like (**heading 67.04**).

(e) Asbestos headgear (**heading 68.12**).

(f) Dolls' hats, other toy hats or carnival articles (**Chapter 95**).

(g) Various articles used as hat trimmings (buckles, clasps, badges, feathers, artificial flowers, etc.) when not incorporated in headgear (appropriate headings).

Chapter 66

Umbrellas, sun umbrellas, walking-sticks, seat-sticks, whips, riding-crops, and parts thereof

Notes.

1.- This Chapter does not cover :

(a) Measure walking-sticks or the like (heading 90.17);

(b) Firearm-sticks, sword-sticks, loaded walking-sticks or the like (Chapter 93); or

(c) Goods of Chapter 95 (for example, toy umbrellas, toy sun umbrellas).

2.- Heading 66.03 does not cover parts, trimmings or accessories of textile material, or covers, tassels, thongs, umbrella cases or the like, of any material. Such goods presented with, but not fitted to, articles of heading 66.01 or 66.02 are to be classified separately and are not to be treated as forming part of those articles.

Chapter 67

Prepared feathers and down and articles made of feathers or of down; artificial flowers; articles of human hair

Notes.

1.- This Chapter does not cover :

(a) Filtering and straining cloth of human hair (heading 59.11);

(b) Floral motifs of lace, of embroidery or other textile fabric (Section XI);

(c) Footwear (Chapter 64);

(d) Headgear or hair-nets (Chapter 65);

(e) Toys, sports requisites or carnival articles (Chapter 95); or

(f) Feather dusters, powder-puffs or hair sieves (Chapter 96).

2.- Heading 67.01 does not cover :

(a) Articles in which feathers or down constitute only filling or padding (for example, bedding of heading 94.04);

(b) Articles of apparel or clothing accessories in which feathers or down constitute no more than mere trimming or padding; or

(c) Artificial flowers or foliage or parts thereof or made up articles of heading 67.02.

3.- Heading 67.02 does not cover :

(a) Articles of glass (Chapter 70); or

(b) Artificial flowers, foliage or fruit of pottery, stone, metal, wood or other materials, obtained in one piece by moulding, forging, carving, stamping or other process, or consisting of parts assembled otherwise than by binding, glueing, fitting into one another or similar methods.

Chapter 68

Articles of stone, plaster, cement, asbestos, mica or similar materials

Notes.

1.- This Chapter does not cover :

(a) Goods of Chapter 25;

(b) Coated, impregnated or covered paper and paperboard of heading 48.10 or 48.11 (for example, paper and paperboard coated with mica powder or graphite, bituminised or asphalted paper and paperboard);

(c) Coated, impregnated or covered textile fabric of Chapter 56 or 59 (for example, fabric coated or covered with mica powder, bituminised or asphalted fabric);

(d) Articles of Chapter 71;

(e) Tools or parts of tools, of Chapter 82;

(f) Lithographic stones of heading 84.42;

(g) Electrical insulators (heading 85.46) or fittings of insulating material of heading 85.47;

(h) Dental burrs (heading 90.18);

(ij) Articles of Chapter 91 (for example, clocks and clock cases);

(k) Articles of Chapter 94 (for example, furniture, luminaires and lighting fittings, prefabricated buildings);

(l) Articles of Chapter 95 (for example, toys, games and sports requisites);

(m) Articles of heading 96.02, if made of materials specified in Note 2 (b) to Chapter 96, or of heading 96.06 (for example, buttons), of heading 96.09 (for example, slate pencils), heading 96.10 (for example, drawing slates) or of heading 96.20 (monopods, bipods, tripods and similar articles); or

(n) Articles of Chapter 97 (for example, works of art).

2.- In heading 68.02 the expression "worked monumental or building stone" applies not only to the varieties of stone referred to in heading 25.15 or 25.16 but also to all other natural stone (for example, quartzite, flint, dolomite and steatite) similarly worked; it does not, however, apply to slate.

GENERAL

This Chapter covers :

(A) Various products of Chapter 25 worked to a degree **beyond** that permitted by Note 1 to that Chapter.

(B) The products **excluded** from Chapter 25 by Note 2 (e) to that Chapter.

(C) Certain goods made from mineral materials of Section V.

(D) Goods made from certain of the materials of Chapter 28 (e.g., the artificial abrasives).

Some of the goods in category (C) or (D) may be agglomerated by means of binders, contain fillers, be reinforced, or in the case of products such as abrasives or mica be put up on a backing or support of textile material, paper, paperboard or other materials.

Most of these products and finished articles are obtained by operations (e.g., shaping, moulding), which alter the form rather than the nature of the constituent material. Some are obtained by agglomeration (e.g., articles of asphalt, or certain goods such as grinding wheels which are agglomerated by vitrification of the binding material); others may have been hardened in autoclaves (sand-lime bricks). The Chapter also includes certain goods obtained by processes involving a more radical transformation of the original raw material (e.g., fusion to produce slag wool, fused basalt, etc.).

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Articles obtained by firing previously shaped earths (i.e., ceramic articles) generally fall in **Chapter 69**, **except** in the case of ceramic abrasive articles of **heading 68.04**. Glass and glassware, including articles of glass-ceramics, fused quartz or other fused silica, are classified in **Chapter 70**.

The Chapter further **excludes**, in addition to certain goods separately referred to in **exclusions** to the following Explanatory Notes, the following :

(a) Diamonds, other precious stones and semi-precious stones (natural, synthetic or reconstructed), articles thereof and all other articles of **Chapter 71**.

(b) Lithographic stones of **heading 84.42**.

(c) Panels (e.g., of slate, marble, asbestos-cement) drilled or otherwise clearly prepared as control panels (**heading 85.38**); also insulators and fittings of insulating material, of **heading 85.46** or **85.47**.

(d) Articles of **Chapter 94** (e.g., furniture, luminaires and lighting fittings, prefabricated buildings).

(e) Toys, games and sports requisites (**Chapter 95**).

(f) Mineral carving materials specified in Note 2 (b) to Chapter 96, worked or in the form of articles (**heading 96.02**).

(g) Original sculptures and statuary, collectors' pieces and antiques of **Chapter 97**.

Chapter 69

Ceramic products

Notes.

1.- This Chapter applies only to ceramic products which have been fired after shaping :

(a) Headings 69.04 to 69.14 apply only to such products other than those classifiable in headings 69.01 to 69.03;

(b) Articles heated to temperatures less than 800 °C for purposes such as curing of resins, accelerating hydration reactions, or for the removal of water or other volatile components, are not considered to be fired. Such articles are excluded from Chapter 69; and

(c) Ceramic articles are obtained by firing inorganic, non-metallic materials which have been prepared and shaped previously at, in general, room temperature. Raw materials comprise, inter alia, clays, siliceous materials including fused silica, materials with a high melting point, such as oxides, carbides, nitrides, graphite or other carbon, and in some cases binders such as refractory clays or phosphates.

2.- This Chapter does not cover :

(a) Products of heading 28.44;

(b) Articles of heading 68.04;

(c) Articles of Chapter 71 (for example, imitation jewellery);

(d) Cermets of heading 81.13;

(e) Articles of Chapter 82;

(f) Electrical insulators (heading 85.46) or fittings of insulating material of heading 85.47;

(g) Artificial teeth (heading 90.21);

(h) Articles of Chapter 91 (for example, clocks and clock cases);

(ij) Articles of Chapter 94 (for example, furniture, luminaires and lighting fittings, prefabricated buildings);

(k) Articles of Chapter 95 (for example, toys, games and sports requisites);

(l) Articles of heading 96.06 (for example, buttons) or of heading 96.14 (for example, smoking pipes); or

(m) Articles of Chapter 97 (for example, works of art).

GENERAL

The term "ceramic products" applies to products obtained :

(A) By firing inorganic, non-metallic materials which have been prepared and shaped previously at, in general, room temperature. Raw materials comprise, inter alia, clays, siliceous materials including fused silica, materials with a high melting point, such as oxides, carbides, nitrides, graphite or other carbon, and in some cases binders such as refractory clays or phosphates.

(B) From rock (e.g., steatite), fired after shaping.

The manufacturing process of the ceramic products referred to in paragraph (A) above (whatever their constituent material) comprises the following main stages :

(i) **Preparation of the paste (or body).**

In some cases (e.g., manufacture of sintered alumina articles) the constituent material is used directly in powder form with the addition of a small amount of lubricant. In most cases, however, it is first made into a paste. This involves measuring and mixing the various constituents and, where necessary, milling, sieving, filter-pressing, kneading, maturing and de-airing. Some refractory products are also made from a blend of graded aggregate and fines, along with a small amount of liquid binder, which may be aqueous (e.g., tar, resin materials, phosphoric acid, lignin liquor).

(ii) **Shaping.**

The prepared powder or paste is then shaped as nearly as possible to the desired form.

This is done by extrusion (through an extrusion die), pressing, moulding, casting or hand-shaping, followed in some cases by some degree of machining.

(iii) **Drying** the resulting articles.

(iv) **Firing.**

In this operation, the "green ware" is heated to a temperature of 800 °C or higher according to the nature of the product. After firing, the grains are closely bound together as a result of diffusion, chemical transformation or partial fusion.

Articles heated to temperatures less than 800 °C for purposes such as curing of resins, accelerating hydration reactions, or for the removal of water or other volatile components, are **not considered to be fired** for the purposes of Chapter Note 1. Such articles are **excluded** from **Chapter 69.**

(v) **Finishing.**

The finishing processes depend on the intended use of the ceramic product. Sometimes machine finishing to a high degree of precision is necessary. Finishing may also include marking, metallising or impregnation.

Ceramic products are also very often coloured (either in the body or superficially), decorated or glazed by using, as appropriate, specially prepared colours or opacifiers, vitrifiable enamels or glazes, slips, lustres, etc.

Firing, after shaping, is the essential distinction between the goods of this Chapter and the mineral or stone articles classified in Chapter 68 which are generally not fired, and the glass articles of Chapter 70 in which the vitrifiable compound has undergone complete fusion.

According to the composition and the firing process adopted, the following products are obtained :

I. Goods of siliceous fossil meals or of similar siliceous earths and refractory goods of sub-Chapter I (headings 69.01 to 69.03).

II. Other ceramic products, consisting essentially of common pottery, stoneware, earthenware, porcelain or china, etc. constituting sub-Chapter II (headings 69.04 to 69.14).

This Chapter **excludes** :

(a) Broken pottery and broken pieces of brick (**heading 25.30**).

(b) Products of **heading 28.44**.

(c) Blocks, plates, bars and similar semi-manufactures of graphite or of other carbon, or metallo-graphitic or other grades, used, e.g., for cutting into electrical brushes (**heading 38.01**) (see corresponding Explanatory Note).

(d) Unmounted cut elements of piezo-electric ceramic materials, e.g., of barium titanate or of lead zirconate titanate (**heading 38.24**).

(e) Articles of **heading 68.04**.

(f) Glass-ceramic products (**Chapter 70**).

(g) Sintered mixtures of base metal **powders** and heterogeneous intimate base metal mixtures obtained by melting (**Section XV**).

(h) Cermets of **heading 81.13**.

(ij) Plates, sticks, tips and the like for tools, unmounted, of cermets (**heading 82.09**) and other articles of **Chapter 82**.

Chapter 70

Glass and glassware

Notes.

1.- This Chapter does not cover :

(a) Goods of heading 32.07 (for example, vitrifiable enamels and glazes, glass frit, other glass in the form of powder, granules or flakes);

(b) Articles of Chapter 71 (for example, imitation jewellery);

(c) Optical fibre cables of heading 85.44, electrical insulators (heading 85.46) or fittings of insulating material of heading 85.47;

(d) Front windscreens (windshields), rear windows and other windows, framed, for vehicles of Chapters 86 to 88;

(e) Front windscreens (windshields), rear windows and other windows, whether or not framed, incorporating heating devices or other electrical or electronic devices, for vehicles of Chapters 86 to 88;

(f) Optical fibres, optically worked optical elements, hypodermic syringes, artificial eyes, thermometers, barometers, hydrometers or other articles of Chapter 90;

(g) Luminaires or lighting fittings, illuminated signs, illuminated name-plates or the like, having a permanently fixed light source, or parts thereof of heading 94.05;

(h) Toys, games, sports requisites, Christmas tree ornaments or other articles of Chapter 95 (excluding glass eyes without mechanisms for dolls or for other articles of Chapter 95); or

(ij) Buttons, fitted vacuum flasks, scent or similar sprays or other articles of Chapter 96.

2.- For the purposes of headings 70.03, 70.04 and 70.05 :

(a) glass is not regarded as "worked" by reason of any process it has undergone before annealing;

(b) cutting to shape does not affect the classification of glass in sheets;

(c) the expression "absorbent, reflecting or non-reflecting layer" means a microscopically thin coating of metal or of a chemical compound (for example, metal oxide) which absorbs, for example, infra-red light or improves the reflecting qualities of the glass while still allowing it to retain a degree of transparency or translucency; or which prevents light from being reflected on the surface of the glass.

3.- The products referred to in heading 70.06 remain classified in that heading whether or not they have the character of articles.

4.- For the purposes of heading 70.19, the expression "glass wool" means :

(a) Mineral wools with a silica (SiO_2) content not less than 60 % by weight;

(b) Mineral wools with a silica (SiO_2) content less than 60 % but with an alkaline oxide (K_2O or Na_2O) content exceeding 5 % by weight or a boric oxide (B_2O_3) content exceeding 2 % by weight.

Mineral wools which do not comply with the above specifications fall in heading 68.06.

5.- Throughout the Nomenclature, the expression "glass" includes fused quartz and other fused silica.

Subheading Note.

1.- For the purposes of subheadings 7013.22, 7013.33, 7013.41 and 7013.91, the expression "lead crystal" means only glass having a minimum lead monoxide (PbO) content by weight of 24 %.

GENERAL

This Chapter covers glass in all forms and articles of glass (**other than** goods excluded by Note 1 to this Chapter or covered more specifically by other headings of the Nomenclature).

Glass (except fused quartz and other fused silica referred to below) is a fused homogeneous mixture, in varying proportions, of an alkali silicate (of sodium or potassium) with one or more silicates of calcium and lead, and accessorily of barium, aluminium, manganese, magnesium, etc.

There are many varieties of glass according to their composition (e.g., Bohemian glass, crown glass, lead crystal glass, flint glass, strass paste). These various types are non-crystalline (amorphous) and wholly transparent.

The various headings of this Chapter cover the corresponding articles irrespective of the variety of glass of which they consist.

Manufacturing processes vary considerably and include :

(A) **Casting** (e.g., for plate glass).

(B) **Rolling** (e.g., for plate glass or wired glass).

(C) **Floating** (for float glass).

(D) **Moulding**, whether or not combined with pressing, blowing or drawing (e.g., for the manufacture of bottles, tumblers, certain types of optical glass, ashtrays).

(E) **Blowing**, mechanical or non-mechanical, with or without moulds (e.g., for the manufacture of bottles, ampoules, ornaments and sometimes for the manufacture of sheet glass).

(F) **Drawing or extruding** (particularly for sheet glass, rods, tubes and piping, and fibre glass).

(G) **Pressing**, generally with moulds, frequently used as the manufacturing process for e.g., ashtrays, and also in combination with rolling (e.g., for figured rolled glass) or blowing (e.g., for bottles).

(H) **Lampworking**, with the aid of a blow lamp (for the manufacture of ampoules, fancy articles, etc., from glass rod or tubing).

(IJ) **Cutting out** the required articles from blanks, spheres, etc., obtained by any process (articles of fused quartz or other fused silica, in particular, are often obtained from blanks of solid or hollow section).

For **multicellular glass**, see the Explanatory Note to heading 70.16.

In certain cases the method of manufacturing the articles determines their classification in this Chapter. For example, heading 70.03 applies only to cast or rolled glass, and heading 70.04 only to drawn or blown glass.

*

* *

Note 5 to this Chapter provides that the expression "glass" includes fused quartz and other fused silica.

This Chapter also covers :

(1) **Milk or opal glasses** which are translucent and are obtained by adding materials such as fluorspar or bone ash (in the proportion of about 5 %) to the mass of the glass; the added material gives rise to partial crystallisation in the melt on cooling or reheating.

(2) **Special materials known as glass-ceramics**, in which the glass is converted into an almost wholly crystalline material by a process of controlled crystallisation. They are made by adding to

the glass batch nucleating agents which are often metal oxides (such as titanium dioxide and zirconium oxide) or metals (such as copper powder). After the article has been shaped by ordinary glass-making techniques, it is maintained at a temperature such as to ensure crystallisation of the glassy body around the nucleating crystals (devitrification). Glass-ceramics may be opaque or sometimes transparent. They have much better mechanical, electrical and heat-resistant properties than ordinary glass.

(3) **Glass having a low coefficient of expansion**, e.g., borosilicate glass.

Chapter 71

Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal, and articles thereof; imitation jewellery; coin

Notes.

1.- Subject to Note 1 (a) to Section VI and except as provided below, all articles consisting wholly or partly :

(a) Of natural or cultured pearls or of precious or semi-precious stones (natural, synthetic or reconstructed), or

(b) Of precious metal or of metal clad with precious metal, are to be classified in this Chapter.

2.- (A) Headings 71.13, 71.14 and 71.15 do not cover articles in which precious metal or metal clad with precious metal is present as minor constituents only, such as minor fittings or minor ornamentation (for example, monograms, ferrules and rims), and paragraph (b) of the foregoing Note does not apply to such articles (*).

(B) Heading 71.16 does not cover articles containing precious metal or metal clad with precious metal (other than as minor constituents).

3.- This Chapter does not cover :

(a) Amalgams of precious metal, or colloidal precious metal (heading 28.43);

(b) Sterile surgical suture materials, dental fillings or other goods of Chapter 30;

(c) Goods of Chapter 32 (for example, lustres);

(d) Supported catalysts (heading 38.15);

(e) Articles of heading 42.02 or 42.03 referred to in Note 3 (B) to Chapter 42;

(f) Articles of heading 43.03 or 43.04;

(g) Goods of Section XI (textiles and textile articles);

(h) Footwear, headgear or other articles of Chapter 64 or 65;

(ij) Umbrellas, walking-sticks or other articles of Chapter 66;

(k) Abrasive goods of heading 68.04 or 68.05 or Chapter 82, containing dust or powder of precious or semi-precious stones (natural or synthetic); articles of Chapter 82 with a working part of precious or semi-precious stones (natural, synthetic or reconstructed); machinery, mechanical appliances or electrical goods, or parts thereof, of Section XVI. However, articles and parts thereof, wholly of precious or semi-precious stones (natural, synthetic or reconstructed) remain classified in this Chapter, except unmounted worked sapphires and diamonds for styli (heading 85.22);

(l) Articles of Chapter 90, 91 or 92 (scientific instruments, clocks and watches, musical instruments);

(m) Arms or parts thereof (Chapter 93);

(n) Articles covered by Note 2 to Chapter 95;

(o) Articles classified in Chapter 96 by virtue of Note 4 to that Chapter; or

(p) Original sculptures or statuary (heading 97.03), collectors' pieces (heading 97.05) or antiques of an age exceeding one hundred years (heading 97.06), other than natural or cultured pearls or precious or semi-precious stones.

4.- (A) The expression "precious metal" means silver, gold and platinum.

(B) The expression "platinum" means platinum, iridium, osmium, palladium, rhodium and ruthenium.

(C) The expression "precious or semi-precious stones" does not include any of the substances specified in Note 2 (b) to Chapter 96.

5.- For the purposes of this Chapter, any alloy (including a sintered mixture and an inter-metallic compound) containing precious metal is to be treated as an alloy of precious metal if any one precious metal constitutes as much as 2 %, by weight, of the alloy. Alloys of precious metal are to be classified according to the following rules :

(a) An alloy containing 2 % or more, by weight, of platinum is to be treated as an alloy of platinum;

(b) An alloy containing 2 % or more, by weight, of gold but no platinum, or less than 2 %, by weight, of platinum, is to be treated as an alloy of gold;

(c) Other alloys containing 2 % or more, by weight, of silver are to be treated as alloys of silver.

6.- Except where the context otherwise requires, any reference in the Nomenclature to precious metal or to any particular precious metal includes a reference to alloys treated as alloys of precious metal or of the particular metal in accordance with the rules in Note 5 above, but not to metal clad with precious metal or to base metal or non-metals plated with precious metal.

7.- Throughout the Nomenclature the expression "metal clad with precious metal" means material made with a base of metal upon one or more surfaces of which there is affixed by soldering, brazing, welding, hot-rolling or similar mechanical means a covering of precious metal. Except where the context otherwise requires, the expression also covers base metal inlaid with precious metal.

8.- Subject to Note 1 (a) to Section VI, goods answering to a description in heading 71.12 are to be classified in that heading and in no other heading of the Nomenclature.

9.- For the purposes of heading 71.13, the expression "articles of jewellery" means :

(a) Any small objects of personal adornment (for example, rings, bracelets, necklaces, brooches, ear-rings, watch-chains, fobs, pendants, tie-pins, cuff-links, dress-studs, religious or other medals and insignia); and

(b) Articles of personal use of a kind normally carried in the pocket, in the handbag or on the person (for example, cigar or cigarette cases, snuff boxes, cachou or pill boxes, powder boxes, chain purses or prayer beads).

These articles may be combined or set, for example, with natural or cultured pearls, precious or semi-precious stones, synthetic or reconstructed precious or semi-precious stones, tortoise shell, mother-of-pearl, ivory, natural or reconstituted amber, jet or coral.

10.- For the purposes of heading 71.14, the expression "articles of goldsmiths' or silversmiths' wares" includes such articles as ornaments, tableware, toilet-ware, smokers' requisites and other articles of household, office or religious use.

11.- For the purposes of heading 71.17, the expression "imitation jewellery" means articles of jewellery within the meaning of paragraph (a) of Note 9 above (but not including buttons or other articles of heading 96.06, or dress-combs, hair-slides or the like, or hairpins, of heading 96.15), not incorporating natural or cultured pearls, precious or semi-precious stones (natural, synthetic or reconstructed) nor (except as plating or as minor constituents) precious metal or metal clad with precious metal.

Subheading Notes.

1.- For the purposes of subheadings 7106.10, 7108.11, 7110.11, 7110.21, 7110.31 and 7110.41, the expressions "powder" and "in powder form" mean products of which 90 % or more by weight passes through a sieve having a mesh aperture of 0.5 mm.

2.- Notwithstanding the provisions of Chapter Note 4 (B), for the purposes of subheadings 7110.11 and 7110.19, the expression "platinum" does not include iridium, osmium, palladium, rhodium or ruthenium.

3.- For the classification of alloys in the subheadings of heading 71.10, each alloy is to be classified with that metal, platinum, palladium, rhodium, iridium, osmium or ruthenium which predominates by weight over each other of these metals.

GENERAL

This Chapter includes :

(1) In headings 71.01 to 71.04, natural or cultured pearls, diamonds, other precious or semi-precious stones (natural, synthetic or reconstructed), unworked or worked, but not mounted, set or strung; also, in heading 71.05, certain waste resulting from the working of these stones.

(2) In headings 71.06 to 71.11, precious metals and metals clad with precious metal, unwrought, semi-manufactured, or in powder form, but not having reached the stage of articles classified in sub-Chapter III, and in heading 71.12, waste and scrap of precious metal or metal clad with precious metal, and waste and scrap containing precious metal or precious metal compounds, of a kind used principally for the recovery of precious metal.

Under Note 4 to this Chapter, the expression "precious metal" means silver, gold and platinum. It should be noted that the term "platinum" also covers iridium, osmium, palladium, rhodium and ruthenium.

Under Note 5 to this Chapter, alloys (**other than** amalgams - **heading 28.43**) containing precious metals are classified as follows :

(A) **As platinum** - if containing 2 % or more, by weight, of platinum.

(B) **As gold** - if containing 2 % or more, by weight, of gold, but no platinum or less than 2 % of platinum.

(C) **As silver** - other alloys containing 2 % or more, by weight, of silver.

(D) **As base metals** (**Section XV**) - all alloys containing less than 2 % of platinum and less than 2 % of gold and less than 2 % of silver.

Under Note 6 to this Chapter, unless the context otherwise requires, any reference to precious metal also includes a reference to its alloys as described at (A), (B) and (C) above, but **not** to metal clad with precious metal, **nor** to base metals or non-metals plated with silver, gold or platinum.

Under Note 7 to this Chapter, the expression "metal clad with precious metal" means material made with a base of metal, one or more surfaces of which have been covered to any thickness with precious metal by soldering, brazing, welding, hot-rolling or similar mechanical means.

Plates and sheets, bars, etc., of metal clad with precious metal are most frequently made by covering one or both surfaces of the foundation metal with the precious metal, "sweating" the two metals together and then rolling them.

Wire clad with precious metal is obtained by inserting a core of base metal into a tube of precious metal, "sweating" the two metals together and then drawing them through a die.

Except where the context otherwise requires base metal articles inlaid with precious metal are also classified as articles of metal clad with precious metal (e.g., copper plates inlaid with silver strips for use in the electrical industry, and the so-called damaskeen work of steel inlaid with strips or threads of hammered gold).

Metal clad with precious metal, as defined in this Chapter, should not be confused with base metals plated with precious metals by electrolysis, vapour deposition, spraying or immersion in a solution of salts of precious metals, etc. These plated base metals remain classified in the Chapters for the respective foundation metals irrespective of the thickness of the plating.

The Chapter also **excludes** :

(a) Colloidal precious metals and amalgams of precious metals (**heading 28.43**).

(b) Radioactive isotopes (e.g., iridium 192) including precious metals in the form of needles, thread or sheets containing radioactive isotopes (**heading 28.44**).

(c) Alloys specially prepared for dental fillings (**heading 30.06**).

(3) In general, articles made wholly or partly of natural or cultured pearls, diamonds or other precious or semi-precious stones (natural, synthetic or reconstructed), precious metals or metal clad with precious metal (headings 71.13 to 71.16). In particular, this group includes jewellery and goldsmiths' or silversmiths' wares (see Explanatory Notes to headings 71.13 and 71.14), but it **does not include** :

(a) The articles specified in Note 3 to this Chapter.

(b) Other articles in which the parts of precious metals or metal clad with precious metal are merely minor constituents, such as minor fittings (for example, monograms, ferrules, rims), **provided** the goods do not contain natural or cultured pearls, diamonds or other precious stones or semi-precious stones (natural, synthetic or reconstructed).

Knives, pen-knives, carving sets, razors and other articles of cutlery with base metal or non-metallic handles are therefore classified in **Chapter 82**, even if they have initials, monograms, ferrules, etc., of precious metals or of metal clad with precious metal; (similar cutlery with handles of precious metal or of metal clad with precious metal are classified in this Chapter).

In the same way, bowls, vases and other porcelain, china or glass tableware are classified in **Chapter 69** or **70** even if they have minor fittings or ornamentation (e.g., rims) of precious metal or metal clad with precious metal.

This group also **excludes** articles of base metals or non-metals plated with precious metals (other than articles of metal clad with precious metal).

(4) Imitation jewellery (heading 71.17) as defined in Note 11 to this Chapter (see corresponding Explanatory Note), **other than** the articles specified in Note 3 to this Chapter.

(5) Coin (heading 71.18), **other than** collectors' pieces (**heading 97.05**).

(*) The underlined portion of this Note constitutes an optional text.

Sub-Chapter I

NATURAL OR CULTURED PEARLS AND PRECIOUS OR SEMI-PRECIOUS STONES

ANNEX

List of precious or semi-precious stones falling in heading 71.03.

Mineral	**Commercial name**
Amblygonite	Amblygonite Montebrasite
Amphiboles (group of) Actinolite	Actinolite, Nephrite, Jade Tremolite

Tremolite Rhodonite	Rhodonite
Andalusite	Andalusite Chiastolite
Apatite	Apatite (all colours)
Aragonite	Aragonite, Ammolite
Axinite	Axinite
Azurite	Azurite (Chessylite) Azurite-Malachite
Benitoite	Benitoite
Beryl	Emerald Aquamarine Colourless Beryl-Goshenite Yellow Beryl Pink Beryl-Morganite Heliodor Golden Beryl Green Beryl Red Beryl, Bixbite
Beryllonite	Beryllonite

Brazilianite	Brazilianite
Calcite	Calcite
Cassiterite	Cassiterite
Cerussite	Cerussite
Chrysoberyl	Chrysoberyl Chrysoberyl Cat's-eye Alexandrite Alexandrite Cat's-eye
Chrysocolla	Chrysocolla
Cordierite	Cordierite Iolite
Corundum	Ruby Star-Ruby Sapphire Star-Sapphire Sapphire Cat's-eye Sapphire or Corundum with colour designation Padparadschah (orange) Black Star-Sapphire, etc.
Danburite	Danburite

Datolite	Datolite
Diaspore	Diaspore
Dumortierite	Dumortierite
Epidote	Epidote
Euclase	Euclase
Feldspar (group of) Albite Labradorite Microcline Oligoclase Orthoclase	 Albite Maw-sit-sit/Jadeite Albite Labradorite, Spectrolite Amazonite, Microcline Aventurine Feldspar Sunstone Orthoclase (yellow) Moonstone
Fluorite	Fluorite
(Fluorspar)	(Fluorspar)
Garnet (group of) Almandine Andradite	Garnet, Almandine Garnet, Rhodolite Garnet, Andradite Garnet, Demantoid Garnet, Melanite

Grossular Pyrope Spessartite	Garnet, Grossular varied colours Garnet, Grossular Chrome Tsavolite Garnet, Hessonite Garnet, Pyrope Garnet, Spessartite
Hematite	Hematite
Idocrase	Idocrase Vesuvianite Californite
Kornerupine	Kornerupine
Kyanite	Kyanite
Lazurite	Lazurite Lapis-lazuli Lapis
Lazulite	Lazulite
Malachite	Malachite
Marcasite	Marcasite

Obsidian (volcanic glass)	Obsidian
Olivine	Peridot
Opal	Opal, Black Opal Boulder Opal Fire Opal Harlequin Opal Moss Opal, Prase Opal Opal Matrix Water Opal Wood Opal
Prehnite	Prehnite
Pyrites	Pyrites (Marcasite)
Pyrophyllite	Pyrophyllite
Pyroxene (group of) Diopside Enstatite-Hypersthene	Diopside Star-Diopside Enstatite-Hypersthene
Jadeite	Jadeite, Jade Chloromelanite
Spodumene	Spodumene (all colours)

	Kunzite Hiddenite
Quartz	Agate (various colours) Fire Agate Onyx Sardonyx Amethyst Aventurine Quartz Aventurine Blue Quartz Chalcedony Chrysoprase Citrine, yellow quartz Cornelian Green Quartz, Prasiollite Heliotrope, Bloodstone, Jasper Multicoloured Jasper Orbicular Jasper Silex Morion, Cairngorm Moss-Agate Agate Dendritic

	Banded Agate Prase Quartz Cat's-eye Quartz Falcon's-eye Quartz Tiger's-eye Rock Crystal, Quartz Rose Quartz Smoky Quartz Violet Quartz
Rhodochrosite	Rhodochrosite
Scapolite	Scapolite
Serpentine	Bowenite Serpentine Verd Antique Williamsite
Sinhalite	Sinhalite
Smithsonite	Smithsonite, Bonamite
Sodalite	Sodalite
Sphalerite	Sphalerite Blende
Spinel	Spinel (all colours) Pleonaste Black Spinel

Sphene (Titanite)	Sphene
Topaz	Topaz (all colours)
Tourmaline	Tourmaline (all colours) Achroite Dravite Indigolite Rubellite Tourmaline Cat's-eye
Tugtupite	Tugtupite
Turquoise	Turquoise Turquoise Matrix
Variscite	Variscite
Verdite	Verdite
Vesuvianite (see Idocrase)	
Zircon	Zircon (all colours)
Zoisite	Zoisite (all colours) Tanzanite Thulite

BASE METALS AND ARTICLES OF BASE METAL

Notes.

1.- This Section does not cover :

(a) Prepared paints, inks or other products with a basis of metallic flakes or powder (headings 32.07 to 32.10, 32.12, 32.13 or 32.15);

(b) Ferro-cerium or other pyrophoric alloys (heading 36.06);

(c) Headgear or parts thereof of heading 65.06 or 65.07;

(d) Umbrella frames or other articles of heading 66.03;

(e) Goods of Chapter 71 (for example, precious metal alloys, base metal clad with precious metal, imitation jewellery);

(f) Articles of Section XVI (machinery, mechanical appliances and electrical goods);

(g) Assembled railway or tramway track (heading 86.08) or other articles of Section XVII (vehicles, ships and boats, aircraft);

(h) Instruments or apparatus of Section XVIII, including clock or watch springs;

(ij) Lead shot prepared for ammunition (heading 93.06) or other articles of Section XIX (arms and ammunition);

(k) Articles of Chapter 94 (for example, furniture, mattress supports, luminaires and lighting fittings, illuminated signs, prefabricated buildings);

(l) Articles of Chapter 95 (for example, toys, games, sports requisites);

(m) Hand sieves, buttons, pens, pencil-holders, pen nibs, monopods, bipods, tripods and similar articles or other articles of Chapter 96 (miscellaneous manufactured articles); or

(n) Articles of Chapter 97 (for example, works of art).

2.- Throughout the Nomenclature, the expression "parts of general use" means :

(a) Articles of heading 73.07, 73.12, 73.15, 73.17 or 73.18 and similar articles of other base metal, other than articles specially designed for use exclusively in implants in medical, surgical, dental or veterinary sciences (heading 90.21);

(b) Springs and leaves for springs, of base metal, other than clock or watch springs (heading 91.14); and

(c) Articles of headings 83.01, 83.02, 83.08, 83.10 and frames and mirrors, of base metal, of heading 83.06.

In Chapters 73 to 76 and 78 to 82 (but not in heading 73.15) references to parts of goods do not include references to parts of general use as defined above.

Subject to the preceding paragraph and to Note 1 to Chapter 83, the articles of Chapter 82 or 83 are excluded from Chapters 72 to 76 and 78 to 81.

3.- Throughout the Nomenclature, the expression "base metals" means : iron and steel, copper, nickel, aluminium, lead, zinc, tin, tungsten (wolfram), molybdenum, tantalum, magnesium, cobalt, bismuth, cadmium, titanium, zirconium, antimony, manganese, beryllium, chromium, germanium, vanadium, gallium, hafnium, indium, niobium (columbium), rhenium and thallium.

4.- Throughout the Nomenclature, the term "cermets" means products containing a microscopic heterogeneous combination of a metallic component and a ceramic component. The term "cermets" includes sintered metal carbides (metal carbides sintered with a metal).

5.- Classification of alloys (other than ferro-alloys and master alloys as defined in Chapters 72 and 74) :

(a) An alloy of base metals is to be classified as an alloy of the metal which predominates by weight over each of the other metals;

(b) An alloy composed of base metals of this Section and of elements not falling within this Section is to be treated as an alloy of base metals of this Section if the total weight of such metals equals or exceeds the total weight of the other elements present;

(c) In this Section the term "alloys" includes sintered mixtures of metal powders, heterogeneous intimate mixtures obtained by melting (other than cermets) and intermetallic compounds.

6.- Unless the context otherwise requires, any reference in the Nomenclature to a base metal includes a reference to alloys which, by virtue of Note 5 above, are to be classified as alloys of that metal.

7.- Classification of composite articles :

Except where the headings otherwise require, articles of base metal (including articles of mixed materials treated as articles of base metal under the General Interpretative Rules)

containing two or more base metals are to be treated as articles of the base metal predominating by weight over each of the other metals.

For this purpose :

(a) Iron and steel, or different kinds of iron or steel, are regarded as one and the same metal;

(b) An alloy is regarded as being entirely composed of that metal as an alloy of which, by virtue of Note 5, it is classified; and

(c) A cermet of heading 81.13 is regarded as a single base metal.

8.- In this Section, the following expressions have the meanings hereby assigned to them :

(a) Waste and scrap

(i) All metal waste and scrap;

(ii) Metal goods definitely not usable as such because of breakage, cutting up, wear or other reasons.

(b) Powders

Products of which 90 % or more by weight passes through a sieve having a mesh aperture of 1 mm.

9.- For the purposes of Chapters 74 to 76 and 78 to 81, the following expressions have the meanings hereby assigned to them :

(a) Bars and rods

Rolled, extruded, drawn or forged products, not in coils, which have a uniform solid cross-section along their whole length in the shape of circles, ovals, rectangles (including squares), equilateral triangles or regular convex polygons (including "flattened circles" and "modified rectangles", of which two opposite sides are convex arcs, the other two sides being straight, of equal length and parallel). Products with a rectangular (including square), triangular or polygonal cross-section may have corners rounded along their whole length. The thickness of such products which have a rectangular (including "modified rectangular") cross-section exceeds one-tenth of the width. The expression also covers cast or sintered products, of the same forms and dimensions, which have been subsequently worked after production (otherwise than by simple trimming or de-scaling), provided that they have not thereby assumed the character of articles or products of other headings.

Wire-bars and billets of Chapter 74 with their ends tapered or otherwise worked simply to facilitate their entry into machines for converting them into, for example, drawing stock (wire-rod) or tubes, are however to be taken to be unwrought copper of heading 74.03. This provision applies mutatis mutandis to the products of Chapter 81.

(b) Profiles

Rolled, extruded, drawn, forged or formed products, coiled or not, of a uniform cross-section along their whole length, which do not conform to any of the definitions of bars, rods, wire, plates, sheets, strip, foil, tubes or pipes. The expression also covers cast or sintered products, of the same forms, which have been subsequently worked after production (otherwise than by simple trimming or de-scaling), provided that they have not thereby assumed the character of articles or products of other headings.

(c) Wire

Rolled, extruded or drawn products, in coils, which have a uniform solid cross-section along their whole length in the shape of circles, ovals, rectangles (including squares), equilateral triangles or regular convex polygons (including "flattened circles" and "modified rectangles", of which two opposite sides are convex arcs, the other two sides being straight, of equal length and parallel). Products with a rectangular (including square), triangular or polygonal cross-section may have corners rounded along their whole length. The thickness of such products which have a rectangular (including "modified rectangular") cross-section exceeds one-tenth of the width.

(d) Plates, sheets, strip and foil

Flat-surfaced products (other than the unwrought products), coiled or not, of solid rectangular (other than square) cross-section with or without rounded corners (including "modified rectangles" of which two opposite sides are convex arcs, the other two sides being straight, of equal length and parallel) of a uniform thickness, which are :

- of rectangular (including square) shape with a thickness not exceeding one-tenth of the width;

- of a shape other than rectangular or square, of any size, provided that they do not assume the character of articles or products of other headings.

Headings for plates, sheets, strip, and foil apply, *inter alia*, to plates, sheets, strip, and foil with patterns (for example, grooves, ribs, chequers, tears, buttons, lozenges) and to such products which have been perforated, corrugated, polished or coated, provided that they do not thereby assume the character of articles or products of other headings.

(e) Tubes and pipes

Hollow products, coiled or not, which have a uniform cross-section with only one enclosed void along their whole length in the shape of circles, ovals, rectangles (including squares), equilateral triangles or regular convex polygons, and which have a uniform wall thickness. Products with a rectangular (including square), equilateral triangular or regular convex polygonal cross-section, which may have corners rounded along their whole length, are also to be considered as tubes and pipes provided the inner and outer cross-sections are concentric and have the same form and orientation. Tubes and pipes of the foregoing cross-sections may be polished, coated, bent, threaded, drilled, waisted, expanded, cone-shaped or fitted with flanges, collars or rings.

GENERAL

This Section covers base metals (including those in a chemically pure state) and many articles thereof. A list of goods of base metal not covered by this Section is reproduced at the end of this Explanatory Note. The Section also includes native metals separated from their gangues, and the mattes of copper, nickel or cobalt. Metallic ores and native metals still enclosed in their gangues are **excluded** (**headings 26.01 to 26.17**).

In accordance with Note 3 to this Section, throughout the Nomenclature, the expression "base metals" means : iron and steel, copper, nickel, aluminium, lead, zinc, tin, tungsten (wolfram), molybdenum, tantalum, magnesium, cobalt, bismuth, cadmium, titanium, zirconium, antimony, manganese, beryllium, chromium, germanium, vanadium, gallium, hafnium, indium, niobium (columbium), rhenium and thallium.

Each of the Chapters 72 to 76 and 78 to 81 covers particular unwrought base metals and products of those metals such as bars, rods, wire or sheets, as well as articles thereof, **except** certain specified articles of base metal which, without regard to the nature of the constituent metal, are classified in **Chapter 82** or **83**, these Chapters being **limited** to the specified articles.

(A) ALLOYS OF BASE METALS

In accordance with Note 6 to this Section, except where the context otherwise requires (e.g., in the case of steel alloys), any reference to a base metal in Chapters 72 to 76 and 78 to 81 or elsewhere in the Nomenclature also includes the alloys of that metal. Similarly, any reference in Chapter 82 or 83 or elsewhere to "base metal" includes alloys classified as alloys of base metals.

Under Note 5 to Chapter 71 and Note 5 to this Section alloys of base metals are classified as follows :

(1) **Alloys of base metals with precious metals.**

These alloys are classified as base metals **provided** that no one of the precious metals (silver, gold and platinum) constitutes as much as 2 % by weight of the alloy. Other alloys of base metals with precious metals are classified in **Chapter 71**.

(2) **Alloys of base metals.**

These alloys are classified with the metal which predominates by weight, with the **exception** of ferro-alloys (see the Explanatory Note to heading 72.02) and master alloys of copper (see the Explanatory Note to heading 74.05).

(3) **Alloys of base metals of this Section with non-metals or with the metals of heading 28.05.**

These are classified as alloys of base metals of this Section **provided** the total weight of the base metals of this Section equals or exceeds the total weight of the other elements present. If this is not the case, the alloys are generally classified in **heading 38.24**.

(4) **Sintered mixtures, heterogeneous intimate mixtures obtained by melting (other than cermets) and intermetallic compounds.**

Sintered mixtures of metal powders and heterogeneous intimate mixtures obtained by melting (**other than** cermets) are treated as alloys. The latter type of mixture includes in particular ingots of variable composition obtained by melting down scrap metal.

The classification of mixtures of metal powders which have not been sintered is, however, governed by Note 7 to this Section (composite articles - see Part (B) below).

Intermetallic compounds composed of two or more base metals are also treated as alloys. The essential difference between intermetallic compounds and alloys is that the arrangement of the atoms of different kinds in the crystal lattice of an intermetallic compound is orderly, whereas in an alloy it is disorderly.

(B) ARTICLES OF BASE METALS

In accordance with Section Note 7, base metal articles containing two or more base metals are classified as articles of that metal which **predominates by weight** over each of the other metals, **except** where the headings otherwise require (e.g., copper-headed iron or steel nails are classified in heading 74.15 even if the copper is not the major constituent). The same rule applies to articles made partly of non-metals, **provided** that, under the General Interpretative Rules, the base metal gives them their essential character.

In calculating the proportions of the metals present for the purposes of this rule, it should be noted that :

(1) All varieties of iron and steel are regarded as the same metal.

(2) An alloy is regarded as being entirely composed of that metal as an alloy of which it is classified (e.g., for these purposes, a part made of brass would be treated as if it were wholly of copper).

(3) A cermet of heading 81.13 is regarded as a single base metal.

(C) PARTS OF ARTICLES

In general, identifiable parts of articles are classified as such parts in their appropriate headings in the Nomenclature.

However, parts of general use (as defined in Note 2 to this Section) presented separately are **not** considered as parts of articles, but are classified in the headings of this Section appropriate to them. This would apply, for example, in the case of bolts specialised for central heating radiators or springs specialised for motor cars. The bolts would be classified in heading 73.18 (as bolts) and not in heading 73.22 (as parts of central heating radiators). The springs would be classified in heading 73.20 (as springs) and not in heading 87.08 (as parts of motor vehicles).

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It should be noted that watch or clock springs are **excluded** by Note 2 (b) to this Section and fall in **heading 91.14**.

In addition to the goods listed in Note 1 to this Section, the following are also **excluded** :

(a) Amalgams of base metals (**heading 28.53**).

(b) Colloidal suspensions of base metals (generally heading **30.03** or **30.04**).

(c) Dental cements and other dental fillings (**heading 30.06**).

(d) Sensitised photographic plates of metal for, e.g., photo-engraving (**heading 37.01**).

(e) Flash-light materials for photographic uses of **heading 37.07**.

(f) Metallised yarn (**heading 56.05**); woven fabrics of such yarn or of metal thread, of a kind used in articles of apparel, as furnishing fabrics or the like (**heading 58.09**).

(g) Embroidery and other goods described in **Section XI**, of metal thread.

Parts of footwear, **other than** those mentioned in Note 2 to Chapter 64 (in particular, protectors, eyelets, hooks and buckles) (**heading 64.06**).

(ij) Coin (**heading 71.18**).

(k) Waste and scrap of primary cells, primary batteries and electric accumulators; spent primary cells, spent primary batteries and spent electric accumulators (**heading 85.48**).

(l) Wire brushes (**heading 96.03**).

Chapter 72

Iron and steel

Notes.

1.- In this Chapter and, in the case of Notes (d), (e) and (f) throughout the Nomenclature, the following expressions have the meanings hereby assigned to them :

(a) **Pig iron**

Iron-carbon alloys not usefully malleable, containing more than 2 % by weight of carbon and which may contain by weight one or more other elements within the following limits :

- not more than 10 % of chromium
- not more than 6 % of manganese
- not more than 3 % of phosphorus
- not more than 8 % of silicon
- a total of not more than 10 % of other elements.

(b) **Spiegeleisen**

Iron-carbon alloys containing by weight more than 6 % but not more than 30 % of manganese and otherwise conforming to the specification at (a) above.

(c) **Ferro-alloys**

Alloys in pigs, blocks, lumps or similar primary forms, in forms obtained by continuous casting and also in granular or powder forms, whether or not agglomerated, commonly used as an additive in the manufacture of other alloys or as de-oxidants, de-sulphurising agents or for

similar uses in ferrous metallurgy and generally not usefully malleable, containing by weight 4 % or more of the element iron and one or more of the following :

- more than 10 % of chromium
- more than 30 % of manganese
- more than 3 % of phosphorus
- more than 8 % of silicon
- a total of more than 10 % of other elements, excluding carbon, subject to a maximum content of 10 % in the case of copper.

(d) **Steel**

Ferrous materials other than those of heading 72.03 which (with the exception of certain types produced in the form of castings) are usefully malleable and which contain by weight 2 % or less of carbon. However, chromium steels may contain higher proportions of carbon.

(e) **Stainless steel**

Alloy steels containing, by weight, 1.2 % or less of carbon and 10.5 % or more of chromium, with or without other elements.

(f) **Other alloy steel**

Steels not complying with the definition of stainless steel and containing by weight one or more of the following elements in the proportion shown :

- 0.3 % or more of aluminium
- 0.0008 % or more of boron
- 0.3 % or more of chromium
- 0.3 % or more of cobalt
- 0.4 % or more of copper
- 0.4 % or more of lead
- 1.65 % or more of manganese
- 0.08 % or more of molybdenum

- 0.3 % or more of nickel
- 0.06 % or more of niobium
- 0.6 % or more of silicon
- 0.05 % or more of titanium
- 0.3 % or more of tungsten (wolfram)
- 0.1 % or more of vanadium
- 0.05 % or more of zirconium
- 0.1 % or more of other elements (except sulphur, phosphorus, carbon and nitrogen), taken separately.

(g) **Remelting scrap ingots of iron or steel**

Products roughly cast in the form of ingots without feeder-heads or hot tops, or of pigs, having obvious surface faults and not complying with the chemical composition of pig iron, spiegeleisen or ferro-alloys.

(h) **Granules**

Products of which less than 90 % by weight passes through a sieve with a mesh aperture of 1 mm and of which 90 % or more by weight passes through a sieve with a mesh aperture of 5 mm.

(ij) **Semi-finished products**

Continuous cast products of solid section, whether or not subjected to primary hot-rolling; and Other products of solid section, which have not been further worked than subjected to primary hot-rolling or roughly shaped by forging, including blanks for angles, shapes or sections.

These products are not presented in coils.

(k) **Flat-rolled products**

Rolled products of solid rectangular (other than square) cross-section, which do not conform to the definition at (ij) above in the form of :

- coils of successively superimposed layers, or

- straight lengths, which if of a thickness less than 4.75 mm are of a width measuring at least ten times the thickness or if of a thickness of 4.75 mm or more are of a width which exceeds 150 mm and measures at least twice the thickness.

Flat-rolled products include those with patterns in relief derived directly from rolling (for example, grooves, ribs, chequers, tears, buttons, lozenges) and those which have been perforated, corrugated or polished, provided that they do not thereby assume the character of articles or products of other headings.

Flat-rolled products of a shape other than rectangular or square, of any size, are to be classified as products of a width of 600 mm or more, provided that they do not assume the character of articles or products of other headings.

(l) **Bars and rods, hot-rolled, in irregularly wound coils**

Hot-rolled products in irregularly wound coils, which have a solid cross-section in the shape of circles, segments of circles, ovals, rectangles (including squares), triangles or other convex polygons (including "flattened circles" and "modified rectangles", of which two opposite sides are convex arcs, the other two sides being straight, of equal length and parallel). These products may have indentations, ribs, grooves or other deformations produced during the rolling process (reinforcing bars and rods).

(m) **Other bars and rods**

Products which do not conform to any of the definitions at (ij), (k) or (l) above or to the definition of wire, which have a uniform solid cross-section along their whole length in the shape of circles, segments of circles, ovals, rectangles (including squares), triangles or other convex polygons (including "flattened circles" and "modified rectangles", of which two opposite sides are convex arcs, the other two sides being straight, of equal length and parallel). These products may :

- have indentations, ribs, grooves or other deformations produced during the rolling process (reinforcing bars and rods);

- be twisted after rolling.

(n) **Angles, shapes and sections**

Products having a uniform solid cross-section along their whole length which do not conform to any of the definitions at (ij), (k), (l) or (m) above or to the definition of wire.

Chapter 72 does not include products of heading 73.01 or 73.02.

(o) **Wire**

Cold-formed products in coils, of any uniform solid cross-section along their whole length, which do not conform to the definition of flat-rolled products.

(p) **Hollow drill bars and rods**

Hollow bars and rods of any cross-section, suitable for drills, of which the greatest external dimension of the cross-section exceeds 15 mm but does not exceed 52 mm, and of which the greatest internal dimension does not exceed one half of the greatest external dimension. Hollow bars and rods of iron or steel not conforming to this definition are to be classified in heading 73.04.

2.- Ferrous metals clad with another ferrous metal are to be classified as products of the ferrous metal predominating by weight.

3.- Iron or steel products obtained by electrolytic deposition, by pressure casting or by sintering are to be classified, according to their form, their composition and their appearance, in the headings of this Chapter appropriate to similar hot-rolled products.

Subheading Notes.

1.- In this Chapter the following expressions have the meanings hereby assigned to them :

(a) **Alloy pig iron**

Pig iron containing, by weight, one or more of the following elements in the specified proportions :

- more than 0.2 % of chromium
- more than 0.3 % of copper
- more than 0.3 % of nickel
- more than 0.1 % of any of the following elements : aluminium, molybdenum, titanium, tungsten (wolfram), vanadium.

(b) **Non-alloy free-cutting steel**

Non-alloy steel containing, by weight, one or more of the following elements in the specified proportions :

- 0.08 % or more of sulphur
- 0.1 % or more of lead

- more than 0.05 % of selenium

- more than 0.01 % of tellurium

- more than 0.05 % of bismuth.

(c) **Silicon-electrical steel**

Alloy steels containing by weight at least 0.6 % but not more than 6 % of silicon and not more than 0.08 % of carbon. They may also contain by weight not more than 1 % of aluminium but no other element in a proportion that would give the steel the characteristics of another alloy steel.

(d) **High speed steel**

Alloy steels containing, with or without other elements, at least two of the three elements molybdenum, tungsten and vanadium with a combined content by weight of 7 % or more, 0.6 % or more of carbon and 3 to 6 % of chromium.

(e) **Silico-manganese steel**

Alloy steels containing by weight :

- not more than 0.7 % of carbon,

- 0.5 % or more but not more than 1.9 % of manganese, and

- 0.6 % or more but not more than 2.3 % of silicon, but no other element in a proportion that would give the steel the characteristics of another alloy steel.

2.- For the classification of ferro-alloys in the subheadings of heading 72.02 the following rule should be observed :

A ferro-alloy is considered as binary and classified under the relevant subheading (if it exists) if only one of the alloy elements exceeds the minimum percentage laid down in Chapter Note 1 (c); by analogy, it is considered respectively as ternary or quaternary if two or three alloy elements exceed the minimum percentage.

For the application of this rule the unspecified "other elements" referred to in Chapter Note 1 (c) must each exceed 10 % by weight.

GENERAL

This Chapter covers the ferrous metals, i.e., pig iron, spiegeleisen, ferro-alloys and other primary materials (sub-Chapter I), as well as certain products of the iron and steel industry (ingots and other primary forms, semi-finished products and the principal products derived directly therefrom)

of iron or non-alloy steel (sub-Chapter II), of stainless steel (sub-Chapter III) and of other alloy steel (sub-Chapter IV).

Further worked articles, such as castings, forgings, etc., and sheet piling, welded angles, shapes and sections, railway or tramway track construction material and tubes are classified in **Chapter 73** or, in certain cases, in other Chapters.

As raw material, the iron and steel industry uses various natural iron ores (oxides, hydrated oxides, carbonates) listed in the Explanatory Note to heading 26.01, pyrites cinder (the sintered iron oxides remaining after burning off the sulphur from pyrite, marcasite, pyrrhotite, etc.) and waste and scrap of iron or steel.

(I) **Conversion (reduction) of iron ore**

Iron ore is converted by reduction either into pig iron, in blast furnaces or electric furnaces, or into a spongy form (sponge iron) or into lumps by various direct reduction processes; only when iron of exceptional purity is required for special use (e.g., in the chemical industry) is it obtained by electrolysis or other chemical processes.

(A) **C onversion of iron ore by blast furnace process**

Most iron obtained from iron ore is still extracted by the blast furnace process. This process uses mainly ore as raw material, but waste and scrap metal, pre-reduced iron ores and other ferrous waste can also be used.

Blast furnace reductants consist essentially of hard coke, sometimes combined with small quantities of coal or liquid or gaseous hydrocarbons.

The iron so obtained is in the form of molten pig iron. The by-products are slag, blast furnace gas and blast furnace dust.

Most of the molten pig iron thus produced is converted directly into steel in steelworks.

Some may be used in foundries (ironworks), for the manufacture of ingot moulds, cast iron tubes and pipes, etc.

The remainder may be cast into the form of pigs or blocks, in casting machines or in sand-beds; or it may be produced in the form of irregularly shaped lumps, sometimes known as "plate iron", or be granulated by being poured into water.

Solid pig iron is either remelted in steelworks with ferrous scrap, to produce steel, or melted in iron foundries, in cupolas or electric furnaces, again with ferrous scrap, and converted into castings.

(B) **Conversion of iron ore in direct reduction plants**

In contrast to the process described above, here the reductants are usually gaseous or liquid hydrocarbons or coal, so that the need for hard coke is eliminated.

In these processes, the reduction temperature is lower so that the resulting products (generally known as sponge iron) are obtained, without passing through the molten state, in the form of sponge, pre-reduced pellets or lumps. For this reason, their carbon content is usually lower than that of blast furnace pig iron (where molten metal is in close contact with the carbon). Most of these crude products are melted in steelworks and converted into steel.

(II) **Steel production**

Pig or cast iron in molten or solid form and the ferrous products obtained by direct reduction (sponge iron) constitute, with waste and scrap, the primary steelmaking materials. To these materials are added certain slag-forming additives such as quick-lime, fluorspar, de-oxidants (e.g., ferro-manganese, ferro-silicon, aluminium) and various alloying elements.

Steelmaking processes fall into two main categories viz : "pneumatic" processes in which molten pig iron is refined in a converter or by blowing air, and hearth processes, such as open hearth or electric furnace.

The pneumatic processes require no external source of heat. They are used when the charge consists mainly of molten pig iron. The oxidation of certain elements present in the pig iron (e.g., carbon, phosphorus, silicon and manganese) generates enough heat to keep the steel liquid and even to remelt any added scrap. These processes include those in which pure oxygen is blown into the molten metal (Linz-Donawitz processes : LD or LDAC, OBM, OLP, Kaldo and others) and those, now becoming obsolete, in which air, sometimes oxygen-enriched, is used (Thomas and Bessemer processes).

Open-hearth refining processes, however, require an external source of heat. They are used whena solid charge (e.g., waste or scrap iron, sponge iron and solid pig iron) forms the raw material.

The two main processes in this category are the Martin furnace process in which the heat is provided by heavy oil or gas, and the arc or induction furnace process, where the heat is supplied by electricity.

For the production of certain steels two different processes may be applied successively (duplex process). For example, refining may begin in a Martin furnace and end in an electric furnace; or steel melted in an electric furnace may be transferred to a special converter where decarburisation is completed by blowing oxygen and argon on to the charge (a process used, for example, in the production of stainless steel).

Many new processes have been evolved for producing steels of special composition or with special properties. These processes include electric arc melting in a vacuum, melting by electronic bombardment and the electroslag process. In all these processes the steel is produced from a self-consuming electrode which, on melting, drips into a water-cooled ingot mould. The mould may be made in one piece, or the bottom may be removable so that the solidified casting can be withdrawn from below.

Liquid steel obtained by the above-mentioned processes, with or without further refining, is generally run into a receiving ladle. At this stage alloying elements or de-oxidising agents, in solid or liquid form, may be added. This may be done in a vacuum to ensure freedom from gaseous impurities.

Steels obtained by all these processes are divided, according to their content of alloying elements, into "non-alloy steels" and "alloy steels" (stainless or other). They are further divided in accordance with their special properties into free-cutting steel, silicon-electrical steel, high speed steel or silico-manganese steel, for example.

(III) **Production of ingots or other primary forms and of semi-finished products**

Although molten steel may be cast (in foundries) into its final shape in moulds (steel castings), most molten steel is cast into ingots in ingot moulds.

At the casting or pouring stage and at the solidification stage, steel is divided into three main groups : rimming (or "effervescent") steel, killed (or "non-effervescent") steel and semi-killed(or "balanced") steel. Steel cast or poured in the rimming state is so named because during and after the pouring process there is a reaction between the iron oxide and carbon dissolved in the steel rendering it "effervescent". During the cooling stage, the impurities concentrate in the central core and upper half of the ingots. The outer layer, which is not affected by these impurities, will subsequently give a better surface appearance to the rolled products obtained from these ingots. This more economical kind of steel is also used for cold dishing.

In many cases, steel cannot be satisfactorily cast in the "effervescent" state. This applies, in particular, to alloy steels and high carbon steels. In these cases, the steel must be killed, i.e., de-oxidised. De-oxidation may be partially carried out by treatment in a vacuum, but is more usually achieved by the addition of elements such as silicon, aluminium, calcium or manganese. In this way, the residual impurities are more evenly distributed throughout the ingot, giving a better assurance, for certain uses, that the properties of the steel will be the same throughout its mass.

Some steels may be partly de-oxidised and are then known as semi-killed (or balanced) steels.

After they have solidified and their temperature has been equalised, the ingots are rolled into semi-finished products (blooms, billets, rounds, slabs, sheet bars) on primary cogging or roughing

mills (blooming, slabbing, etc.) or converted by drop hammer or on a forging press into semi-finished forgings.

An increasing amount of steel is being cast directly into the form of semi-finished products in **continuous casting** machines. Their cross-sectional shape may, in certain cases, approach that of finished products. Semi-finished products obtained by the continuous casting process are characterised by their external surface appearance which usually shows transverse rings of different colours at more or less regular distances, as well as by the appearance of their cut cross-section which usually shows radial crystallisation resulting from rapid cooling. Continuously cast steel is always killed.

(IV) **Production of finished products**

Semi-finished products and, in certain cases, ingots are subsequently converted into finished products.

These are generally subdivided into **flat products** ("wide flats", including "universal plates", "wide coil", sheets, plates and strip) and **long products** (bars and rods, hot-rolled, in irregularly wound coils, other bars and rods, angles, shapes, sections and wire).

These products are obtained by plastic deformation, either hot, directly from ingots or semi-finished products (by hot-rolling, forging or hot-drawing) or cold, indirectly from hot finished products (by cold-rolling, extrusion, wire-drawing, bright-drawing), followed in some cases by finishing operations (e.g., cold-finished bars obtained by centre-less grinding or by precision turning).

According to Note 3 to this Chapter, iron and steel products obtained by electrolytic deposition, by casting under pressure or by sintering are to be classified, according to their form, their composition and their appearance, in the headings of this Chapter appropriate to similar hot-rolled products.

For the purpose of this Note, the following expressions have the meanings hereby assigned to them :

(1) **Casting under pressure** (die casting)

This process consists of injecting an alloy in molten or pasty form into a mould under a more or less high pressure.

Such a process facilitates production in large quantities and ensures dimensional precision.

(2) **Sintering**

This is an operation of powder metallurgy by means of which a compacted powder product, obtained by moulding, usually coupled with pressing, is subsequently heated in a special furnace.

This operation, which gives the final properties to the sintered materials, is carried out under specified conditions of temperature, timing and atmosphere. It produces an agglomeration in solid form. Sintering may also be carried out in a vacuum.

(A) **Hot plastic deformation**

(1) **Hot-rolling** means rolling at a temperature between the point of rapid recrystallisation and that of the beginning of fusion. The temperature range depends on various factors such as the composition of the steel. As a rule, the final temperature of the work-piece in hot-rolling is about 900 °C.

(2) **Forging** means the hot deformation of the metal in the mass by means of drop hammers or on forging presses, to obtain pieces of any shape.

(3) In **hot-drawing**, the steel is heated and passed through a die to produce bars, tubes or sections of various shapes.

(4) **Hot drop forging and drop stamping** means producing metal shapes or sections (usually on the conveyor line) by the hot shaping of cut blanks in dies (closed or with burr joints) by means of special tools. The work, carried out by impact or pressure, is generally effected in successive phases, following preliminary operations of rolling, hammering, hand forging or bending.

(B) **Cold plastic deformation**

(1) **Cold-rolling** is carried out at ambient temperatures, i.e., below the recrystallisation temperature.

(2) **Cold drop forging and drop stamping** means producing shapes or sections by cold processes similar to those described in Item A (4) above.

(3) **Extrusion** is a process, generally cold, for deforming steel in the mass under high pressure between a die and a press tool, in a space enclosed on all sides except that through which the charge passes, to assume the desired shape.

(4) **Wire-drawing** is a cold process in which bars or rods in irregularly wound coils are drawn through one or more dies at high speed to obtain coiled wire of smaller diameter.

(5) **Bright-drawing** is a cold process in which bars or rods, whether or not in irregularly wound coils, are drawn (at relatively low speed) through one or more dies to obtain products of smaller or different shaped section.

Cold-worked products can be distinguished from hot-rolled or hot-drawn products by the followingcriteria :

- the surface of cold-worked products has a better appearance than that of products obtained by a hot process and never has a layer of scale;

- the dimensional tolerances are smaller for cold-worked products;

- thin-flat products (thin "wide coil", sheets, plates and strip) are usually produced by cold-reduction;

- microscopic examination of cold-worked products reveals a marked deformation of the grains and grain orientation parallel to the direction of working. By contrast, products obtained by hot processes show almost regular grains owing to recrystallisation;

In addition, cold-worked products have the following properties which may be shared by certain hot-rolled or hot-drawn products :

(a) because of the strain or work hardening they have undergone, cold-worked products are very hard and possess great tensile strength, though these properties may diminish appreciably with heat treatment;

(b) elongation at fracture is very low in cold-worked products; it is higher in products that have undergone suitable heat treatment.

The very light cold-rolling process (known as a skin pass or pinch pass) which is applied to certain hot-rolled flat products without significant reduction of their thickness does not change their character of finished hot-rolled products. This cold pass under low pressure acts essentially on the surface of the products only, whereas cold-rolling in the true sense (also known as cold-reduction) changes the crystalline structure of the work piece by considerably reducing its cross-section.

(C) **Subsequent manufacture and finishing**

The finished products may be subjected to further finishing treatments or converted into other articles by a series of operations such as :

(1) **Mechanical working**, i.e., turning, milling, grinding, perforation or punching, folding, sizing, peeling, etc.; however, it should be noted that rough turning merely to eliminate the

oxidation scale and crust and rough trimming are not regarded as finishing operations leading to a change in classification.

(2) **Surface treatments** or other operations, including cladding, to improve the properties or appearance of the metal, protect it against rusting and corrosion, etc. Except as otherwise providedin the text of certain headings, such treatments do not affect the heading in which the goods are classified. They include :

(a) Annealing, hardening, tempering, case-hardening, nitriding and similar heat treatments to improve the properties of the metal.

(b) Descaling, pickling, scraping and other processes to remove the oxide scale and crust formed during the heating of the metal.

(c) Rough coating intended solely to protect products from rust or other oxidation, to prevent slipping during transport and to facilitate handling e.g., paints containing an active anti-rust pigment (red lead, zinc powder, zinc oxide, zinc chromate, iron oxide, iron minium, jewellers' rouge), and non-pigmented coatings with a basis of oil, grease, wax, paraffin wax, graphite, tar or bitumen.

(d) Surface finishing treatment, including;

(i) polishing and burnishing or similar treatment;

(ii) artificial oxidation (by various chemical processes, such as immersion in an oxidising solution), patina finishing, blueing (blue annealing) browning or bronzing (by various techniques), which also from a film of oxide on the surface of the product, to improve its appearance. The operations increase resistance to rusting;

(iii) chemicalsurface treatments, such as :

- phosphatising, which consists of immersing the product in a solution of metallic acid phosphates, particularly those of manganese, iron and zinc; this process is known as parkerising or bonderising, depending on the period of the operation and the temperature of the bath;

- oxalating, borating, etc., using methods similar to those for phosphatising, with the appropriate salts or acids;

- chromating, which consists of immersing the product in a solution whose main contents are chronic acid or chromates; this process is for the surface treatment of e.g., steel plate plated or coated with zinc.

These chemical surface treatments have the advantage of protecting the surface of metal, facilitating any later cold deformation of the products treated and the application of paints or other non-metallic protective coatings.

(iv) coating with metal (metallisation) the main processes being :

- immersion in a bath of molten metal or metal alloy e.g., hot-dip galvanising, tinning, hot-coating with lead, and aluminium coating;

- electroplating (cathodic deposition of a coating metal on the product to be coated, by electrolysis of a suitable solution of metallic salts), e.g., with zinc, cadmium, tin, lead, chromium, chromium/chromate, copper, nickel, gold or silver;

- impregnation or diffusion (by heating the product to be coated with the required coating metal in powder form e.g., sherardising (cementation with zinc) and calorising (cementation with aluminium) and chromising (with diffusion of chromium);

- spraying (atomising the molten coating metal and directing the spray on to the product to be coated), e.g., the Schoop process and the gas pistol, arc, plasma and electrostatic spray processes;

- metallisation by evaporating the coating metal in a vacuum. etc.;

- metallisation by bombarding the coating metal with ions in a glow discharge (ion plating);

- coating by cathode vaporisation (sputtering).

(v) coating with non-metallic substances, e.g., enamelling, varnishing, lacquering, painting, surface printing, coating with ceramics or plastics, including special processes such as glow discharge, electrophoresis, electrostatic projection and immersion in an electrostatic fluidised bath followed by radiation firing, etc.

(e) Cladding, i.e., the association of layers of metals of different colours or natures by molecular interpenetration of the surfaces in contact. This limited diffusion is characteristic of clad products and differentiates them from products metallised in the manner specified in the preceding paragraphs (e.g., by normal electroplating).

The various cladding processes include pouring molten cladding metal on to the basic metal, followed by rolling; simple hot-rolling of the cladding metal to ensure efficient welding to the basic metal; any other method of deposition or superimposing of the cladding metal followed by any mechanical or thermal process to ensure welding (e.g., electro-cladding), in which the cladding metal (nickel, chromium, etc.) is applied to the basic metal by electroplating, molecular interpenetration of the surfaces in contact then being obtained by heat treatment at the appropriate temperature with subsequent cold-rolling.

Ferrous products clad with non-ferrous metals remain in their respective headings in Chapter 72 **provided** that iron or steel is the predominating metal by weight (see Note 7 to Section XV). Iron or steel products, clad with another ferrous metal, which, according to the composition of the original products, or of the cladding metal, could be classified in two sub-Chapters (II, III or IV) have similarly to be classified according to the metal predominating by weight (see Note 2 to this Chapter); e.g., a bar of non-alloy ordinary steel clad with stainless steel is therefore classified in sub-Chapter II if the former metal predominates by weight, or in sub-Chapter III if not.

(f) Removal of small portions of the metal for testing purposes.

(g) Lamination, for example, the superimposing of metal layers over an intermediate layer of viscoelastic material, the latter layer serving as a sound, etc., insulator.

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The classification of alloys of ferrous metals and of composite articles is dealt with in the General Explanatory Note to Section XV.

Sub-Chapter I

PRIMARY MATERIALS; PRODUCTS IN GRANULAR OR POWDER FORM

GENERAL

The sub-Chapter covers :

(1) The primary materials of iron and steel metallurgy (pig iron, spiegeleisen, ferro-alloys, ferrous products obtained by direct reduction of iron ore and other spongy ferrous products, waste and scrap and remelting scrap ingots) and iron having a minimum purity by weight of 99.94 % (headings 72.01 to 72.04).

(2) Granules and powders, of pig iron, spiegeleisen, iron or steel (heading 72.05).

Sub-chapter II

IRON AND NON-ALLOY STEEL

GENERAL

Provided that they are of iron or non-alloy steel this sub-Chapter covers :

(1) Ingots or other primary forms such as puddled bars, pilings, blocks, lumps, including steel in the molten state (heading 72.06).

(2) Semi-finished products such as blooms, billets, rounds, slabs, sheet bars, pieces roughly shaped by forging, blanks for angles, shapes and sections (heading 72.07).

(3) Flat-rolled products (headings 72.08 to 72.12).

(4) Bars and rods, hot-rolled, in irregularly wound coils (heading 72.13) and other bars and rods (heading 72.14 or 72.15).

(5) Angles, shapes and sections (heading 72.16).

(6) Wire (heading 72.17).

Sub-Chapter III

STAINLESS STEEL

GENERAL

Heat-resisting steel, creep-resisting steel and any other steel complying with the specified criteria in Note 1 (e) to this Chapter are to be classified as stainless steel.

Because of its high resistance to corrosion, stainless steel is put to a very wide range of uses, e.g., in the manufacture of silencers, catalytic converters or transformer tanks.

This sub-Chapter covers stainless steel in the forms mentioned in headings 72.18 to 72.23.

Sub-Chapter IV

OTHER ALLOY STEEL; HOLLOW DRILL BARS AND RODS, OF ALLOY OR NON-ALLOY STEEL

GENERAL

Other alloy steel is defined in Note 1 (f) to this Chapter and **hollow drill bars and rods** in Note 1 (p) to this Chapter.

This sub-Chapter covers alloy steel other than stainless steel, in the form of ingots or other primary forms, semi-finished products (e.g., blooms, billets, rounds, slabs, sheet bars, pieces roughly shaped by

forging), flat-rolled products, whether or not in coils (so-called wide-flats, wide coil, sheets, plates or strip), bars and rods, angles, shapes or sections, or wire.

All these products may be worked **provided** that they do not thereby assume the character of articles or of products falling in other headings (see the Explanatory Notes to headings 72.06 to 72.17).

The metals most commonly present in other alloy steel are manganese, nickel, chromium, tungsten (wolfram), molybdenum, vanadium and cobalt; the most common non-metal additive is silicon. These alloying materials confer special properties to the steel, e.g., resistance to shock and wear (e.g., manganese steels); improved electrical qualities (silicon steels); improved tempering qualities (e.g., vanadium steels); or increased cutting speed (e.g., chrome-tungsten steels).

Other alloy steels are used for many purposes requiring special qualities (e.g., durability, increased hardness, resilience, strength), for example, in armaments, tools and cutlery, and machinery.

Alloy steels of this sub-Chapter include :

(1) Alloy engineering and structural steels usually containing the following elements : chromium, manganese, molybdenum, nickel, silicon and vanadium.

(2) Alloy steels having improved tensile strength and welding properties containing in particular very small quantities of boron (0.0008 % or more by weight) or of niobium (0.06 % or more by weight).

(3) Alloy steels, containing chromium or copper, which are weather resistant.

(4) Alloy steels for so-called "magnetic" sheets (having a low magnetic loss) generally containing 3 to 4 % of silicon and possibly aluminium.

(5) Free-cutting alloy steels which not only conform to the requirements of Note 1 (f) but also contain at least one of the following elements : lead, sulphur, selenium, tellurium or bismuth.

(6) Alloy bearing steels (generally containing chromium).

(7) Alloy manganese silicon spring steels (containing manganese, silicon and possibly chromium or molybdenum) and other alloy steels for springs.

(8) Non-magnetic alloy steels resistant to shock and abrasion, having a high manganese content.

(9) High speed steels : alloy steels containing, with or without other alloy elements, at least two of the three elements molybdenum, tungsten and vanadium with a combined content by weight of 7 % or more, 0.6 % or more of carbon and 3 to 6 % of chromium.

(10) Non-distorting tool steels : containing generally by weight 12 % or more of chromium and 2 % or more of carbon.

(11) Other alloy tool steels.

(12) Permanent magnet steels containing aluminium, nickel, and cobalt.

(13) Non-magnetic alloy steels which are characterised by their manganese or nickel content, other than those covered by sub-Chapter III.

(14) Steels for control rods in nuclear reactors (with high boron content).

This sub-Chapter also includes hollow drill bars and rods, of alloy or non-alloy steel (**heading 72.28**).

Chapter 73

Articles of iron or steel

Notes.

1.- In this Chapter the expression "cast iron" applies to products obtained by casting in which iron predominates by weight over each of the other elements and which do not comply with the chemical composition of steel as defined in Note 1 (d) to Chapter 72.

2.- In this Chapter the word "wire" means hot or cold-formed products of any cross-sectional shape, of which no cross-sectional dimension exceeds 16 mm.

GENERAL

This Chapter covers a certain number of specific articles in headings 73.01 to 73.24, and in headings 73.25 and 73.26 a group of articles not specified or included in Chapter 82 or 83 and not falling in other Chapters of the Nomenclature, of iron (including cast iron as defined in Note 1 to this Chapter) or steel.

For the purposes of this Chapter, the expressions "tubes and pipes" and "hollow profiles" have the following meanings hereby assigned to them :

(1) **Tubes and pipes**

Concentric hollow products, of uniform cross-section with only one enclosed void along their whole length, having their inner and outer surfaces of the same form. Steel tubes are mainly of circular, oval, rectangular (including square) cross-sections but in addition may include equilateral triangular and other regular convex polygonal cross-sections. Products of cross-section other

than circular, with rounded corners along their whole length, and tubes with upset ends, are also to be considered as tubes. They may be polished, coated, bent (including coiled tubing), threaded and coupled or not, drilled, waisted, expanded, cone shaped or fitted with flanges, collars or rings.

(2) **Hollow profiles**

Hollow products not conforming to the above definition and mainly those not having their inner and outer surfaces of the same form.

The General Explanatory Note to Chapter 72 applies, *mutatis mutandis*, to this Chapter.

Chapter 74

Copper and articles thereof

Note.

1.- In this Chapter the following expressions have the meanings hereby assigned to them :

(a) **Refined copper**

Metal containing at least 99.85 % by weight of copper; or

Metal containing at least 97.5 % by weight of copper, provided that the content by weight of any other element does not exceed the limit specified in the following table :

TABLE - Other elements

Element		Limiting content % by weight
Ag	Silver	0.25
As	Arsenic	0.5
Cd	Cadmium	1.3
Cr	Chromium	1.4
Mg	Magnesium	0.8
Pb	Lead	1.5

S	Sulphur	0.7
Sn	Tin	0.8
Te	Tellurium	0.8
Zn	Zinc	1
Zr	Zirconium	0.3
Other elements*, each		0.3

* Other elements are, for example, Al, Be, Co, Fe, Mn, Ni, Si.

(b) **Copper alloys**

Metallic substances other than unrefined copper in which copper predominates by weight over each of the other elements, provided that :

(i) the content by weight of at least one of the other elements is greater than the limit specified in the foregoing table; or

(ii) the total content by weight of such other elements exceeds 2.5 %.

(c) **Master alloys**

Alloys containing with other elements more than 10 % by weight of copper, not usefully malleable and commonly used as an additive in the manufacture of other alloys or as de-oxidants, de-sulphurising agents or for similar uses in the metallurgy of non-ferrous metals. However, copper phosphide (phosphor copper) containing more than 15 % by weight of phosphorus falls in heading 28.53.

Subheading Note.

1.- In this Chapter the following expressions have the meanings hereby assigned to them :

(a) **Copper-zinc base alloys (brasses)**

Alloys of copper and zinc, with or without other elements. When other elements are present :

- zinc predominates by weight over each of such other elements;

- any nickel content by weight is less than 5 % (see copper-nickel-zinc alloys (nickel silvers)); and

- any tin content by weight is less than 3 % (see copper-tin alloys (bronzes)).

(b) **Copper-tin base alloys (bronzes)**

Alloys of copper and tin, with or without other elements. When other elements are present, tin predominates by weight over each of such other elements, except that when the tin content is 3 % or more the zinc content by weight may exceed that of tin but must be less than 10 %.

(c) **Copper-nickel-zinc base alloys (nickel silvers)**

Alloys of copper, nickel and zinc, with or without other elements. The nickel content is 5 % or more by weight (see copper-zinc alloys (brasses)).

(d) **Copper-nickel base alloys**

Alloys of copper and nickel, with or without other elements but in any case containing by weight not more than 1 % of zinc. When other elements are present, nickel predominates by weight over each of such other elements.

GENERAL

This Chapter covers copper and its alloys, and certain articles thereof.

Copper is extracted from various ores (see Explanatory Note to heading 26.03) and is also worked up from the metal in its native state, or recovered from waste and scrap.

Copper is recovered from its sulphide ores by a dry extraction process in which the powdered and concentrated ore is roasted where necessary to drive off excess sulphur and smelted in a furnace to produce **copper matte** or regulus.

In some cases the concentrated ore is smelted in an air or oxygen flash smelting furnace ("flash smelting") without prior roasting.

The matte is treated in a converter to eliminate most of the iron and sulphur and produce "blister copper" (so-called because it has a rough and blistery surface). The blister copper is refined in a reverberatory furnace to produce fire-refined copper and, where required, may be further refined by electrolysis.

For oxide ores and also for certain other ores and residues a wet process (leaching) is used (see Explanatory Note to heading 74.01).

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Copper is very ductile and malleable; it is, after silver, the best conductor of heat and electricity. It is used in the pure state, particularly in the form of wire for electrical use, or in the form of coils or plates as a refrigerating element, but for general purposes it is mainly used in the form of alloys.

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Under the provisions of Note 5 to Section XV (see the General Explanatory Note to that Section), the **copper-base metal alloys** which may be classified with copper include :

(1) Copper-zinc base alloys (**brasses**) (see Subheading Note 1 (a)) in variable proportions of copper and zinc, e.g., common brass, used for many purposes; gilding metal (tombac) used particularly in the manufacture of imitation jewellery and fancy goods.

Copper-zinc alloys containing small quantities of other elements form special brasses, with characteristic properties. Special brasses include high-tensile brass (often known as manganese bronze), used in shipbuilding, as well as leaded brasses, iron brass, aluminium brass and silicon brass.

(2) Copper-tin base alloys (**bronzes**) (see Subheading Note 1 (b)), and sometimes containing other elements which confer special properties. The bronzes include coinage bronze; hard-bronze for gearing, bearings or other machinery parts; bell-metal; statuary bronze; leaded bronze used for bearings; phosphor bronze (or de-oxidised bronze) used in the manufacture of springs and woven wire gauze for filters, screens, etc.

(3) Copper-nickel-zinc base alloys (**nickel silvers**) (see Subheading Note 1 (c)) having a good corrosion resistance and strength. They are used mainly in telecommunications equipment (in the telephone industry *inter alia*); other uses include use in equipment for instrument parts, taps and high quality plumbing hardware, slide fasteners, various applications in the electrical field such as clamps, springs, connectors, receptacles, etc., ornamental and architectural metalwork and chemical and food processing equipment. Certain grades of these alloys are also used in the manufacture of tableware, etc.

(4) Copper-nickel base alloys (**cupro-nickels**) (see Subheading Note 1 (d)), which often contain small amounts of aluminium or iron. They represent a family of alloys featuring resistance to the corrosive effects of sea water and, therefore, find wide use in a variety of marine or shipbuilding applications, particularly for condensers or piping, and in the manufacture of coins or electrical resistors.

(5) **Aluminium bronze** composed essentially of copper with aluminium and employed in engineering where high strength properties, corrosion resistance and hardness are important factors.

(6) **Beryllium copper** (sometimes known as beryllium bronze) composed essentially of copper with beryllium and, because of its hardness, high strength and resistance to corrosion, used for springs of many types, as moulds for plastics, as resistance welding electrodes, and for non-sparking tools.

(7) **Copper-silicon** consisting essentially of copper and silicon and having high strength and resistance to corrosion. It is used, e.g., for the manufacture of storage tanks, bolts and fasteners.

(8) **Chromium copper** mainly used for resistance welding electrodes.

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This Chapter covers :

(A) Mattes and other intermediate products of copper metallurgy and unwrought copper and waste and scrap (headings 74.01 to 74.05).

(B) Copper powders and flakes (heading 74.06).

(C) Products generally obtained by rolling, extruding, drawing or forging the copper of heading 74.03 (headings 74.07 to 74.10).

(D) Various articles specified in headings 74.11 to 74.18 and other articles falling in heading 74.19 which covers all other copper articles other than those covered by Note 1 to Section XV or those included in **Chapter 82** or **83**, or more specifically covered elsewhere in the Nomenclature.

The products and articles of copper are frequently subjected to various treatments to improve the properties or appearance of the metal, etc. These treatments are generally those referred to in the General Explanatory Note to Chapter 72, and do not affect the classification of the goods.

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The classification of **composite goods**, particularly made up articles, is explained in the General Explanatory Note to Section XV.

Chapter 75

Nickel and articles thereof

Subheading Notes.

1.- In this Chapter the following expressions have the meanings hereby assigned to them :

(a) **Nickel, not alloyed**

Metal containing by weight at least 99 % of nickel plus cobalt, provided that :

(i) the cobalt content by weight does not exceed 1.5 %, and

(ii) the content by weight of any other element does not exceed the limit specified in the following table :

TABLE - Other elements

Element	Limiting content % by weight
Fe Iron	0.5
O Oxygen	0.4
Other elements, each	0.3

(b) **Nickel alloys**

Metallic substances in which nickel predominates by weight over each of the other elements provided that :

(i) the content by weight of cobalt exceeds 1.5 %,

(ii) the content by weight of at least one of the other elements is greater than the limit specified in the foregoing table, or

(iii) the total content by weight of elements other than nickel plus cobalt exceeds 1 %.

2.- Notwithstanding the provisions of Note 9 (c) to Section XV, for the purposes of subheading 7508.10 the term "wire" applies only to products, whether or not in coils, of any cross-sectional shape, of which no cross-sectional dimension exceeds 6 mm.

GENERAL

This Chapter covers nickel and its alloys, and certain articles thereof.

Nickel is a relatively hard, greyish-white metal melting at 1453 °C. It is ferro-magnetic, malleable, ductile, strong and resistant to corrosion and oxidation.

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Nickel is used mainly in the production of many alloys especially alloy steels, for coating other metals usually by electrodeposition and as a catalyst in many chemical reactions. Unalloyed wrought nickel is also extensively used in the manufacture of chemical plant. In addition nickel and nickel alloys are used for coinage.

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The principal nickel alloys which may fall in this Chapter under the provisions of Note 5 to Section XV include the following :

(1) **Nickel-iron alloys**. These include materials used in submarine cables, induction coil cores, magnetic shielding, etc., because of their high magnetic permeability and low hysteresis.

(2) **Nickel-chromium or nickel-chromium-iron alloys**. These include a variety of commercial materials featuring good strength and excellent resistance to oxidation at high temperature and scaling as well as to many corrosive environments. These materials are employed for the heater element in electrical resistance heating devices and are also used for components such as muffles and retorts used in the heat treatment of steels and other metals or in the form of pipe and tubing for high temperature chemical or petrochemical processing. Also in this group are special alloys known as "super alloys" which have been developed specifically for high strength at the elevated temperatures prevailing in aircraft turbines where they are used for turbine blades and vanes, combustion liners, transition sections, etc. Often these alloys contain molybdenum, tungsten, niobium, aluminium, titanium, etc., which are effective in significantly improving the strength of the nickel-base composition.

(3) **Nickel-copper alloys**. These alloys, which in addition to corrosion resistance have good strength, are used in such applications as propeller shafts and fasteners and are also used in pumps, valves, tubing and other forms of equipment exposed to certain mineral or organic acids or alkalis and salts.

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This Chapter includes :

(A) Nickel mattes, nickel oxide sinters and other intermediate products of nickel metallurgy and unwrought nickel, and nickel waste and scrap (headings 75.01 to 75.03).

(B) Nickel powders and flakes (heading 75.04).

(C) Products generally obtained by rolling, forging, drawing or extruding the unwrought nickel of heading 75.02 (headings 75.05 and 75.06).

(D) Tubes, pipes and fittings (heading 75.07), and electroplating anodes and other articles of heading 75.08, which covers all nickel articles, **other than** those covered by Note 1 to Section XV or included in **Chapter 82** or **83**, or more specifically covered elsewhere in the Nomenclature.

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Products and articles of nickel may be subjected to various treatments to improve the properties or appearance of the metal, etc. These treatments are generally those referred to at the end of the General Explanatory Note to Chapter 72, and do not affect the classification of the goods. (See, however, the special case of electroplating anodes (heading 75.08).)

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The classification of **composite articles** is explained in the General Explanatory Note to Section XV.

Chapter 76

Aluminium and articles thereof

Subheading Notes.

1.- In this Chapter the following expressions have the meanings hereby assigned to them :

(a) **Aluminium, not alloyed**

Metal containing by weight at least 99 % of aluminium, provided that the content by weight of any other element does not exceed the limit specified in the following table :

TABLE - Other elements

Element	Limiting content % by weight
Fe + Si (iron plus silicon)	1

Other elements[1], each	0.1[2]

[1] Other elements are, for example Cr, Cu, Mg, Mn, Ni, Zn.

[2] Copper is permitted in a proportion greater than 0.1 % but not more than 0.2 %, provided that neither the chromium nor manganese content exceeds 0.05 %.

(b) **Aluminium alloys**

Metallic substances in which aluminium predominates by weight over each of the other elements, provided that :

(i) the content by weight of at least one of the other elements or of iron plus silicon taken together is greater than the limit specified in the foregoing table; or

(ii) the total content by weight of such other elements exceeds 1 %.

2.- Notwithstanding the provisions of Note 9 (c) to the Section XV, for the purposes of subheading 7616.91 the term "wire" applies only to products, whether or not in coils, of any cross-sectional shape, of which no cross-sectional dimension exceeds 6 mm.

GENERAL

This Chapter covers aluminium and its alloys, and certain articles thereof.

Aluminium is obtained principally from bauxite, a crude hydrated alumina (see the Explanatory Note to heading 26.06). The first stage of the extraction is designed to convert the bauxite into pure aluminium oxide (alumina). For this purpose the ground ore is calcined and then treated with sodium hydroxide to produce a solution of sodium aluminate; this is then filtered to eliminate insoluble impurities (iron oxide, silica, etc.). The aluminium is then precipitated as aluminium hydroxide, which is calcined to give pure aluminium oxide in the form of a white powder. However, aluminium hydroxide and aluminium oxide are classified in **Chapter 28**.

In the second stage, the metal is extracted by electrolytic reduction of the alumina dissolved in fused cryolite (the latter is sodium aluminium fluoride, but it acts solely as a solvent). This electrolysis is carried out in carbon lined baths which act as the cathode; carbon bars are used as anodes. The aluminium is deposited in the bottom of the baths from where it is syphoned. It is then cast in the form of blocks, ingots, billets, slabs, wire bars, etc., usually after refining. By repeated electrolysis, aluminium can be obtained almost completely pure.

Aluminium may also be obtained by the treatment of certain other ores such as leucite (double silicate of aluminium and potassium), by re-melting aluminium waste and scrap or by processing residues (slag, dross, etc.).

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Aluminium is a bluish-white metal characterised by its lightness. It is very ductile and easily rolled, drawn, forged, stamped, and may be cast, etc. Like other soft metals, aluminium is also very suitable for extrusion and die-casting. In modern practice it can be soldered. Aluminium is an excellent conductor of heat and electricity and is a very good reflector. Since the oxide film which forms naturally on its surface protects the metal, it is often produced artificially in greater depth by anodising or chemical treatment; the surface is also sometimes coloured during these processes.

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The hardness, toughness, etc., of aluminium can be very substantially increased by alloying with other elements such as copper, magnesium, silicon, zinc or manganese. Certain of the alloys may be improved by age-hardening treatments. These processes may be followed by tempering.

The **principal aluminium alloys** which may be classified in this Chapter under the provisions of Note 5 to Section XV (see the General Explanatory Note to that Section) are :

(1) Aluminium-copper alloys. These are aluminium based alloys with a low copper content.

(2) Aluminium-zinc-copper alloys.

(3) Aluminium-silicon alloys (e.g., "alpax", "silumin").

(4) Aluminium-manganese-magnesium alloys.

(5) Aluminium-magnesium-silicon alloys (e.g., "almelec", "aldrey").

(6) Aluminium-copper-magnesium-manganese alloys (e.g., "duralumin").

(7) Aluminium-magnesium alloys (e.g., "magnalium").

(8) Aluminium-manganese alloys.

(9) Aluminium-zinc-magnesium alloys.

Most of these alloys may also contain small quantities of iron, nickel, chromium, etc.; they are often marketed under trade names which vary according to the country of origin.

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The special properties of aluminium and its alloys favour their wide use : in the aircraft, automobile or shipbuilding industries; in the building industry; in the construction of railway or tramway rolling-stock; in the electrical industry (e.g., as cables); for all types of containers (reservoirs and vats of all sizes, transport casks, drums, etc.); for household or kitchen utensils; for the manufacture of foil; etc.

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The Chaptercovers :

(A) Unwrought aluminium, and waste and scrap (headings 76.01 and 76.02).

(B) Aluminium powders and flakes (heading 76.03).

(C) Products generally obtained by rolling, extruding, drawing or forging the unwrought aluminium of heading 76.01 (headings 76.04 to 76.07).

(D) Various articles specified in headings 76.08 to 76.15, and other articles of the residual heading 76.16 which covers all other aluminium articles **other than** those included in **Chapter 82** or **83**, or more specifically covered elsewhere in the Nomenclature.

Products obtained by sintering aluminium and alumina are considered as cermets and **are excluded** from this Chapter (**heading 81.13**).

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Products and articles of aluminium are frequently subjected to various treatments to improve the properties or appearance of the metal, to protect it from corrosion, etc. These treatments are generally those referred to at the end of the General Explanatory Note to Chapter 72, and do not affect the classification of the goods.

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The classification of **composite goods**, particularly made up articles, is explained in the General Explanatory Note to Section XV.

Chapter 78

Lead and articles thereof

Subheading Note.

1.- In this Chapter the expression "refined lead" means :

Metal containing by weight at least 99.9 % of lead, provided that the content by weight of any other element does not exceed the limit specified in the following table :

TABLE - Other elements

Element		Limiting content % by weight
Ag	Silver	0.02
As	Arsenic	0.005
Bi	Bismuth	0.05
Ca	Calcium	0.002
Cd	Cadmium	0.002
Cu	Copper	0.08
Fe	Iron	0.002
S	Sulphur	0.002
Sb	Antimony	0.005
Sn	Tin	0.005
Zn	Zinc	0.002
Other	(for example Te), each	0.001

GENERAL

This Chapter covers lead and its alloys, and certain articles thereof.

Lead is mainly extracted from galena, a natural lead sulphide ore often containing silver. The crushed ore, after concentration by flotation, is generally roasted or sintered, and is then reduced by smelting. During the roasting or sintering process, the sulphide is largely converted into oxide; in the smelting process, the oxide is reduced to lead by means of coke and a flux. In this manner "bullion lead" or "work lead" is obtained; this contains a number of impurities, frequently including silver. It is therefore generally further refined to produce almost completely pure lead.

Lead is also obtained by remelting lead waste and scrap.

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Lead is a heavy, bluish-grey metal; it is very malleable, easily melted and very soft (it can be marked easily with the thumb nail). It resists the action of most acids (e.g., sulphuric acid or hydrogen chloride) and is therefore used in the construction of chemical plant.

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Because of its low melting point lead is easily alloyed with other elements. The **principal lead alloys** which may fall in this Chapter under the provisions of Note 5 to Section XV (see the General Explanatory Note to that Section), are the following :

(1) Lead-tin alloys used, for example, in lead-based soft solders, in terne-plate and in foil for the packing of tea.

(2) Lead-antimony-tin alloys used for printing type and in anti-friction bearings.

(3) Lead-arsenic alloys used for lead shot.

(4) Lead-antimony alloys (hard lead), used for bullets, accumulator plates, etc.

(5) Lead-calcium, lead-antimony-cadmium, lead-tellurium alloys.

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The Chapter covers :

(A) Unwrought lead and waste and scrap (headings 78.01 and 78.02).

(B) Products generally obtained by rolling or extruding the unwrought lead of heading 78.01 (headings 78.04 and 78.06); lead powders and flakes (heading 78.04).

(C) Tubes, pipes and fittings and the other articles of the residual heading 78.06 which covers all other lead articles **other than** those covered by Note 1 to Section XV or included in **Chapter 82** or **83** or those more specifically covered elsewhere in the Nomenclature.

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Products and articles of lead may be subjected to various treatments to improve the properties or appearance of the metal, etc. These treatments are generally those referred to at the end of the General Explanatory Note to Chapter 72, and do not affect the classification of the goods.

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The classification of **composite articles** is explained in the General Explanatory Note to Section XV.

Chapter 79

Zinc and articles thereof

Subheading Note.

1.- In this Chapter the following expressions have the meanings hereby assigned to them :

(a) **Zinc, not alloyed**

Metal containing by weight at least 97.5 % of zinc.

(b) **Zinc alloys**

Metallic substances in which zinc predominates by weight over each of the other elements, provided that the total content by weight of such other elements exceeds 2.5 %.

(c) **Zinc dust**

Dust obtained by condensation of zinc vapour, consisting of spherical particles which are finer than zinc powders. At least 80 % by weight of the particles pass through a sieve with 63 micrometres (microns) mesh. It must contain at least 85 % by weight of metallic zinc.

GENERAL

This Chapter covers zinc and zinc alloys, and certain articles thereof.

Zinc is mainly extracted from the sulphide ore (zinc blende or sphalerite), though the carbonate and silicate ores (smithsonite, hemimorphite, etc.) are also used (see the Explanatory Note to heading 26.08).

In either case, the ore is first concentrated and is then roasted or calcined to produce zinc oxide (in the case of the sulphide and carbonate ores) or water-free zinc silicate (in the case of silicate ores). Zinc is extracted from these by thermal reduction or (except in the case of silicate ores) electrolysis.

(I) **Thermal reduction** is effected by heating the oxide or silicate with coke in closed retorts. The temperature is sufficient to vaporise the zinc which distils over into condensers where most of the metal is collected as "spelter". This impure zinc may be used directly for galvanising, or may be refined by various methods.

Some impure metal is also deposited in the retort extensions as a very fine powder known as zinc dust or blue powder.

A modern modification of the process is based on the continuous reduction of zinc oxide and distillation of zinc in vertical retorts. This process gives very pure metal suitable for making die-casting alloys.

(II) **Electrolysis**. The zinc oxide is dissolved in dilute sulphuric acid. This solution of zinc sulphate is carefully purified to remove cadmium, iron, copper, etc., and is then electrolysed to produce a very pure zinc.

Zinc is also obtained by resmelting zinc waste and scrap.

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Zinc is a bluish-white metal which can be rolled, drawn, stamped, extruded, etc., at suitable temperatures, and it can readily be cast. It is resistant to atmospheric corrosion and is therefore used in building (e.g., for roofing), and to form protective coverings for other metals, especially iron and steel (e.g., by hot-dip galvanising, electro-deposition, sherardising, painting or spraying).

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Zinc is also used in the manufacture of alloys; many of these (e.g., brass), contain a predominance of other metals, but the following are the **principal zinc alloys** which may fall in this Chapter under the provisions of Note 5 to Section XV :

(1) Zinc-aluminium alloys, usually with added copper or magnesium used for die-casting, especially for automobile parts (carburettor bodies, radiator grilles, dash-boards, etc.), cycle parts (pedals, dynamo cases, etc.), radio parts, refrigerator parts, etc. Alloys of the same metals are used to produce sheets stronger than ordinary zinc, press-tools, and as cathodic protection anodes (sacrificial anodes) for protecting pipelines, condensers, etc., against corrosion.

(2) Zinc-copper alloys (button metal alloys), for casting, stamping, etc. See Subheading Notes 1 (a) and 1 (b) concerning the distinction between zinc and zinc alloys.

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The Chapter covers :

(A) Spelter and unwrought zinc, and waste and scrap (headings 79.01 and 79.02).

(B) Zinc dust, powders and flakes (heading 79.03).

(C) Products generally obtained by rolling, drawing or extruding the unwrought zinc of heading 79.01 (headings 79.04 and 79.05).

(D) Tubes, pipes and fittings and the other articles of the residual heading 79.07 which covers all other zinc articles **other than** those covered by Note 1 to Section XV or included in **Chapter 82** or **83** or those more specifically covered elsewhere in the Nomenclature.

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Products and articles of zinc may be subjected to various treatments to improve the properties or appearance of the metal, etc. These treatments are generally those referred to at the end of the General Explanatory Note to Chapter 72, and do not affect the classification of the goods.

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The classification of **composite articles** is explained in the General Explanatory Note to Section XV.

Chapter 80

Tin and articles thereof

Subheading Note.

1.- In this Chapter the following expressions have the meanings hereby assigned to them :

(a) **Tin, not alloyed**

Metal containing by weight at least 99 % of tin, provided that the content by weight of any bismuth or copper is less than the limit specified in the following table :

TABLE - Other elements

Element		Limiting content % by weight
Bi	Bismuth	0.1
Cu	Copper	0.4

(b) **Tin alloys**

Metallic substances in which tin predominates by weight over each of the other elements, provided that :

(i) the total content by weight of such other elements exceeds 1 %; or

(ii) the content by weight of either bismuth or copper is equal to or greater than the limit

(iii) specified in the foregoing table.

GENERAL

This Chapter covers tin and its alloys, and certain articles thereof.

Commercially, tin is extracted from the oxide ore cassiterite (or tin-stone) classified in heading 26.09; this ore may occur either in veins or in alluvial deposits.

The principal stages in the extraction are as follows :

(I) Concentration of the ore by washing, or by crushing and flotation.

(II) Treatment of the oxide by roasting, magnetic separation, or with acids or other solvents, to remove impurities such as sulphur, arsenic, copper, lead, iron and tungsten.

(III) Reduction of the purified oxide with coke to produce a crude tin.

(IV) Refining of the crude tin by various processes which can produce the metal in an almost completely pure condition.

Tin is also recovered from scrap tinplate by chlorination or electrolytic treatment, or by re-melting tin waste and scrap. These recovery processes can also produce very pure tin.

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Pure tin is silvery-white and very shiny. It is not very ductile, but is malleable, easily melted and soft (although harder than lead). It can readily be cast, hammered, rolled or extruded.

Tin is very resistant to atmospheric corrosion but is attacked by concentrated acids.

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Tin is chiefly used for tinning other base metals especially iron or steel (e.g., manufacture of tin-plate, especially for the canning industry), and in the preparation of alloys (bronze, etc.). In the pure state or alloyed, it is also used in the manufacture of apparatus, tubing and piping for the food industries; still heads; refrigerating apparatus; industrial reservoirs, tanks, etc.; solder in sticks, wire, etc.; ornamental articles and tableware (e.g., in pewter); toys; organ pipes; etc. It is also used in the form of foil or collapsible tubes.

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The **principal alloys of tin** which may be classified in this Chapter under the provisions of Note 5 to Section XV (see the General Explanatory Note to that Section) include :

(1) Tin-lead alloys used, for example, as tin base soft solders; in pewter-ware; in toy manufacture; for certain capacity measures.

(2) Tin-antimony alloys, usually with copper (e.g., Britannia metal) used for tableware, manufacture of bearings, etc.

(3) Tin-lead-antimony alloys, sometimes with copper (e.g., tin based anti-friction metals), used to make castings (especially bearings) and as packing.

(4) Tin-cadmium alloys, sometimes also including zinc, used as anti-friction metals.

*

* *

This Chapter covers :

(A) Unwrought tin and tin waste and scrap (headings 80.01 and 80.02).

(B) Productsobtained generally by rolling or extruding the unwrought tin of heading 80.01 (heading 80.03 and 80.07); tin powders and flakes (heading 80.07).

(C) Tubes, pipes and fittings and the other articles of the residual heading 80.07 which covers all other tin articles **other than** those covered by Note 1 to Section XV or included in **Chapter 82** or **83** or those more specifically covered elsewhere in the Nomenclature.

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Products and articles of tin may be subjected to various treatments to improve the properties or appearance of the metal, etc. These treatments are generally those referred to at the end of the General Explanatory Note to Chapter 72, and do not affect the classification of the goods.

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The classification of **composite articles** is explained in the General Explanatory Note to Section XV.

Chapter 81

Other base metals; cermets; articles thereof

GENERAL

This Chapter is **limited** to the following base metals, their alloys, and articles thereof which are **not** more specifically covered elsewhere in the Nomenclature :

(A) Tungsten (wolfram) (heading 81.01), molybdenum (heading 81.02), tantalum (heading 81.03), magnesium (heading 81.04), cobalt, including cobalt mattes and other intermediate products of cobalt metallurgy (heading 81.05), bismuth (heading 81.06), titanium (heading 81.08), zirconium (heading 81.09), antimony (heading 81.10) and manganese (heading 81.11).

(B) Beryllium, chromium, hafnium, rhenium, thallium, cadmium, germanium, vanadium, gallium, indium and niobium (columbium) (heading 81.12).

This Chapter also covers cermets (heading 81.13).

Base metals not included in this Chapter or in the preceding Chapters of Section XV are classified in **Chapter 28**.

Most of the metals classified in this Chapter are mainly used in the form of alloys or carbides, rather than in the pure state. The classification of such alloys follows the rules set out in Note 5 to Section XV; metal carbides are **excluded** from this Chapter.

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The classification of **composite goods**, particularly made up articles, is explained in the General Explanatory Note to Section XV.

Note 8 to Section XV defines "waste and scrap" and "powders".

Chapter 82

Tools, implements, cutlery, spoons and forks, of base metal; parts thereof of base metal

Notes.

1.- Apart from blow lamps, portable forges, grinding wheels with frameworks, manicure or pedicure sets, and goods of heading 82.09, this Chapter covers only articles with a blade, working edge, working surface or other working part of :

(a) Base metal;

(b) Metal carbides or cermets;

(c) Precious or semi-precious stones (natural, synthetic or reconstructed) on a support of base metal, metal carbide or cermet; or

(d) Abrasive materials on a support of base metal, provided that the articles have cutting teeth, flutes, grooves, or the like, of base metal, which retain their identity and function after the application of the abrasive.

2.- Parts of base metal of the articles of this Chapter are to be classified with the articles of which they are parts, except parts separately specified as such and tool-holders for hand tools (heading 84.66). However parts of general use as defined in Note 2 to Section XV are in all cases excluded from this Chapter.

Heads, blades and cutting plates for electric shavers and electric hair clippers are to be classified in heading 85.10.

3.- Sets consisting of one or more knives of heading 82.11 and at least an equal number of articles of heading 82.15 are to be classified in heading 82.15.

GENERAL

This Chapter covers certain specific kinds of base metal articles, of the nature of tools, implements, cutlery, tableware, etc., which are excluded from the preceding Chapters of Section XV, and are not machinery or appliances of Section XVI (see below), nor instruments or apparatus proper to Chapter 90, nor articles of heading 96.03 or 96.04.

This Chapter includes :

(A) Tools which, apart from certain specified exceptions (e.g., blades for machine saws), are used in the hand (headings 82.01 to 82.05).

(B) Tools of two or more of the headings 82.02 to 82.05, put up in sets for retail sale (heading 82.06).

(C) Interchangeable tools for hand tools, for machine-tools or for power-operated hand tools (heading 82.07), knives and blades for machines or mechanical appliances (heading 82.08) and plates, sticks, tips and the like, for tools (heading 82.09).

(D) Articles of cutlery (whether intended for professional, personal or domestic use), certain mechanical domestic appliances, spoons and forks and similar tableware and kitchen utensils (headings 82.10 to 82.15).

In general, the Chapter covers tools which can be used independently in the hand, whether or not they incorporate simple mechanisms such as gearing, crank-handles, plungers, screw mechanisms or levers. Appliances are, however, generally classified in **Chapter 84** if they are designed for fixing to a

bench, a wall, etc., or if, by reason of their weight or size or the degree of force required for their use, they are fitted with base plates, stands, supporting frames, etc., for standing on the floor, bench, etc.

Thus a breast drill which the worker uses freely in the hand, without support, is a tool classified in heading 82.05 although it includes a simple gearing mechanism; on the other hand, a drill designed to be fixed to a stand or supporting framework would be classified in **heading 84.59**. Similarly, plier-type metal cutting shears are classified in heading 82.03, whereas guillotine-type shears fitted with a stand or base plate would be classified in **heading 84.62** even if hand-operated.

There are, however, **exceptions** to this rule, in both directions, depending on the nature of the appliances. Thus vices, grinding wheels with frameworks and portable forges are specifically covered by heading 82.05. Similarly certain mechanical appliances (coffee-mills, juice extractors, meat mincers, etc.) are classified in heading 82.10, to which special criteria apply (see relative Explanatory Note below). On the other hand, **Chapter 84** specifically includes certain apparatus used independently in the hand, such as appliances for spraying liquids or powders (**heading 84.24**), pneumatic tools (**heading 84.67**), non-pistol type office stapling machines (**heading 84.72**) – some of the latter being very small appliances which can hardly be described as having base plates or supporting frames.

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Tools, cutlery, etc., do not in general fall in this Chapter unless the blade, working edge, working surface or other working part is of base metal, of metal carbides (see the Explanatory Note to heading 28.49) or of cermets (see the Explanatory Note to heading 81.13); provided, however, that this condition is met, they remain in the Chapter even if fitted with non-metallic handles, bodies, etc., of a weight exceeding that of the metallic working part (e.g., a wooden plane with a metal blade).

The Chapter also, however, includes tools if the working part is of natural, synthetic or reconstructed precious or semi-precious stones (e.g., black diamonds) fitted onto a support of base metal, metal carbides or cermets; further, in certain cases, the working part may be of base metal fitted or covered with abrasive materials.

There are **exceptions** to these general rules in the case of certain articles specifically mentioned in the headings (e.g., portable forges and grinding wheels with frameworks). Moreover, very few abrasive tools remain in the scope of the Chapter (see the Explanatory Notes to headings 82.02 and 82.07), since **heading 68.04** covers grinding wheels and the like (including grinding, sharpening, polishing, trueing and cutting wheels, heads, discs and points), of natural stone, of agglomerated abrasives, or of ceramics, with or without cores, shanks, sockets, axles or the like of other materials, but without frameworks.

Interchangeable tools of base metal, for hand tools, for machine tools or for power-operated hand tools, which are **excluded** from this Chapter because their working part is not one of the materials specified in Note 1, generally fall to be classified according to the constituent material of the working part, e.g., those of rubber (**Chapter 40**), leather (**Chapter 42**), furskin (**Chapter 43**), cork (**Chapter 45**), textile fabric (**Chapter 59**), ceramic materials (**heading 69.09**). Brushes for use on machines are classified in **heading 96.03**.

Identifiable base metal parts of tools, cutlery, etc. (e.g., saw frames and plane irons) are normally classified in the same heading as the complete articles. This rule **does not**, however, apply to parts forming the subject of a special heading. Chains, nails, bolts, nuts, screws, rivets, springs (e.g. for secateurs) and other parts of general use as defined in Note 2 to Section XV are **excluded** from this Chapter and fall in their appropriate headings (**Chapters 73 to 76** and **78 to 81**).

Cutlery and other articles classified in headings 82.08 to 82.15 may be fitted with minor trimmings of precious metal or metal clad with precious metal (e.g., monograms or bands); if, however, they include other parts (e.g., handles or blades) of precious metal or metal clad with precious metal, or if they contain natural or cultured pearls, or precious or semi-precious stones (natural, synthetic or reconstructed) (except as working parts as described above), they are classified in **Chapter 71**.

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The Chapter **does not include** :

(a) Tools, scissors and other cutlery of the type used as medical, dental, surgical or veterinary instruments or appliances (**heading 90.18**).

(b) Tools clearly having the character of toys (**Chapter 95**).

Chapter 83

Miscellaneous articles of base metal

Notes.

1.- For the purposes of this Chapter, parts of base metal are to be classified with their parent articles. However, articles of iron or steel of heading 73.12, 73.15, 73.17, 73.18 or 73.20, or similar articles of other base metal (Chapters 74 to 76 and 78 to 81) are not to be taken as parts of articles of this Chapter.

2.- For the purposes of heading 83.02, the word "castors" means those having a diameter (including, where appropriate, tyres) not exceeding 75 mm, or those having a diameter (including, where appropriate, tyres) exceeding 75 mm provided that the width of the wheel or tyre fitted thereto is less than 30 mm.

GENERAL

Whereas in Chapters 73 to 76 and 78 to 81 articles are classified according to a specific metal, this Chapter, like Chapter 82, covers certain particular classes of goods **irrespective** of the base metal of which they are composed.

In general, parts of base metal are to be classified with their parent articles (see Chapter Note 1). However, the Chapter **does not cover** springs (even if specialised for locks, etc.), chains, cables, nuts, bolts, screws or nails; these goods are classified in the appropriate headings of **Chapters 73 to 76** and **78 to 81** (see Note 2 to Section XV and Note 1 to this Chapter).

SECTION XVI

MACHINERY AND MECHANICAL APPLIANCES; ELECTRICAL EQUIPMENT; PARTS THEREOF; SOUND RECORDERS AND REPRODUCERS, TELEVISION IMAGE AND SOUND RECORDERS AND REPRODUCERS, AND PARTS AND ACCESSORIES OF SUCH ARTICLES

Notes.

1. This Section does not cover :

(a) Transmission or conveyor belts or belting, of plastics of Chapter 39, or of vulcanised rubber (heading 40.10), or other articles of a kind used in machinery or mechanical or electrical appliances or for other technical uses, of vulcanised rubber other than hard rubber (heading 40.16);

(b) Articles of leather or of composition leather (heading 42.05) or of furskin (heading 43.03), of a kind used in machinery or mechanical appliances or for other technical uses;

(c) Bobbins, spools, cops, cones, cores, reels or similar supports, of any material (for example, Chapter 39, 40, 44 or 48 or Section XV);

(d) Perforated cards for Jacquard or similar machines (for example, Chapter 39 or 48 or Section XV);

(e) Transmission or conveyor belts or belting of textile material (heading 59.10) or other articles of textile material for technical uses (heading 59.11);

(f) Precious or semi-precious stones (natural, synthetic or reconstructed) of headings 71.02 to 71.04, or articles wholly of such stones of heading 71.16, except unmounted worked sapphires and diamonds for styli (heading 85.22);

(g) Parts of general use, as defined in Note 2 to Section XV, of base metal (Section XV), or similar goods of plastics (Chapter 39);

(h) Drill pipe (heading 73.04);

(ij) Endless belts of metal wire or strip (Section XV);

(k) Articles of Chapter 82 or 83;

(l) Articles of Section XVII;

(m) Articles of Chapter 90;

(n) Clocks, watches or other articles of Chapter 91;

(o) Interchangeable tools of heading 82.07 or brushes of a kind used as parts of machines (heading 96.03); similar interchangeable tools are to be classified according to the constituent material of their working part (for example, in Chapter 40, 42, 43, 45 or 59 or heading 68.04 or 69.09);

(p) Articles of Chapter 95; or

(q) Typewriter or similar ribbons, whether or not on spools or in cartridges (classified according to their constituent material, or in heading 96.12 if inked or otherwise prepared for giving impressions), or monopods, bipods, tripods and similar articles, of heading 96.20.

2.- Subject to Note 1 to this Section, Note 1 to Chapter 84 and Note 1 to Chapter 85, parts of machines (not being parts of the articles of heading 84.84, 85.44, 85.45, 85.46 or 85.47) are to be classified according to the following rules :

(a) Parts which are goods included in any of the headings of Chapter 84 or 85 (other than headings 84.09, 84.31, 84.48, 84.66, 84.73, 84.87, 85.03, 85.22, 85.29, 85.38 and 85.48) are in all cases to be classified in their respective headings;

(b) Other parts, if suitable for use solely or principally with a particular kind of machine, or with a number of machines of the same heading (including a machine of heading 84.79 or 85.43) are to be classified with the machines of that kind or in heading 84.09, 84.31, 84.48, 84.66, 84.73, 85.03, 85.22, 85.29 or 85.38 as appropriate. However, parts which are equally suitable for use principally with the goods of headings 85.17 and 85.25 to 85.28 are to be classified in

heading 85.17, and parts which are suitable for use solely or principally with the goods of heading 85.24 are to be classified in heading 85.29;

(c) All other parts are to be classified in heading 84.09, 84.31, 84.48, 84.66, 84.73, 85.03, 85.22, 85.29 or 85.38 as appropriate or, failing that, in heading 84.87 or 85.48.

3.- Unless the context otherwise requires, composite machines consisting of two or more machines fitted together to form a whole and other machines designed for the purpose of performing two or more complementary or alternative functions are to be classified as if consisting only of that component or as being that machine which performs the principal function.

4.- Where a machine (including a combination of machines) consists of individual components (whether separate or interconnected by piping, by transmission devices, by electric cables or by other devices) intended to contribute together to a clearly defined function covered by one of the headings in Chapter 84 or Chapter 85, then the whole falls to be classified in the heading appropriate to that function.

5.- For the purposes of these Notes, the expression "machine" means any machine, machinery, plant, equipment, apparatus or appliance cited in the headings of Chapter 84 or 85.

6.- (A) Throughout the Nomenclature, the expression "electrical and electronic waste and scrap" means electrical and electronic assemblies, printed circuit boards, and electrical or electronic articles that :

(i) have been rendered unusable for their original purposes by breakage, cutting-up or other processes or are economically unsuitable for repair, refurbishment or renovation to render them fit for their original purposes; and

(ii) are packaged or shipped in a manner not intended to protect individual articles from damage during transportation, loading and unloading operations.

(B) Mixed consignments of "electrical and electronic waste and scrap" and other waste and scrap are to be classified in heading 85.49.

(C) This Section does not cover municipal waste, as defined in Note 4 to Chapter 38.

GENERAL

(I) GENERAL CONTENT OF THE SECTION

(A) Subject to certain **exclusions** provided for in the Notes to this Section and to Chapters 84 and 85 and apart from goods covered more specifically in other Sections, this Section covers all mechanical or electrical machinery, plant, equipment, apparatus and appliances and parts thereof, together with certain apparatus and plant which is neither mechanical nor electrical

(such as boilers and boiler house plant, filtering apparatus, etc.) and parts of such apparatus and plant.

The main **exclusions** from the Section are :

(a) Spools, cops, bobbins, reels, etc., of any material (classified according to their constituent material). However, warp beams should not be regarded as bobbins, spools or similar supports and fall in **heading 84.48**.

(b) Parts of general use as defined in Note 2 to Section XV, such as wire, chains, bolts, screws and springs, of iron or steel (**heading 73.12**, **73.15**, **73.18** or **73.20**) and similar articles of other base metals (**Chapters 74 to 76** and **78 to 81**), locks of **heading 83.01**, fittings and mountings for doors, windows, etc., of **heading 83.02**. Similar goods of plastics are also excluded from this Section and fall in **Chapter 39**.

(c) Interchangeable tools of **heading 82.07**; other similar interchangeable tools are classified according to the constituent material of their working part (e.g., in **Chapter 40** (rubber), **Chapter 42** (leather), **Chapter 43** (fur), **Chapter 45** (cork) or **Chapter 59** (textile) or in **heading 68.04** (abrasive, etc.), or **heading 69.09** (ceramics), etc.).

(d) Other articles of **Chapter 82** (e.g., tools, tool-tips, knives and cutting blades, non-electrical hair clippers, and certain mechanical domestic appliances) and articles of **Chapter 83**.

(e) Articles of **Section XVII**.

(f) Articles of **Section XVIII**.

(g) Arms and ammunition (**Chapter 93**).

(h) Machinery and apparatus having the character of toys, games or sports requisites and identifiable parts and accessories thereof (including non-electric motors and engines but **excluding** pumps for liquids and filtering or purifying machinery for liquids or gases, which fall in **heading 84.13** or **84.21**, respectively, and also excluding electric motors, electric transformers and radio remote control apparatus, which fall in **heading 85.01**, **85.04** or **85.26**, respectively) which are suitable for use solely or principally with toys, games or sports requisites (**Chapter 95**).

(ij) Brushes of a kind used as parts of machines (**heading 96.03**).

(B) In general, the goods of this Section may be of any material. In the great majority of cases they are of base metal, but the Section also covers certain machinery of other materials (e.g., pumps wholly of plastics) and parts of plastics, of wood, precious metals, etc.

The Section **does not**, however, **cover** :

(a) Transmission or conveyor belts or belting, of plastics (**Chapter 39**); articles of unhardened vulcanised rubber (e.g., transmission or conveyor belts or belting) (**heading 40.10**), rubber tyres, tubes, etc. (**headings 40.11 to 40.13**) and washers, etc. (**heading 40.16**).

(b) Articles of leather or composition leather (e.g., pickers for textile looms) (**heading 42.05**), or of furskin (**heading 43.03**).

(c) Textile articles, e.g., transmission or conveyor belts (**heading 59.10**), felt pads and polishing discs (**heading 59.11**).

(d) Certain ceramic goods of **Chapter 69** (see General Explanatory Notes to Chapters 84 and 85).

(e) Certain glass articles of **Chapter 70** (see General Explanatory Notes to Chapters 84 and 85).

(f) Articles wholly of precious or semi-precious stones (natural, synthetic or reconstructed) (**heading 71.02, 71.03, 71.04 or 71.16**), except unmounted worked sapphires or diamonds for styli (**heading 85.22**).

(g) Endless belts of metal wire or strip (**Section XV**).

(II) PARTS

(Section Note 2)

In general, parts which are suitable for use solely or principally with particular machines or apparatus (including those of heading 84.79 or heading 85.43), or with a group of machines or apparatus falling in the same heading, are classified in the same heading as those machines or apparatus subject, of course, to the **exclusions** mentioned in Part (I) above. Separate headings are, however, provided for :

(A) Parts of the engines of heading 84.07 or 84.08 (heading 84.09).

(B) Parts of the machinery of headings 84.25 to 84.30 (heading 84.31).

(C) Parts of the textile machines of headings 84.44 to 84.47 (heading 84.48).

(D) Parts of the machines of headings 84.56 to 84.65 (heading 84.66).

(E) Parts of the office machines of headings 84.70 to 84.72 (heading 84.73).

(F) Parts of the machines of heading 85.01 or 85.02 (heading 85.03).

(G) Parts of apparatus of headings 85.19 or 85.21 (heading 85.22).

(H) Parts of apparatus of headings 85.25 to 85.28 (heading 85.29).

(IJ) Parts of apparatus of heading 85.35, 85.36 or 85.37 (heading 85.38).

The above rules do **not** apply to parts which in themselves constitute an article covered by a heading of this Section (**other than** headings 84.87 and 85.48); these are in all cases classified in their own appropriate heading even if specially designed to work as part of a specific machine. This applies in particular to :

(1) Pumps and compressors (headings 84.13 and 84.14).

(2) Filtering machinery and apparatus of heading 84.21.

(3) Lifting and handling machinery (heading 84.25, 84.26, 84.28 or 84.86).

(4) Taps, cocks, valves, etc. (heading 84.81).

(5) Ball or roller bearings, and polished steel balls of a tolerance not exceeding 1 % or 0.05 mm, whichever is less (heading 84.82).

(6) Transmission shafts, cranks, bearing housings, plain shaft bearings, gears and gearing (including friction gears and gear-boxes and other speed changers), flywheels, pulleys and pulley blocks, clutches and shaft couplings (heading 84.83).

(7) Gaskets and similar joints of heading 84.84.

(8) Electric motors of heading 85.01.

(9) Electrical transformers and other machines and apparatus of heading 85.04.

(10) Electric accumulators assembled into battery packs (heading 85.07).

(11) Electric heating resistors (heading 85.16).

(12) Electrical capacitors (heading 85.32).

(13) Electrical apparatus for switching, protecting, etc., electrical circuits (switches, fuses, junction boxes, etc.) (headings 85.35 and 85.36).

(14) Boards, panels, consoles, desks, cabinets and other apparatus for electric control or the distribution of electricity (heading 85.37).

(15) Lamps of heading 85.39.

(16) Valves and tubes of heading 85.40 and diodes, transistors, etc., of heading 85.41.

(17) Electrical carbons (e.g., arc lamp carbons, carbon electrodes and carbon brushes) (heading 85.45).

(18) Insulators of any material (heading 85.46).

(19) Insulating fittings for electrical machines, etc., of heading 85.47.

Other parts which are recognisable as such, but are not suitable for use solely or principally with a particular machine or class of machine (i.e., which may be common to a number of machines falling in different headings), are classified in heading 84.87 (if not electrical) or in heading 85.48 (if electrical), unless they are **excluded** by the provisions set out above.

The above provisions for the classification of parts do not apply to parts of the goods falling in heading 84.84 (gaskets, etc.), 85.44 (insulated wire), 85.45 (electrical carbons), 85.46 (insulators) or 85.47 (conduit tubing); in general, such parts are classified in the appropriate materials Chapter.

Machinery parts remain classified in this Section whether or not finished ready for use. However, rough forgings of iron or steel are classified in **heading 72.07**.

(III) ACCESSORY APPARATUS

(See General Interpretative Rules 2 (a) and 3 (b) and Section Notes 3 and 4)

Accessory instruments and apparatus (e.g., manometers, thermometers, level gauges or other measuring or checking instruments, output counters, clockwork switches, control panels, automatic regulators) presented with the machine or apparatus with which they normally belong are classified with that machine or apparatus, if they are designed to measure, check, control or regulate one specific machine or apparatus (which may be a combination of machines (see Part VI below) or a functional unit (see Part VII below)). However, accessory instruments and apparatus designed to measure, check, control or regulate several machines (whether or not of the same type) fall in their own appropriate heading.

(IV) INCOMPLETE MACHINES

(See General Interpretative Rule 2 (a))

Throughout the Section any reference to a machine or apparatus covers not only the complete machine, but also an incomplete machine (i.e., an assembly of parts so far advanced that it already has the main essential features of the complete machine). Thus a machine lacking only a flywheel, a bed plate, calender rolls, tool holders, etc., is classified in the same heading as the machine, and not in any separate heading provided for parts. Similarly a machine or apparatus normally incorporating an electric motor (e.g., electro-mechanical hand tools of heading 84.67) is classified in the same heading as the corresponding complete machine even if presented without that motor.

(V) UNASSEMBLED MACHINES

(See General Interpretative Rule 2 (a))

For convenience of transport many machines and apparatus are transported in an unassembled state. Although in effect the goods are then a collection of parts, they are classified as being the machine in question and not in any separate heading for parts. The same applies to an incomplete machine having the features of the complete machine (see Part (IV) above), presented unassembled (see also in this connection the General Explanatory Notes to Chapters 84 and 85). However, unassembled components in excess of the number required for a complete machine or for an incomplete machine having the characteristics of a complete machine, are classified in their own appropriate heading.

(VI) MULTI-FUNCTION MACHINES AND COMPOSITE MACHINES

(Section Note 3)

In general, multi-function machines are classified according to the principal function of the machine.

Multi-function machines are, for example, machine-tools for working metal using interchangeable tools, which enable them to carry out different machining operations (e.g., milling, boring, lapping).

Where it is not possible to determine the principal function, and where, as provided in Note 3 to the Section, the context does not otherwise require, it is necessary to apply General Interpretative Rule 3 (c); such is the case, for example, in respect of multi-function machines potentially classifiable in several of the headings 84.25 to 84.30, in several of the headings 84.58 to 84.63 or in several of the headings 84.70 to 84.72.

Composite machines consisting of two or more machines or appliances of different kinds, fitted together to form a whole, consecutively or simultaneously performing **separate** functions which are generally complementary and are described in different headings of Section XVI, are also classified according to the principal function of the composite machine.

The following are examples of such composite machines : printing machines with a subsidiary machine for holding the paper (heading 84.43); a cardboard box making machine combined with an auxiliary machine for printing a name or simple design (heading 84.41); industrial furnaces combined with lifting or handling machinery (heading 84.17 or 85.14); cigarette making machinery combined with subsidiary packaging machinery (heading 84.78).

For the purposes of the above provisions, machines of different kinds are taken to be **fitted together to form a whole** when incorporated one in the other or mounted one on the other, or mounted on a common base or frame or in a common housing.

Assemblies of machines should not be taken to be fitted together to form a whole unless the machines are designed to be permanently attached either to each other or to a common base, frame, housing, etc. This **excludes** assemblies which are of a temporary nature or are not normally built as a composite machine.

The bases, frames or housings may be provided with wheels so that the composite machine can be moved about as required during use, **provided** it does not thereby acquire the character of an article (e.g., a vehicle) more specifically covered by a particular heading of the Nomenclature.

Floors, concrete bases, walls, partitions, ceilings, etc., even if specially fitted out to accommodate machines or appliances, should not be regarded as a common base joining such machines or appliances to form a whole.

Note 3 to Section XVI **need not be invoked** when the composite machine is covered as such by a particular heading, for example, some types of air conditioning machines (heading 84.15).

It should be noted that multi-purpose machines (e.g., machine-tools capable of working metals and other materials or eyeletting machines used equally well in the paper, textile, leather, plastics, etc., industries) are to be classified according to the provisions of Note 7 to Chapter 84.

(VII) FUNCTIONAL UNITS

(Section Note 4)

This Note applies when a machine (including a combination of machines) consists of separate components which are intended to contribute together to a clearly defined function covered by one of the headings in Chapter 84 or, more frequently, Chapter 85. The whole then falls to be classified in the heading appropriate to that function, whether the various components (for convenience or other reasons) remain separate or are interconnected by piping (carrying air, compressed gas, oil, etc.), by devices used to transmit power, by electric cables or by other devices.

For the purposes of this Note, the expression "intended to contribute together to a clearly defined function" covers only machines and combinations of machines essential to the performance of the function specific to the functional unit as a whole, and thus excludes machines or appliances fulfilling auxiliary functions and which do not contribute to the function of the whole.

The following are examples of functional units of this type within the meaning of Note 4 to this Section :

(1) Hydraulic systems consisting of a hydraulic power unit (comprising essentially a hydraulic pump, an electric motor, control valves and an oil tank), hydraulic cylinders and the pipes or hoses needed to connect the cylinders to the hydraulic power unit (heading 84.12).

(2) Refrigerating equipment consisting of components which are not fitted together to form a whole and are interconnected by means of piping through which the coolant circulates (heading 84.18).

(3) Irrigation systems consisting of a control station comprising filters, injectors, metering valves, etc., underground distribution and branchlines, and a surface network (heading 84.24).

(4) Milking machines with separate component parts (vacuum pump, pulsator, teat-cups and pails) interconnected by hoses or piping (heading 84.34).

(5) Brewhouse machinery comprising, inter alia, sprouting or germination machines, malt crushing machines, mashing vats, straining vats (heading 84.38). Auxiliary appliances (e.g., bottling machines, label-printing machines), are however not included and should be classified in their own appropriate heading.

(6) Letter sorting systems consisting essentially of coding desks, pre-sorting channel systems, intermediate sorters and final sorters, the whole being controlled by an automatic data processing machine (heading 84.72).

(7) Asphalt plant consisting of separate components, such as feed hoppers, conveyors, dryers, vibrating screens, mixers, storage bins and control units, placed side by side (heading 84.74).

(8) Machinery for assembling electric filament lamps, of which the component parts are interconnected by conveyors, and which include equipment for the heat-treatment of glass, pumps and lamp-testing units (heading 84.75).

(9) Welding equipment consisting of the welding head or tongs, with a transformer, generator or rectifier to supply the current (heading 85.15).

(10) Portable radiotelephone transmitters and their associated hand microphone (heading 85.17).

(11) Radar apparatus with the associated power packs, amplifiers, etc. (heading 85.26).

(12) Satellite television reception systems consisting of a receiver, a parabolic aerial reflector dish, a control rotator for the reflector dish, a feed horn (wave guide), a polarizer, a low-noise-block (LNB) down converter and an infra-red remote control (heading 85.28).

(13) Burglar alarms, comprising, e.g., an infra-red lamp, a photoelectric cell and a bell (heading 85.31).

It should be noted that component parts not complying with the terms of Note 4 to Section XVI fall in their own appropriate headings. This applies, for example, to closed circuit video-surveillance systems, consisting of a combination of a variable number of television cameras and video monitors

connected by coaxial cables to a controller, switchers, audio board/receivers and possibly automatic data processing machines (for saving data) and/or video recorders (for recording pictures).

(VIII) MOBILE MACHINERY

As regards self-propelled or other mobile machines, reference should be made to the Explanatory Notes to the headings for the machines (e.g., lifting and handling machinery, headings 84.25 to 84.28, and excavating machinery, headings 84.29 and 84.30), and to the Explanatory Notes to the Chapters and headings of Section XVII.

(IX) MACHINERY AND APPARATUS FOR USE IN LABORATORIES

Machinery and apparatus of a kind covered by this Section remain classified in the Section even if specialised for use in laboratories or in connection with scientific and measuring instruments, **provided** they do not constitute non-industrial demonstrational apparatus of **heading 90.23** nor measuring, checking, etc., instruments of **Chapter 90**. For example, small furnaces, distillation apparatus, grinders, mixers, electrical transformers and capacitors, for use in laboratories, remain classified in this Section.

(X) ELECTRICAL AND ELECTRONIC WASTE AND SCRAP (E-WASTE)

(Note 6 de la Section)

The expression ''original purpose'', in Note 6 to Section XVI, refers to functional use as an electrical or electronic goods.

Chapter 84

Nuclear reactors, boilers, machinery

and mechanical appliances; parts thereof

Notes.

1.- This Chapter does not cover :

(a) Millstones, grindstones or other articles of Chapter 68;

(b) Machinery or appliances (for example, pumps) of ceramic material and ceramic parts of machinery or appliances of any material (Chapter 69);

(c) Laboratory glassware (heading 70.17); machinery, appliances or other articles for technical uses or parts thereof, of glass (heading 70.19 or 70.20);

(d) Articles of heading 73.21 or 73.22 or similar articles of other base metals (Chapters 74 to 76 or 78 to 81);

(e) Vacuum cleaners of heading 85.08;

(f) Electro-mechanical domestic appliances of heading 85.09; digital cameras of heading 85.25;

(g) Radiators for the articles of Section XVII; or

(h) Hand-operated mechanical floor sweepers, not motorised (heading 96.03).

2.- Subject to the operation of Note 3 to Section XVI and subject to Note 11 to this Chapter, a machine or appliance which answers to a description in one or more of the headings 84.01 to 84.24, or heading 84.86 and at the same time to a description in one or more of the headings 84.25 to 84.80 is to be classified under the appropriate heading of the former group or under heading 84.86, as the case may be, and not the latter group.

(A) Heading 84.19 does not, however, cover :

(i) Germination plant, incubators or brooders (heading 84.36);

(ii) Grain dampening machines (heading 84.37);

(iii) Diffusing apparatus for sugar juice extraction (heading 84.38);

(iv) Machinery for the heat-treatment of textile yarns, fabrics or made up textile articles (heading 84.51); or

(v) Machinery, plant or laboratory equipment, designed for a mechanical operation, in which a change of temperature, even if necessary, is subsidiary.

(B) Heading 84.22 does not cover :

(i) Sewing machines for closing bags or similar containers (heading 84.52); or

(ii) Office machinery of heading 84.72.

(C) Heading 84.24 does not cover :

(i) Ink-jet printing machines (heading 84.43); or

(ii) Water-jet cutting machines (heading 84.56).

3.- A machine-tool for working any material which answers to a description in heading 84.56 and at the same time to a description in heading 84.57, 84.58, 84.59, 84.60, 84.61, 84.64 or 84.65 is to be classified in heading 84.56.

4.- Heading 84.57 applies only to machine-tools for working metal, other than lathes (including turning centres), which can carry out different types of machining operations either :

(a) by automatic tool change from a magazine or the like in conformity with a machining programme (machining centres),

(b) by the automatic use, simultaneously or sequentially, of different unit heads working on a fixed position workpiece (unit construction machines, single station), or

(c) by the automatic transfer of the workpiece to different unit heads (multi-station transfer machines).

5.- For the purposes of heading 84.62, a "slitting line" for flat products is a processing line composed of an uncoiler, a coil flattener, a slitter and a recoiler. A "cut-to-length line" for flat products is a processing line composed of an uncoiler, a coil flattener, and a shear.

6.- (A) For the purposes of heading 84.71, the expression "automatic data processing machines" means machines capable of :

(i) Storing the processing program or programs and at least the data immediately necessary for the execution of the program;

(ii) Being freely programmed in accordance with the requirements of the user;

(iii) Performingarithmetical computations specified by the user; and

(iv) Executing, without human intervention, a processing program which requires them to modify their execution, by logical decision during the processing run.

(B) Automatic data processing machines may be in the form of systems consisting of a variable number of separate units.

(C) Subject to paragraphs (D) and (E) below, a unit is to be regarded as being part of an automatic data processing system if it meets all of the following conditions :

(i) It is of a kind solely or principally used in an automatic data processing system;

(ii) It is connectable to the central processing unit either directly or through one or more other units; and

(iii) It is able to accept or deliver data in a form (codes or signals) which can be used by the system.

Separately presented units of an automatic data processing machine are to be classified in heading 84.71.

However, keyboards, X-Y co-ordinate input devices and disk storage units which satisfy the conditions of paragraphs (C) (ii) and (C) (iii) above, are in all cases to be classified as units of heading 84.71.

(D) Heading 84.71 does not cover the following when presented separately, even if they meet all of the conditions set forth in Note 6 (C) above :

(i) Printers, copying machines, facsimile machines, whether or not combined;

(ii) Apparatus for the transmission or reception of voice, images or other data, including apparatus for communication in a wired or wireless network (such as a local or wide area network);

(iii) Loudspeakers and microphones;

(iv) Television cameras, digital cameras and video camera recorders;

(v) Monitors and projectors, not incorporating television reception apparatus.

(E) Machines incorporating or working in conjunction with an automatic data processing machine and performing a specific function other than data processing are to be classified in the headings appropriate to their respective functions or, failing that, in residual headings.

7.- Heading 84.82 applies, inter alia, to polished steel balls, the maximum and minimum diameters of which do not differ from the nominal diameter by more than 1 % or by more than 0.05 mm, whichever is less.

Other steel balls are to be classified in heading 73.26.

8.- A machine which is used for more than one purpose is, for the purposes of classification, to be treated as if its principal purpose were its sole purpose.

Subject to Note 2 to this Chapter and Note 3 to Section XVI, a machine the principal purpose of which is not described in any heading or for which no one purpose is the principal purpose is, unless the context otherwise requires, to be classified in heading 84.79. Heading 84.79 also covers machines for making rope or cable (for example, stranding, twisting or cabling machines) from metal wire, textile yarn or any other material or from a combination of such materials.

9.- For the purposes of heading 84.70, the term "pocket-size" applies only to machines the dimensions of which do not exceed 170 mm x 100 mm x 45 mm.

10.- For the purposes of heading 84.85, the expression "additive manufacturing" (also referred to as 3D printing) means the formation of physical objects, based on a digital model, by the successive addition and layering, and consolidation and solidification, of material (for example, metal, plastics or ceramics).

Subject to Note 1 to Section XVI and Note 1 to Chapter 84, machines answering to the description in heading 84.85 are to be classified in that heading and in no other heading of the Nomenclature.

11.- (A) Notes 12 (a) and 12 (b) to Chapter 85 also apply with respect to the expressions "semiconductor devices" and "electronic integrated circuits", respectively, as used in this Note and in heading 84.86. However, for the purposes of this Note and of heading 84.86, the expression "semiconductor devices" also covers photosensitive semiconductor devices and light-emitting diodes (LED).

(B) For the purposes of this Note and of heading 84.86, the expression "manufacture of flat panel displays" covers the fabrication of substrates into a flat panel. It does not cover the manufacture of glass or the assembly of printed circuit boards or other electronic components onto the flat panel. The expression "flat panel display" does not cover cathode-ray tube technology.

(C) Heading 84.86 also includes machines and apparatus solely or principally of a kind used for :

(i) the manufacture or repair of masks and reticles;

(ii) assembling semiconductor devices or electronic integrated circuits;

(iii) lifting, handling, loading or unloading of boules, wafers, semiconductor devices, electronic integrated circuits and flat panel displays.

(D) Subject to Note 1 to Section XVI and Note 1 to Chapter 84, machines and apparatus answering to the description in heading 84.86 are to be classified in that heading and in no other heading of the Nomenclature.

Subheading Notes.

1.- For the purposes of subheading 8465.20, the term "machining centres" applies only to machine-tools for working wood, cork, bone, hard rubber, hard plastics or similar hard materials, which can carry out different types of machining operations by automatic tool change from a magazine or the like in conformity with a machining programme.

2.- For the purposes of subheading 8471.49, the term "systems" means automatic data processing machines whose units satisfy the conditions laid down in Note 6 (C) to Chapter 84 and which comprise at least a central processing unit, one input unit (for example, a keyboard or a scanner), and one output unit (for example, a visual display unit or a printer).

3.- For the purposes of subheading 8481.20, the expression "valves for oleohydraulic or pneumatic transmissions" means valves which are used specifically in the transmission of "fluid power" in a hydraulic or pneumatic system, where the energy source is supplied in the form of pressurised fluids (liquid or gas). These valves may be of any type (for example, pressure-reducing type, check type). Subheading 8481.20 takes precedence over all other subheadings of heading 84.81.

4.- Subheading 8482.40 applies only to bearings with cylindrical rollers of a uniform diameter not exceeding 5 mm and having a length which is at least three times the diameter. The ends of the rollers may be rounded.

GENERAL

(A) GENERAL CONTENT OF THE CHAPTER

Subject to the provisions of the General Explanatory Note to Section XVI, this Chapter covers all machinery and mechanical appliances, and parts thereof, not more specifically covered by **Chapter 85**, and not being :

(a) Articles of textile material, for technical uses (**heading 59.11**).

(b) Articles of stone, etc., of **Chapter 68**.

(c) Ceramic articles of **Chapter 69**.

(d) Laboratory glassware of **heading 70.17**; machinery and appliances and parts thereof, of glass (**heading 70.19** or **70.20**).

(e) Stoves, central heating radiators and other goods of **heading 73.21** or **73.22**, and similar articles of other base metals.

(f) Electro-mechanical domestic appliances of **heading 85.09**; digital cameras of **heading 85.25**.

(g) Radiators for the articles of Section XVII (**Section XVII**).

(h) Hand-operated mechanical floor sweepers, not motorised (**heading 96.03**).

In general, Chapter 84 covers machinery and mechanical apparatus and Chapter 85 electrical goods. However, certain machines are specified in headings of Chapter 85 (e.g., electro-mechanical domestic appliances) while Chapter 84 on the other hand covers certain non-mechanical apparatus (e.g., steam generating boilers and their auxiliary apparatus, and filtering apparatus).

It should also be noted that machinery and apparatus of a kind covered by Chapter 84 remain in this Chapter even if electric, for example :

(1) Machinery powered by electric motor.

(2) Electrically heated machinery, for example, electric central heating boilers of heading 84.03, machinery of heading 84.19 and other machinery (e.g., calenders, textile washing or bleaching machines or presses) incorporating electrical heating elements.

(3) Machines operated electro-magnetically (e.g., electro-magnetic valves) or incorporating electro-magnetic devices (e.g., textile looms with electrical automatic stop motions, cranes with electro-magnetic lifting heads and lathes with electro-magnetic chucks).

(4) Machines operated electronically (e.g., electronic calculating or automatic data processing machines) or incorporating photoelectric or electronic devices (e.g., rolling mills with photo-electric apparatus and machine-tools incorporating a variety of electronic control devices).

Since machinery or appliances (for example, pumps) of ceramic material and ceramic parts of machinery or appliances of any material **(Chapter 69),** laboratory glassware **(heading 70.17)** and machinery and appliances and parts thereof, of glass (**heading 70.19** or **70.20**) are **excluded** from this Chapter, it follows that even if a machine or mechanical appliance is covered, because of its description or nature, by a heading of this Chapter it is not to be classified therein if it has the character of an article of ceramic materials or of glass.

This applies, for example, to articles of ceramic material or of glass, incorporating components of minor importance of other materials, such as stoppers, joints, taps, etc., clamping or tightening bands or collars or other fixing or supporting devices (stands, tripods, etc.).

On the other hand, the following are, as a rule, to be taken to have lost the character of ceramic articles, laboratory glassware, or machinery or appliances and parts thereof, of ceramic material or of glass :

(i) Combinations of ceramic or glass components with a high proportion of components of other materials (e.g., of metal); also articles consisting of a high proportion of ceramic or glass components incorporated or permanently mounted in frames, cases or the like, of other materials.

(ii) Combinations of static components of ceramic material or glass with mechanical components such as motors, pumps, etc., of other materials (e.g., of metal).

(B) GENERAL ARRANGEMENT OF THE CHAPTER

(1) Heading 84.01 covers nuclear reactors, fuel elements (cartridges), non-irradiated, for nuclear reactors and machinery and apparatus for isotopic separation.

(2) Headings 84.02 to 84.24 cover the other machines and apparatus which are classified mainly by reference to their function, and regardless of the field of industry in which they are used.

(3) Headings 84.25 to 84.78 cover machines and apparatus which, with certain exceptions, are classified there by reference to the field of industry in which they are used, regardless of their particular function in that field.

(4) Heading 84.79 covers machines and mechanical appliances not covered by any preceding heading of the Chapter.

(5) Heading 84.80 covers, in addition to moulding boxes for metal foundry and moulding patterns, moulds (**other than** ingot moulds) used, by hand or in machines, for moulding certain materials.

(6) Headings 84.81 to 84.84 cover certain general-purpose goods suitable for use as machinery parts or as parts of goods of other Chapters.

(7) Heading 84.86 covers machines and apparatus of a kind used solely or principally for the manufacture of semiconductor boules or wafers, semiconductor devices, electronic integrated circuits or flat panel displays, and machines and apparatus specified in Note 11 (C) to this Chapter.

(8) Heading 84.87 covers non-electrical parts not classified elsewhere.

(C) PARTS

As regards parts in general, see the General Explanatory Note to Section XVI.

Separately presented electrical parts generally fall in one or other of the headings of **Chapter 85**, for example : electric motors (**heading 85.01**); electrical transformers (**heading 85.04**); electro-magnets, permanent magnets, electro-magnetic lifting heads for cranes and electro-magnetic chucks (**heading 85.05**); electrical starting equipment for internal combustion piston engines (**heading 85.11**); electrical switches, control panels, plugs, junction boxes, etc. (**headings 85.35 to 85.37**); electronic valves (**heading 85.40**); diodes, transistors and similar semiconductor devices (**heading 85.41**); electronic integrated circuits (**heading 85.42**); electrical carbons (**heading 85.45**); insulators (**heading 85.46**); and certain fittings of insulating material (**heading 85.47**). Unless incorporated with other parts of the machine, such goods are classified in those headings, even if designed for use solely or principally with a particular machine of this Chapter.

Other electrical parts are classified :

(1) In heading 84.09, 84.31, 84.48, 84.66 or 84.73, if they comply with the description in those headings.

(2) If not, in this Chapter in the same heading as the machine for which they are intended, **provided** they are designed for use solely or principally with that machine; when not so designed, they fall in **heading 85.48**.

(D) GOODS COVERED BY TWO OR MORE HEADINGS

OF THE CHAPTER

(Chapter Notes 2, 7 and 9 (D))

Subject to Note 1 to Section XVI and Note 1 to Chapter 84, machines and apparatus answering to the description in heading 84.86 are to be classified in that heading and in no other heading of the Nomenclature.

Headings 84.01 to 84.24 cover machinery and apparatus (described generally by reference to their function), which can be used in various branches of industry. In the other headings the machinery or apparatus is described, in most cases, by reference to the industry or other field of activity in which they are used. Under Chapter Note 2, machinery or apparatus falling in two or more headings one of which is within the first group (i.e., headings 84.01 to 84.24) is classified in that heading of the first group. Thus motors are always classified in headings 84.06 to 84.08 and 84.10 to 84.12 without regard to their use. The same principle of classification applies for pumps, even if specialised for a particular purpose (e.g., textile spinning pumps or agricultural pumps), centrifuges, calenders, filter presses, furnaces, steam generators, etc.

Certain exceptions (specified in Chapter Note 2) have been made to this general principle as regards headings 84.19, 84.22 and 84.24. Thus the following, although potentially covered by heading 84.19, are in fact classified in later headings of the Chapter :

(1) Agricultural germination plant, and poultry incubators and brooders (heading 84.36).

(2) Grain dampening machines (heading 84.37).

(3) Diffusing apparatus for sugar juice extraction (heading 84.38).

(4) Machinery for the heat-treatment of textile yarns, fabrics or made up textile articles (heading 84.51).

(5) Machinery, plant or laboratory equipment, in which the change of temperature, although necessary, is subsidiary to the main mechanical function.

Similarly the following, although potentially covered by heading 84.22, are in fact classified in later headings of the Chapter :

(1) Sewing machines (e.g., for the closing of sacks) (heading 84.52).

(2) Machines designed to insert documents or correspondence in wrappers or in envelopes and to seal them, and coin-counting or wrapping machines (heading 84.72).

Also the following, although potentially covered by heading 84.24, are in fact classified in later headings of the Chapter :

(1) Ink-jet printing machines (heading 84.43).

(2) Water-jet cutting machines (heading 84.56).

The rule of precedence for headings 84.01 to 84.24 applies **only** to machines considered as a whole. Composite machines or multi-function machines are classified in accordance with Note 3 to Section XVI and functional units in accordance with Note 4 to that Section (see Parts (VI) and (VII) of the General Explanatory Note to Section XVI).

Machines which fall in two or more headings, none of which is within headings 84.01 to 84.24, are classified in that heading which provides the most specific description of the goods, or according to the principal use of the machine. Multi-purpose machines which are used **equally** for a number of different purposes or industries (e.g., eyeletting machines used equally well in the paper, textile, leather, plastics, etc., industries) are classified in heading 84.79.

(E) MACHINES INCORPORATING OR WORKING IN CONJUNCTION WITH AN AUTOMATIC DATA PROCESSING MACHINE

AND PERFORMING A SPECIFIC FUNCTION

(Chapter Note 6 (E))

In accordance with the provisions of Note 6 (E) to Chapter 84, the following classification principles should be applied in the case of a machine incorporating or working in conjunction with an automatic data processing machine, and performing a specific function :

(1) A machine incorporating an automatic data processing machine and performing a specific function other than data processing is classifiable in the heading corresponding to the function of that machine or, in the absence of a specific heading, in a residual heading, and not in heading 84.71.

(2) Machines presented with an automatic data processing machine and intended to work in conjunction therewith to perform a specific function other than data processing, are to be classified as follows :

the automatic data processing machine must be classified separately in heading 84.71 and the other machines in the heading corresponding to the function which they perform unless, by application of Note 4 to Section XVI or Note 3 to Chapter 90, the whole is classified in another heading of Chapter 84, Chapter 85 or of Chapter 90.

Chapter 85

Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles

Notes.

1.- This Chapter does not cover :

(a) Electrically warmed blankets, bed pads, foot-muffs or the like; electrically warmed clothing, footwear or ear pads or other electrically warmed articles worn on or about the person;

(b) Articles of glass of heading 70.11;

(c) Machines and apparatus of heading 84.86;

(d) Vacuum apparatus of a kind used in medical, surgical, dental or veterinary sciences (heading 90.18); or

(e) Electrically heated furniture of Chapter 94.

2.- Headings 85.01 to 85.04 do not apply to goods described in heading 85.11, 85.12, 85.40, 85.41 or 85.42.

However, metal tank mercury arc rectifiers remain classified in heading 85.04.

3.- For the purposes of heading 85.07, the expression "electric accumulators" includes those presented with ancillary components which contribute to the accumulator's function of storing and supplying energy or protect it from damage, such as electrical connectors, temperature control devices (for example, thermistors) and circuit protection devices. They may also include a portion of the protective housing of the goods in which they are to be used.

4.- Heading 85.09 covers only the following electro-mechanical machines of the kind commonly used for domestic purposes :

(a) Floor polishers, food grinders and mixers, and fruit or vegetable juice extractors, of any weight;

(b) Other machines provided the weight of such machines does not exceed 20 kg.

The heading does not, however, apply to fans or ventilating or recycling hoods incorporating a fan, whether or not fitted with filters (heading 84.14), centrifugal clothes-dryers (heading 84.21), dish washing machines (heading 84.22), household washing machines (heading 84.50), roller or other ironing machines (heading 84.20 or 84.51), sewing machines (heading 84.52), electric scissors (heading 84.67) or to electrothermic appliances (heading 85.16).

5.- For the purposes of heading 85.17, the term "smartphones" means telephones for cellular networks, equipped with a mobile operating system designed to perform the functions of an automatic data processing machine such as downloading and running multiple applications simultaneously, including thirdparty applications, and whether or not integrating other features such as digital cameras and navigational aid systems.

6.- For the purposes of heading 85.23 :

(a) "Solid-state non-volatile storage devices" (for example, "flash memory cards" or "flash electronic storage cards") are storage devices with a connecting socket, comprising in the same housing one or more flash memories (for example, "FLASH E2PROM") in the form of integrated circuits mounted on a printed circuit board. They may include a controller in the form of an integrated circuit and discrete passive components, such as capacitors and resistors;

(b) The term "smart cards" means cards which have embedded in them one or more electronic integrated circuits (a microprocessor, random access memory (RAM) or read-only memory (ROM)) in the form of chips. These cards may contain contacts, a magnetic stripe or an embedded antenna but do not contain any other active or passive circuit elements.

7.- For the purposes of heading 85.24, "flat panel display modules" refer to devices or apparatus for the display of information, equipped at a minimum with a display screen, which are designed to be incorporated into articles of other headings prior to use. Display screens for flat panel display modules include, but are not limited to, those which are flat, curved, flexible, foldable or stretchable in form. Flat panel display modules may incorporate additional elements, including those necessary for receiving video signals and the allocation of those signals to pixels on the display. However, heading 85.24 does not include display modules which are equipped with components for converting video signals (e.g., a scaler IC, decoder IC or application processer) or have otherwise assumed the character of goods of other headings.

For the classification of flat panel display modules defined in this Note, heading 85.24 shall take precedence over any other heading in the Nomenclature.

8.- For the purposes of heading 85.34 "printed circuits" are circuits obtained by forming on an insulating base, by any printing process (for example, embossing, plating-up, etching) or by the "film circuit" technique, conductor elements, contacts or other printed components (for example, inductances, resistors, capacitors) alone or interconnected according to a pre-established pattern, other than elements which can produce, rectify, modulate or amplify an electrical signal (for example, semiconductor elements).

The expression "printed circuits" does not cover circuits combined with elements other than those obtained during the printing process, nor does it cover individual, discrete resistors, capacitors or inductances. Printed circuits may, however, be fitted with non-printed connecting elements.

Thin- or thick-film circuits comprising passive and active elements obtained during the same technological process are to be classified in heading 85.42.

9.- For the purpose of heading 85.36, "connectors for optical fibres, optical fibre bundles or cables" means connectors that simply mechanically align optical fibres end to end in a digital line system. They perform no other function, such as the amplification, regeneration or modification of a signal.

10.- Heading 85.37 does not include cordless infrared devices for the remote control of television receivers or other electrical equipment (heading 85.43).

11.- For the purposes of heading 85.39, the expression "light-emitting diode (LED) light sources" covers :

(a) "Light-emitting diode (LED) modules" which are electrical light sources based on light-emitting diodes (LED) arranged in electrical circuits and containing further elements like electrical, mechanical, thermal or optical elements. They also contain discrete active elements, discrete passive elements, or articles of heading 85.36 or 85.42 for the purposes of providing power supply or power control. Lightemitting diode (LED) modules do not have a cap designed to allow easy installation or replacement in a luminaire and ensure mechanical and electrical contact.

(b) "Light-emitting diode (LED) lamps" which are electrical light sources containing one or more LED modules containing further elements like electrical, mechanical, thermal or optical elements. The distinction between light-emitting diode (LED) modules and light-emitting diode (LED) lamps is that lamps have a cap designed to allow easy installation or replacement in a luminaire and ensure mechanical and electrical contact.

12.- For the purposes of headings 85.41 and 85.42 :

(a)(i) "Electronic integrated circuits" are :

"Semiconductor devices" are semiconductor devices the operation of which depends on variations in resistivity on the application of an electric field or semiconductor-based transducers. Semiconductor devices may also include assembly of plural elements, whether or not equipped with active and passive device ancillary functions. "Semiconductor-based transducers" are, for the purposes of this definition, semiconductorbased sensors, semiconductorbased actuators, semiconductorbased resonators and semiconductor-based oscillators, which are types of discrete semiconductor-based devices, which perform an intrinsic function, which are able to convert any kind of physical or chemical phenomena or an action into an electrical signal or an electrical signal into any type of physical phenomenon or an action.

All the elements in semiconductorbased transducers are indivisibly combined, and may also include necessary materials indivisibly attached, that enable their construction or function. The following expressions mean :

(1) "Semiconductor-based" means built or manufactured on a semiconductor substrate or made of semiconductor materials, manufactured by semiconductor technology, in which the semiconductor substrate or material plays a critical and unreplaceable role of transducer function and performance, and the operation of which is based on semiconductor properties including physical, electrical, chemical and optical properties.

(2) "Physical or chemical phenomena" relate to phenomena, such as pressure, acoustic waves, acceleration, vibration, movement, orientation, strain, magnetic field strength, electric field strength, light, radioactivity, humidity, flow, chemicals concentration, etc.

(3) "Semiconductor-based sensor" is a type of semiconductor device, which consists of microelectronic or mechanical structures that are created in the mass or on the surface of a semiconductor and that have the function of detecting physical or chemical quantities and converting these into electric signals caused by resulting variations in electric properties or displacement of a mechanical structure.

(4) "Semiconductor-based actuator" is a type of semiconductor device, which consists of microelectronic or mechanical structures that are created in the mass or on the surface of a semiconductor and that have the function of converting electric signals into physical movement.

(5) "Semiconductor-based resonator" is a type of semiconductor device, which consists of microelectronic or mechanical structures that are created in the mass or on the surface of a semiconductor and that have the function of generating a mechanical or electrical oscillation of a predefined frequency that depends on the physical geometry of these structures in response to an external input.

(6) "Semiconductor-based oscillator" is a type of semiconductor device, which consists of microelectronic or mechanical structures that are created in the mass or on the surface of a semiconductor and that have the function of generating a mechanical or electrical oscillation of a predefined frequency that depends on the physical geometry of these structures.

(ii) "Light-emitting diodes (LED)" are semiconductor devices based on semiconductor materials which convert electrical energy into visible, infra-red or ultra-violet rays, whether or not electrically connected among each other and whether or not combined with protective diodes. Light-emitting diodes (LED) of heading 85.41 do not incorporate elements for the purposes of providing power supply or power control;

(b) "Electronic integrated circuits" are :

(i) Monolithic integrated circuits in which the circuit elements (diodes, transistors, resistors, capacitors, inductances, etc.) are created in the mass (essentially) and on the surface of a semiconductor or compound semiconductor material (for example, doped silicon, gallium arsenide, silicon germanium, indium phosphide) and are inseparably associated;

(ii) Hybrid integrated circuits in which passive elements (resistors, capacitors, inductances, etc.), obtained by thin- or thick-film technology, and active elements (diodes, transistors, monolithic integrated circuits, etc.), obtained by semiconductor technology, are combined to all intents and purposes indivisibly, by interconnections or interconnecting cables, on a single insulating substrate (glass, ceramic, etc.). These circuits may also include discrete components;

(iii) Multichip integrated circuits consisting of two or more interconnected monolithic integrated circuits combined to all intents and purposes indivisibly, whether or not on one or more insulating substrates, with or without leadframes, but with no other active or passive circuit elements.

(iv) Multi-component integrated circuits (MCOs) : a combination of one or more monolithic, hybrid, or multi-chip integrated circuits with at least one of the following components : silicon-based sensors, actuators, oscillators, resonators or combinations thereof, or components performing the functions of articles classifiable under heading 85.32, 85.33, 85.41, or inductors classifiable under heading 85.04, formed to all intents and purposes indivisibly into a single body like an integrated circuit, as a component of a kind used for assembly onto a printed circuit board (PCB) or other carrier, through the connecting of pins, leads, balls, lands, bumps, or pads.

For the purpose of this definition :

1. "Components" may be discrete, manufactured independently then assembled onto the rest of the MCO, or integrated into other components.

2. "Silicon based" means built on a silicon substrate, or made of silicon materials, or manufactured onto integrated circuit die.

3. (a) "Silicon based sensors" consist of microelectronic or mechanical structures that are created in the mass or on the surface of a semiconductor and that have the function of detecting physical or chemical phenomena and transducing these into electric signals, caused by resulting variations in electric properties or displacement of a mechanical structure. "Physical or chemical phenomena" relates to real world phenomena, such as pressure, acoustic waves, acceleration, vibration, movement, orientation, strain, magnetic field strength, electric field strength, light, radioactivity, humidity, flow, chemicals concentration, etc.

(b) "Silicon based actuators" consist of microelectronic and mechanical structures that are created in the mass or on the surface of a semiconductor and that have the function of converting electrical signals into physical movement.

(c) "Silicon based resonators" are components that consist of microelectronic or mechanical structures that are created in the mass or on the surface of a semiconductor and have the function of generating a mechanical or electrical oscillation of a predefined frequency that depends on the physical geometry of these structures in response to an external input.

(d) "Silicon based oscillators" are active components that consist of microelectronic or mechanical structures that are created in the mass or on the surface of a semiconductor and that have the function of generating a mechanical or electrical oscillation of a predefined frequency that depends on the physical geometry of these structures.

For the classification of the articles defined in this Note, headings 85.41 and 85.42 shall take precedenceover any other heading in the Nomenclature, except in the case of heading 85.23, which might cover them by reference to, in particular, their function.

Subheading Notes.

1.- Subheading 8525.81 covers only high-speed television cameras, digital cameras and video camera recorders having one or more of the following characteristics :
- writing speed exceeding 0.5 mm per microsecond;
- time resolution 50 nanoseconds or less;
- frame rate exceeding 225,000 frames per second.

2.- In respect of subheading 8525.82, radiationhardened or radiation-tolerant television cameras, digital cameras and video camera recorders are designed or shielded to enable operation in a high-radiation environment. These cameras are designed to withstand a total radiation dose of at least 50 × 103 Gy(silicon) (5 × 106 RAD (silicon)), without operational degradation.

3.- Subheading 8525.83 covers night vision television cameras, digital cameras and video camera recorders which use a photocathode to convert available light to electrons, which can be amplified and converted to yield a visible image. This subheading excludes thermal imaging cameras (generally subheading 8525.89).

4.- Subheading 8527.12 covers only cassette-players with built-in amplifier, without built-in loudspeaker, capable of operating without an external source of electric power and the dimensions of which do not exceed 170 mm x 100 mm x 45 mm.

5.- For the purposes of subheadings 8549.11 to 8549.19, "spent primary cells, spent primary batteries and spent electric accumulators" are those which are neither usable as such because of breakage, cutting-up, wear or other reasons, nor capable of being recharged.

GENERAL

(A) SCOPE AND STRUCTURE OF THE CHAPTER

This Chapter covers all electrical machinery and equipment, **other than** :

(a) Machinery and apparatus of a kind covered by **Chapter 84**, which remains classified there even if electric (see the General Explanatory Note to that Chapter).

and (b) Certain goods excluded from the Section as a whole (see the General Explanatory Note to Section XVI).

Contrary to the rules in Chapter 84, the goods of this Chapter remain classified here, even if they are of ceramic materials or glass, with the **exception** of glass envelopes (including bulbs and tubes) of **heading 70.11**.

This Chapter covers :

(1) Machines and apparatus for the production, transformation or storage of electricity, e.g., generators, transformers, etc. (headings 85.01 to 85.04) and primary cells (heading 85.06) and accumulators (heading 85.07).

(2) Certain domestic appliances (heading 85.09), and shavers, hair clippers and hair-removing appliances (heading 85.10).

(3) Certain machines and appliances which depend for their operation on the properties or effects of electricity, such as its electro-magnetic effects, heating properties, etc. (headings 85.05, 85.11 to 85.18, 85.25 to 85.31 and 85.43).

(4) Instruments and appliances for recording or reproducing sound; video recorders or reproducers; parts and accessories for such instruments and appliances (headings 85.19 to 85.22).

(5) Recording media for sound or similar recording of other phenomena (including video recording media, but **excluding** photographic or cinematographic films of **Chapter 37**) (heading 85.23).

(6) Flat panel display modules (heading 85.24).

(7) Certain electrical goods not generally used independently, but designed to play a particular role as components, in electrical equipment, e.g., capacitors (heading 85.32), switches, fuses, junction boxes, etc. (heading 85.35 or 85.36), lamps (heading 85.39), thermionic, etc., valves and tubes (heading 85.40), diodes, transistors and similar semiconductor devices (heading 85.41), electrical carbons (heading 85.45).

(8) Certain articles and materials which are used in electrical apparatus and equipment because of their conducting or insulating properties, such as insulated electric wire and assemblies thereof (heading 85.44), insulators (heading 85.46), insulating fittings and metal conduit tubing with an interior insulating lining (heading 85.47).

In addition to the electrical goods indicated above, the Chapter also covers permanent magnets, including those not yet magnetised, and permanent magnet work holders (heading 85.05).

It should, however, be noted that this Chapter covers **only certain types of electro-thermic apparatus**, e.g., furnaces, etc. (heading 85.14) and space heating equipment, domestic appliances, etc. (heading 85.16).

It should be further noted that certain electronic memory modules (e.g., SIMMs (Single In-line Memory Modules) and DIMMs (Dual In-line Memory Modules)) **which cannot be regarded as products of heading 85.23 or as multi-component integrated circuits (MCOs) of heading 85.42** (see Note 12 (b) (iv) to this Chapter), and **do not have another individual function** are to be classified by application of Note 2 to Section XVI as follows :

(a) modules suitable for use solely or principally with automatic data processing machines are to be classified in **heading 84.73** as parts of those machines,

(b) modules suitable for use solely or principally with other specific machines or with a number of machines of the same heading are to be classified **as parts of those machines or groups of machines**, and

(c) where it is not possible to determine principal use, the modules are to be classified in **heading 85.48**.

In general, however, electrically heated apparatus falls in other Chapters (mainly in **Chapter 84**), for example : steam generating boilers and super-heated water boilers (**heading 84.02**), air conditioning machines (**heading 84.15**), roasting, distilling or other apparatus of **heading 84.19**, calendering or other rolling machines and cylinders therefor (**heading 84.20**), poultry incubators and brooders (**heading 84.36**), general purpose branding machines for wood, cork, leather, etc. (**heading 84.79**), medical apparatus (**heading 90.18**).

(B) PARTS

As regards parts in general, see the General Explanatory Note to Section XVI.

Non-electrical parts of the machines or apparatus of this Chapter are classified as follows :

(i) Many are in fact articles falling in other Chapters (especially **Chapter 84**), for example, pumps and fans (**heading 84.13** or **84.14**), taps, cocks, etc. (**heading 84.81**), ball bearings (**heading 84.82**), transmission shafts, gearing, etc. (**heading 84.83**).

(ii) Other non-electrical parts suitable for use solely or principally with a particular kind of electrical machine of this Chapter (or with a number of machines falling in the same heading) are to be classified with that machine (or those machines) or, if appropriate, in **heading 85.03**, **85.22**, **85.29** or **85.38**.

(iii) Other non-electrical parts fall in **heading 84.87**.

Section XVII

VEHICLES, AIRCRAFT, VESSELS AND ASSOCIATED TRANSPORT EQUIPMENT

Notes.

1.- This Section does not cover articles of heading 95.03 or 95.08, or bobsleighs, toboggans or the like of heading 95.06.

2.- The expressions "parts" and "parts and accessories" do not apply to the following articles, whether or not they are identifiable as for the goods of this Section :

(a) Joints, washers or the like of any material (classified according to their constituent material or in heading 84.84) or other articles of vulcanised rubber other than hard rubber (heading 40.16);

(b) Parts of general use, as defined in Note 2 to Section XV, of base metal (Section XV), or similar goods of plastics (Chapter 39);

(c) Articles of Chapter 82 (tools);

(d) Articles of heading 83.06;

(e) Machines or apparatus of headings 84.01 to 84.79, or parts thereof, other than the radiators for the articles of this Section; articles of heading 84.81 or 84.82 or, provided they constitute integral parts of engines or motors, articles of heading 84.83;

(f) Electrical machinery or equipment (Chapter 85);

(g) Articles of Chapter 90;

(h) Articles of Chapter 91;

(ij) Arms (Chapter 93);

(k) Luminaires and lighting fittings and parts thereof of heading 94.05; or

(l) Brushes of a kind used as parts of vehicles (heading 96.03).

3.- References in Chapters 86 to 88 to "parts" or "accessories" do not apply to parts or accessories which are not suitable for use solely or principally with the articles of those Chapters. A part or accessory which answers to a description in two or more of the headings of those Chapters is to be classified under that heading which corresponds to the principal use of that part or accessory.

4.- For the purposes of this Section :

(a) Vehicles specially constructed to travel on both road and rail are classified under the appropriate heading of Chapter 87;

(b) Amphibious motor vehicles are classified under the appropriate heading of Chapter 87;

(c) Aircraft specially constructed so that they can also be used as road vehicles are classified under the appropriate heading of Chapter 88.

5.- Air-cushion vehicles are to be classified within this Section with the vehicles to which they are most akin as follows :

(a) In Chapter 86 if designed to travel on a guide-track (hovertrains);

(b) In Chapter 87 if designed to travel over land or over both land and water;

(c) In Chapter 89 if designed to travel over water, whether or not able to land on beaches or landing-stages or also able to travel over ice.

Parts and accessories of air-cushion vehicles are to be classified in the same way as those of vehicles of the heading in which the air-cushion vehicles are classified under the above provisions.

Hovertrain track fixtures and fittings are to be classified as railway track fixtures and fittings, and signalling, safety or traffic control equipment for hovertrain transport systems as signalling, safety or traffic control equipment for railways.

GENERAL

(I) GENERAL CONTENT OF THE SECTION

This Section covers railway vehicles of all types and hovertrains (Chapter 86), other land vehicles, including air-cushion vehicles (Chapter 87), aircraft and spacecraft (Chapter 88) and ships, boats, hovercraft and floating structures (Chapter 89), **except** the following :

(a) Certain mobile machines (see Part (II) below).

(b) Demonstrational models of **heading 90.23**.

(c) Toys, certain winter sports equipment, and vehicles specially designed for amusement park rides, water park amusements and fairground amusements. The Section **excludes**, for example toy cycles (other than bicycles), pedal cars, etc., designed to be ridden by children, toy boats and aircraft (**heading 95.03**); bobsleds, toboggans and the like (**heading 95.06**); "dodge'em" cars, tractors and other transport vehicles, including trailers, specially designed for and forming part of fairground amusements (e.g., ring-stand trailers)(**heading 95.08**).

In addition, the Section includes certain specified items of associated transport equipment such as containers specially designed and equipped for carriage by one or more modes of transport, certain railway or tramway track fittings and fixtures, and mechanical (including electro-mechanical) signalling equipment (Chapter 86) and parachutes, aircraft launching gear, deck-arrestor or similar gear and ground flying trainers (Chapter 88).

Subject to the provisions of Part (III) below, the Section also covers parts and accessories of the vehicles, aircraft, etc., of Chapters 86 to 88.

(II) SELF-PROPELLED OR OTHER MOBILE MACHINES

Many machines or equipment (in particular of the type falling in Section XVI) can be mounted on the vehicle chassis or on the floating bases of Section XVII; the classification of the resultant mobile machine depends on various factors, in particular on the type of base.

For example, all mobile machines, formed by mounting a machine on a floating base are classified in Chapter 89 (e.g., floating cranes, dredgers, grain elevators, etc.). For the classification of mobile machines formed by mounting equipment on a vehicle chassis of Chapter 86 or 87, see the Explanatory Notes to heading 86.04, 87.01, 87.05, 87.09 or 87.16.

(III) PARTS AND ACCESSORIES

It should be noted that Chapter 89 makes **no provision** for parts (other than hulls) or accessories of ships, boats or floating structures. Such parts and accessories, even if identifiable as being for ships, etc., are therefore classified in other Chapters in their respective headings. The other Chapters of this Section each provide for the classification of parts and accessories of the vehicles, aircraft or equipment concerned.

It should, however, be noted that these headings apply **only** to those parts or accessories which comply with **all three** of the following conditions :

(a) They must not be excluded by the terms of Note 2 to this Section (see paragraph (A) below).

and (b) They must be suitable for use solely or principally with the articles of Chapters 86 to 88 (see paragraph (B) below).

and (c) They must not be more specifically included elsewhere in the Nomenclature (see paragraph (C) below).

(A) **Parts and accessories excluded by Note 2 to Section XVII.**

This Note **excludes** the following parts and accessories, whether or not they are identifiable as for the articles of this Section :

(1) **Joints, gaskets, washers and the like**, of any material (classified according to their constituent material or in **heading 84.84**) and other articles of vulcanised rubber **other than** hard rubber (e.g., mudguard-flaps and pedal covers) (**heading 40.16**).

(2) **Parts of general use as defined in Note 2 to Section XV**, for example, cable and chain (whether or not cut to length or equipped with end fittings, other than brake cables, accelerator **cables** and similar cables suitable for use in vehicles of **Chapter 87**), nails, bolts, nuts, washers, cotters and cotter-pins, springs (including leaf springs for vehicles) (such goods of base metals fall in **Chapters 73 to 76** and **78 to 81**, and similar goods of plastics fall in **Chapter 39**), and locks, fittings or mountings for vehicle coachwork (e.g., made up ornamental beading strips, hinges, door handles, grip bars, foot rests, window opening mechanisms), number plates, nationality plates, etc. (such goods of base metals fall in **Chapter 83**, and similar goods of plastics fall in **Chapter 39**).

(3) **Spanners, wrenches and other tools of Chapter 82.**

(4) **Bells (e.g., for cycles) and other articles of heading 83.06.**

(5) **Machines and mechanical appliances, and parts thereof, of headings 84.01 to 84.79**, for example :

(a) Boilers and boiler equipment (**heading 84.02** or **84.04**).

(b) Producer gas generators (e.g., for cars) (**heading 84.05**).

(c) Steam turbines of **heading 84.06.**

(d) Engines of all kinds including engines fitted with gear boxes and parts thereof, falling in **headings 84.07 to 84.12.**

(e) Pumps, compressors and fans (**heading 84.13** or **84.14**).

(f) Air-conditioning machines (**heading 84.15**).

(g) Mechanical appliances for projecting, dispersing or spraying liquids or powders; fire extinguishers (**heading 84.24**).

(h) Lifting, handling, loading or unloading machinery (e.g., hoists, jacks, derricks), moving, grading, levelling, scraping, excavating, tamping, compacting, extracting or boring machinery, for earth, minerals or ores (**heading 84.25, 84.26, 84.28, 84.30** or **84.31**).

(ij) Agricultural machinery of **heading 84.32** or **84.33** (e.g., threshing, seed distributing, mowing, etc., attachments) constructed for mounting on vehicles.

(k) Machinery of a kind described in **heading 84.74.**

(l) Windscreen wiping mechanisms of **heading 84.79**.

(6) **Certain other goods of Chapter 84**, e.g. :

(a) Taps, cocks, valves and similar appliances (e.g., radiator drainage taps, inner-tube valves) (**heading 84.81**).

(b) Ball or roller bearings (**heading 84.82**).

(c) Internal parts of engines or motors (crank shafts, cam shafts, flywheels, etc.) falling in **heading 84.83**.

(7) **Electrical machinery or equipment of Chapter 85**, for example :

(a) Electric motors, generators, transformers, etc., of **heading 85.01** or **85.04**.

(b) Electro-magnets, electro-magnetic clutches, brakes, etc., of **heading 85.05**.

(c) Electric accumulators (**heading 85.07**).

(d) Electrical ignition or starting equipment of a kind used for spark-ignition or compression-ignition internal combustion engines (sparking plugs, starter motors, etc.) (**heading 85.11**).

(e) Electrical lighting, signalling, windscreen wiping, defrosting, demisting, equipment for cycles or motor vehicles (**heading 85.12**); electrical signalling apparatus for other vehicles (e.g., trains) or for aircraft or ships (**heading 85.31**); electrical defrosters or demisters for such other vehicles, aircraft or ships (**heading 85.43**).

(f) Electric heating units for motor or railway vehicles, aircraft, etc. (**heading 85.16**).

(g) Microphones, loudspeakers and audio-frequency electric amplifiers (**heading 85.18**).

(h) Radio transmitters and receivers (**heading 85.25** or **85.27**).

(ij) Electrical capacitors (**heading 85.32**).

(k) Pantographs and other current collectors for electric traction vehicles, and fuses, switches and other electrical apparatus of **heading 85.35** or **85.36**.

(l) Electric filament lamps and electric discharge lamps, including sealed beam lamp units, of **heading 85.39**.

(m) Other electrical fittings, such as insulated electric wire and cable (including wiring sets) and electrical articles of graphite or other carbon, whether or not fitted with terminals; insulators, insulating fittings (**headings 85.44 to 85.48**).

(8) **Instruments and apparatus of Chapter 90**, including those used on certain vehicles, such as :

(a) Photographic or cinematographic cameras (**heading 90.06** or **90.07**).

(b) Navigational instruments and appliances (**heading 90.14**).

(c) Instruments and appliances used in medical, surgical, dental or veterinary sciences (**heading 90.18**).

(d) Apparatus based on the use of X-rays and other apparatus of **heading 90.22**.

(e) Manometers (**heading 90.26**).

(f) Revolution counters, taximeters, speed indicators and tachometers and other instruments and apparatus of **heading 90.29**.

(g) Measuring or checking instruments, appliances and machines of **heading 90.31**.

(9) **Clocks** (e.g., instrument panel clocks) (**Chapter 91**).

(10) **Arms** (**Chapter 93**).

(11) **Luminaires and lighting fittings** (e.g., headlamps for aircraft or trains) of **heading 94.05**.

(12) **Brushes** (e.g., for road sweeper lorries) (**heading 96.03**).

(B) **Criterion of sole or principal use.**

(1) **Parts and accessories classifiable both in Section XVII and in another Section.**

Under Section Note 3, parts and accessories which are not suitable for use **solely or principally** with the articles of Chapters 86 to 88 are **excluded** from those Chapters.

The effect of Note 3 is therefore that when a part or accessory can fall in one or more other Sections as well as in Section XVII, its final classification is determined by its **principal use**. Thus the steering gear, braking systems, road wheels, mudguards, etc., used on many of the mobile machines falling in Chapter 84, are virtually identical with those used on the

lorries of Chapter 87, and since their principal use is with lorries, such parts and accessories are classified in this Section.

(2) **Parts and accessories classifiable in two or more headings of the Section.**

Certain parts and accessories are suitable for use on more than one type of vehicle (motor cars, aircraft, motorcycles, etc.); examples of such goods include brakes, steering systems, wheels, axles, etc. Such parts and accessories are to be classified in the heading relating to the parts and accessories of the vehicles with which they are **principally used**.

(C) **Parts and accessories covered more specifically elsewhere in the Nomenclature.**

Parts and accessories, even if identifiable as for the articles of this Section, are **excluded** if they are covered more specifically by another heading elsewhere in the Nomenclature, e.g. :

(1) Profile shapes of vulcanised rubber other than hard rubber, whether or not cut to length (**heading 40.08**).

(2) Transmission belts of vulcanised rubber (**heading 40.10**).

(3) Rubber tyres, interchangeable tyre treads, tyre flaps and inner tubes (**headings 40.11 to 40.13**).

(4) Tool bags of leather or of composition leather, of vulcanised fibre, etc. (**heading 42.02**).

(5) Bicycle or balloon nets (**heading 56.08**).

(6) Towing ropes (**heading 56.09**).

(7) Textile carpets (**Chapter 57**).

(8) Unframed safety glass consisting of toughened or laminated glass, whether or not shaped (**heading 70.07**).

(9) Rear-view mirrors (**heading 70.09** or **Chapter 90** – see the corresponding Explanatory Notes).

(10) Unframed glass for vehicle headlamps (**heading 70.14**) and, in general, the goods of **Chapter 70**.

(11) Flexible shafts for speed indicators, revolution counters, etc. (**heading 84.83**).

(12) Vehicle seats of **heading 94.01**.

Chapter 86

Railway or tramway locomotives, rolling-stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical (including electro-mechanical) traffic signalling equipment of all kinds

Notes.

1.- This Chapter does not cover :

(a) Railway or tramway sleepers of wood or of concrete, or concrete guide-track sections for hovertrains (heading 44.06 or 68.10);

(b) Railway or tramway track construction material of iron or steel of heading 73.02; or

(c) Electrical signalling, safety or traffic control equipment of heading 85.30.

2.- Heading 86.07 applies, *inter alia*, to :

(a) Axles, wheels, wheel sets (running gear), metal tyres, hoops and hubs and other parts of wheels;

(b) Frames, underframes, bogies and bissel-bogies;

(c) Axle boxes; brake gear;

(d) Buffers for rolling-stock; hooks and other coupling gear and corridor connections;

(e) Coachwork.

3.- Subject to the provisions of Note 1 above, heading 86.08 applies, *inter alia*, to :

(a) Assembled track, turntables, platform buffers, loading gauges;

(b) Semaphores, mechanical signal discs, level crossing control gear, signal and point controls, and other mechanical (including electro-mechanical) signalling, safety or traffic control equipment, whether or not fitted for electric lighting, for railways, tramways, roads, inland waterways, parking facilities, port installations or airfields.

GENERAL

This Chapter covers locomotives and rolling-stock, and parts thereof, and certain track fixtures and fittings, for railways or tramways of any kind (including narrow gauge railways, single rail railways, etc.). It also covers containers specially designed and equipped for carriage by one or more modes of

transport. Mechanical (including electro-mechanical) signalling, safety or traffic control equipment for traffic of all kinds (including that for parking facilities) is also covered.

Throughout this Chapter, the expressions "railway" and "tramway" refer not only to conventional railways and tramways using steel rails, but also to similar guided systems such as those using magnetic levitation or concrete tracks.

These various goods are classified as follows :

(A) Self-propelled railway vehicles of all types, such as locomotives, motorised railway or tramway coaches and rail-cars (headings 86.01 to 86.03). Heading 86.02 also includes locomotive tenders. Locomotives operated by two types of power are classified in the heading corresponding to the main type of power used.

(B) Railway or tramway maintenance or service vehicles, whether or not self-propelled (heading 86.04).

(C) Various types of hauled vehicles (railway or tramway passenger coaches and luggage vans, railway or tramway goods vans, wagons and trucks, etc.) (headings 86.05 and 86.06).

(D) Parts of railway or tramway locomotives and rolling-stock (heading 86.07), and also railway or tramway track fixtures and fittings, and mechanical (including electro-mechanical) equipment, for signalling to or controlling road, rail or other vehicles, ships or aircraft (heading 86.08).

(E) Containers specially designed and equipped for carriage by one or more modes of transport (heading 86.09).

The Chapter also includes air-cushion vehicles designed to travel on a guide-track (hovertrains), parts of these vehicles, and hovertrain track fixtures, fittings and mechanical (including electro-mechanical) signalling, safety or traffic control equipment for hovertrain transport systems (see Note 5 to Section XVII).

Incomplete or unfinished vehicles are classified with the corresponding complete or finished vehicles, **provided** they have the essential character thereof. Such vehicles may include :

(1) Locomotives or motorised railway or tramway coaches, not fitted with a power unit, measuring instruments, safety apparatus or service equipment.

(2) Passenger coaches not fitted with seats.

(3) Truck underframes complete with suspension and wheels.

On the other hand, bodies of motorised railway or tramway coaches, of vans, wagons or trucks or of tenders, **not mounted on underframes**, are classified as parts of railway or tramway locomotives or rolling-stock (heading 86.07).

The Chapter **excludes** :

(a) Model railway rolling-stock for demonstrational purposes, of **heading 90.23**.

(b) Heavy artillery mounted on railway trucks (**heading 93.01**).

(c) Toy trains (**heading 95.03**).

(d) Equipment not constituting rolling-stock proper, specially designed for use on amusement park rides, water park amusements or fairground amusements (**heading 95.08**).

Chapter 87

Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof

Notes.

1.- This Chapter does not cover railway or tramway rolling-stock designed solely for running on rails.

2.- For the purposes of this Chapter, "tractors" means vehicles constructed essentially for hauling or pushing another vehicle, appliance or load, whether or not they contain subsidiary provision for the transport, in connection with the main use of the tractor, of tools, seeds, fertilisers or other goods.

Machines and working tools designed for fitting to tractors of heading 87.01 as interchangeable equipment remain classified in their respective headings even if presented with the tractor, and whether or not mounted on it.

3.- Motor chassis fitted with cabs fall in headings 87.02 to 87.04, and not in heading 87.06.

4.- Heading 87.12 includes all children's bicycles. Other children's cycles fall in heading 95.03.

Subheading Note.

1.- Subheading 8708.22 covers :

(a)- front windscreens (windshields), rear windows and other windows, framed; and
(b)- front windscreens (windshields), rear windows and other windows, whether or not framed, incorporating heating devices or other electrical or electronic devices,

when suitable for use solely or principally with the motor vehicles of headings 87.01 to 87.05.

GENERAL

This Chapter covers the following vehicles, with the **exception** of certain mobile machines of **Section XVI** (see the Explanatory Notes to headings 87.01, 87.05 and 87.16) :

(1) Tractors (heading 87.01).

(2) Motor vehicles designed for the transport of persons (heading 87.02 or 87.03) or goods (heading 87.04) or for special purposes (heading 87.05).

(3) Works trucks, self-propelled, not fitted with lifting or handling equipment, of the type used in factories, warehouses, dock areas or airports for short distance transport of goods, and tractors of the type used on railway station platforms (heading 87.09).

(4) Armoured fighting vehicles, motorised (heading 87.10).

(5) Motorcycles and side-cars; cycles and carriages for disabled persons, whether or not motorised (headings 87.11 to 87.13).

(6) Baby carriages (heading 87.15).

(7) Trailers and semi-trailers, and other vehicles, not mechanically propelled, i.e., vehicles for towing by another vehicle, pushing or pulling by hand or drawing by animals (heading 87.16).

The Chapter also covers air-cushion vehicles designed to travel over land or over both land and certain tracts of water (swamps, etc.) (see Note 5 to Section XVII).

The classification of a motor vehicle is not affected by operations which are carried out after assembling all parts into a complete motor vehicle, such as : vehicle identification number fixation, brake system charging and bleeding air from brakes, charging of the steering booster system (power steering) and cooling and conditioning systems, headlights regulation, wheel geometry regulation (alignment) and regulation of brakes. This includes classification by the application of General Interpretative Rule 2 (a).

An incomplete or unfinished vehicle, whether or not assembled, is classified as the corresponding complete or finished vehicle **provided** it has the essential character of the latter (see General Interpretative Rule 2 (a)), as for example :

(A) A motor vehicle, not yet fitted with the wheels or tyres and battery.

(B) A motor vehicle not equipped with its engine or with its interior fittings.

(C) A bicycle without saddle and tyres.

This Chapter also covers parts and accessories which are identifiable as being suitable for use **solely or principally** with the vehicles included therein, **subject** to the provisions of the Notes to Section XVII (see the General Explanatory Note to the Section).

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* *

It should be noted that amphibious motor vehicles are classified as motor vehicles of this Chapter. But aircraft specially constructed so that they can also be used as road vehicles remain classified as aircraft (**heading 88.02**).

The Chapter also **excludes** :

(a) Vehicles and parts thereof, cross-sectioned, designed for demonstrational purposes, unsuitable for other uses (**heading 90.23**).

(b) Wheeled toys designed to be ridden by children, and children's cycles (other than children's bicycles) (**heading 95.03**).

(c) Winter sports equipment such as bobsleighs, toboggans and the like (**heading 95.06**).

(d) Vehicles specially designed for use on amusement park rides, or fairground amusements (**heading 95.08**).

Chapter 88

Aircraft, spacecraft, and parts thereof

Notes.

1.- For the purposes of this Chapter, the expression "unmanned aircraft" means any aircraft, other than those of heading 88.01, designed to be flown without a pilot on board. They may be designed to carry a payload or equipped with permanently integrated digital cameras or other equipment which would enable them to perform utilitarian functions during their flight.

The expression "unmanned aircraft,", however does not cover flying toys, designed solely for amusement purposes (heading 95.03).

Subheading Notes.

1.- For the purposes of subheadings 8802.11 to 8802.40, the expression "unladen weight" means the weight of the machine in normal flying order, excluding the weight of the crew and of fuel and equipment other than permanently fitted items of equipment.

2.- For the purposes of subheadings 8806.21 to 8806.24 and 8806.91 to 8806.94, the expression "maximum take-off weight" means the maximum weight of the machine in normal flying order, at take-off, including the weight of payload, equipment and fuel.

GENERAL

This Chapter covers balloons and dirigibles and non-powered aircraft (heading 88.01), other aircraft (headings 88.02 or 88.06), spacecraft (including satellites) and spacecraft launch vehicles (heading 88.02), certain allied equipment such as parachutes (heading 88.04), aircraft launching gear, deck-arrestor gear and ground flying trainers (heading 88.05).

Incomplete or unfinished aircraft (e.g., aircraft not equipped with engines or internal equipment) are classified as the corresponding complete or finished aircraft, **provided** they have the essential character of the latter.

Chapter 89

Ships, boats and floating structures

Note.

1.- A hull, an unfinished or incomplete vessel, assembled, unassembled or disassembled, or a complete vessel unassembled or disassembled, is to be classified in heading 89.06 if it does not have the essential character of a vessel of a particular kind.

GENERAL

This Chapter covers ships, boats and other vessels of all kinds (whether or not self-propelled), and also floating structures such as coffer-dams, landing stages and buoys. It also includes air-cushion vehicles (hovercraft) designed to travel over water (sea, estuaries, lakes), whether or not able to land on beaches or landing-stages or also able to travel over ice (see Note 5 to Section XVII).

The Chapter also includes :

(A) Unfinished or incomplete vessels (e.g., those not equipped with their propelling machinery, navigational instruments, lifting or handling machinery or interior furnishings).

(B) Hulls of any material.

Complete vessels presented unassembled or disassembled, and hulls, unfinished or incomplete vessels (whether assembled or not), are classified as vessels of a particular kind, if they have the essential character of that kind of vessel. In other cases, such goods are classified in heading 89.06.

Contrary to the provisions relating to the transport equipment falling in other Chapters of Section XVII, this Chapter **excludes** all separately presented parts (**other than** hulls) and accessories of vessels or floating structures, even if they are clearly identifiable as such. Such parts and accessories are classified in the appropriate headings elsewhere in the Nomenclature, for example :

(1) The parts and accessories specified in Note 2 to Section XVII.

(2) Wooden oars and paddles (**heading 44.21**).

(3) Ropes and cables of textile material (**heading 56.07**).

(4) Sails (**heading 63.06**).

(5) Masts, hatchways, gangways, rails and bulkheads for ships or boats and parts of hulls, having the character of metal structures of **heading 73.08**.

(6) Cables of iron or steel (**heading 73.12**).

(7) Anchors of iron or steel (**heading 73.16**).

(8) Propellers and paddle-wheels (**heading 84.87**).

(9) Rudders (**headings 44.21, 73.25, 73.26**, etc.) and other steering or rudder equipment for ships or boats (**heading 84.79**).

The following are also **excluded** from this Chapter :

(a) Model vessels used for ornamental purposes (e.g., galleons and other sailing vessels) (**headings 44.20, 83.06**, etc.).

(b) Demonstrational apparatus or models of **heading 90.23**.

(c) Torpedoes, mines and similar munitions of war (**heading 93.06**).

(d) Wheeled toys, in the form of boats, designed to be ridden by children and other toys (**heading 95.03**).

(e) Water-skis and the like (**heading 95.06**).

(f) Small boats specially designed for use on amusement park rides,water park amusements or fairground amusements (**heading 95.08**).

(g) Antiques of an age exceeding 100 years (**heading 97.06**).

Amphibious motor vehicles and air-cushion vehicles designed to travel over both land and certain tracts of water (swamps, etc.) are classified as motor vehicles in **Chapter 87**, and seaplanes and flying boats fall in **heading 88.02**.

Chapter 90

Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof

Notes.

1.- This Chapter does not cover :

(a) Articles of a kind used in machines, appliances or for other technical uses, of vulcanised rubber other than hard rubber (heading 40.16), of leather or of composition leather (heading 42.05) or of textile material (heading 59.11);

(b) Supporting belts or other support articles of textile material, whose intended effect on the organ to be supported or held derives solely from their elasticity (for example, maternity belts, thoracic support bandages, abdominal support bandages, supports for joints or muscles) (Section XI);

(c) Refractory goods of heading 69.03; ceramic wares for laboratory, chemical or other technical uses, of heading 69.09;

(d) Glass mirrors, not optically worked, of heading 70.09, or mirrors of base metal or of precious metal, not being optical elements (heading 83.06 or Chapter 71);

(e) Goods of heading 70.07, 70.08, 70.11, 70.14, 70.15 or 70.17;

(f) Parts of general use, as defined in Note 2 to Section XV, of base metal (Section XV) or similar goods of plastics (Chapter 39);however, articles specially designed for use exclusively in implants in medical, surgical, dental or veterinary sciences are to be classified in heading 90.21;

(g) Pumps incorporating measuring devices, of heading 84.13; weight-operated counting or checking machinery, or separately presented weights for balances (heading 84.23); lifting or handling machinery (headings 84.25 to 84.28); paper or paperboard cutting machines of all kinds (heading 84.41); fittings for adjusting work or tools on machine-tools or water-jet cutting machines, of heading 84.66, including fittings with optical devices for reading the scale (for example, "optical" dividing heads) but not those which are in themselves essentially optical instruments (for example, alignment telescopes); calculating machines (heading 84.70); valves or other appliances of heading 84.81; machines and apparatus (including apparatus for the projection or drawing of circuit patterns on sensitised semiconductor materials) of heading 84.86;

(h) Searchlights or spotlights of a kind used for cycles or motor vehicles (heading 85.12); portable electric lamps of heading 85.13; cinematographic sound recording, reproducing or re-recording apparatus (heading 85.19); sound-heads (heading 85.22); television cameras, digital cameras and video camera recorders (heading 85.25); radar apparatus, radio navigational aid apparatus or radio remote control apparatus (heading 85.26); connectors for optical fibres, optical fibre bundles or cables (heading 85.36); numerical control apparatus of heading 85.37; sealed beam lamp units of heading 85.39; optical fibre cables of heading 85.44;

(ij) Searchlights or spotlights of heading 94.05;

(k) Articles of Chapter 95;

(l) Monopods, bipods, tripods and similar articles, of heading 96.20;

(m) Capacity measures, which are to be classified according to their constituent material; or

(n) Spools, reels or similar supports (which are to be classified according to their constituent material, for example, in heading 39.23 or Section XV).

2.- Subject to Note 1 above, parts and accessories for machines, apparatus, instruments or articles of this Chapter are to be classified according to the following rules :

(a) Parts and accessories which are goods included in any of the headings of this Chapter or of Chapter 84, 85 or 91 (other than heading 84.87, 85.48 or 90.33) are in all cases to be classified in their respective headings;

(b) Other parts and accessories, if suitable for use solely or principally with a particular kind of machine, instrument or apparatus, or with a number of machines, instruments or apparatus of the same heading (including a machine, instrument or apparatus of heading 90.10, 90.13 or 90.31) are to be classified with the machines, instruments or apparatus of that kind;

(c) All other parts and accessories are to be classified in heading 90.33.

3.- The provisions of Notes 3 and 4 to Section XVI apply also to this Chapter.

4.- Heading 90.05 does not apply to telescopic sights for fitting to arms, periscopic telescopes for fitting to submarines or tanks, or to telescopes for machines, appliances, instruments or apparatus of this Chapter or Section XVI; such telescopic sights and telescopes are to be classified in heading 90.13.

5.- Measuring or checking optical instruments, appliances or machines which, but for this Note, could be classified both in heading 90.13 and in heading 90.31 are to be classified in heading 90.31.

6.- For the purposes of heading 90.21, the expression "orthopaedic appliances" means appliances for :

- Preventing or correcting bodily deformities; or

- Supporting or holding parts of the body following an illness, operation or injury.

Orthopaedic appliances include footwear and special insoles designed to correct orthopaedic conditions, provided that they are either (1) made to measure or (2) mass-produced, presented singly and not in pairs and designed to fit either foot equally.

7.- Heading 90.32 applies only to :

(a) Instruments and apparatus for automatically controlling the flow, level, pressure or other variables of liquids or gases, or for automatically controlling temperature, whether or not their operation depends on an electrical phenomenon which varies according to the factor to be automatically controlled, which are designed to bring this factor to, and maintain it at, a desired value, stabilised against disturbances, by constantly or periodically measuring its actual value; and

(b) Automatic regulators of electrical quantities, and instruments or apparatus for automatically controlling non-electrical quantities the operation of which depends on an electrical phenomenon varying according to the factor to be controlled, which are designed to bring this factor to, and maintain it at, a desired value, stabilised against disturbances, by constantly or periodically measuring its actual value.

GENERAL

(I) GENERAL CONTENT AND ARRANGEMENT OF THE CHAPTER

This Chapter covers a wide variety of instruments and apparatus which are, as a rule, characterised by their high finish and high precision. Most of them are used mainly for scientific purposes (laboratory research work, analysis, astronomy, etc.), for specialised technical or industrial purposes (measuring or checking, observation, etc.) or for medical purposes.

The Chapter includes in particular :

(A) A wide group comprising not only simple optical elements of headings 90.01 and 90.02, but also optical instruments and apparatus ranging from spectacles of heading 90.04 to more complex instruments used in astronomy, photography, cinematography or for microscopic observation.

(B) Instruments and apparatus designed for certain specifically defined uses (surveying, meteorology, drawing, calculating, etc.).

(C) Instruments and appliances for medical, surgical, dental or veterinary uses, or for related purposes (radiology, mechano-therapy, oxygen therapy, orthopaedy, prosthetics, etc.).

(D) Machines, instruments and appliances for testing materials.

(E) Laboratory instruments and appliances.

(F) A large group of measuring, checking or automatically controlling instruments and apparatus, whether or not optical or electrical and in particular those of heading 90.32 as defined in Note 7 to the Chapter.

Some of these instruments are specified in certain headings, for example, compound optical microscopes (heading 90.11), electron microscopes (heading 90.12), other instruments and apparatus are covered by more general descriptions in headings which refer to a particular science, industry, etc. (e.g., astronomical instruments of heading 90.05, surveying instruments and appliances of heading 90.15, X-ray, etc., apparatus of heading 90.22). This Chapter also includes vacuum apparatus of a kind used in medical, surgical, dental or veterinary sciences (**heading 90.18**).

There are certain exceptions to the general rule that the instruments and apparatus of this Chapter are high precision types. For example, the Chapter also covers ordinary goggles (heading 90.04), simple magnifying glasses and non-magnifying periscopes (heading 90.13), divided scales and school rules (heading 90.17) and fancy hygrometers, irrespective of their accuracy (heading 90.25).

Except for certain exclusions referred to in Note 1 to this Chapter (e.g., rubber or leather washers and gaskets, and leather diaphragms for meters), the instruments, apparatus and parts thereof falling in this Chapter may be of any material (including precious metals or metal clad with precious metal, precious or semi-precious stones (natural, synthetic or reconstructed)).

(II) INCOMPLETE OR UNFINISHED MACHINES, APPARATUS, ETC.

(See General Interpretative Rule 2 (a))

Provided they have the essential character of the complete or finished article, incomplete or unfinished machines, appliances, instruments or apparatus are classified with the corresponding complete or finished articles (for example, a photographic camera or a microscope presented without its optical elements or an electricity supply meter without its totalling device).

(III) PARTS AND ACCESSORIES

(Chapter Note 2)

Subject to Chapter Note 1, parts or accessories identifiable as suitable for use ***solely or principally*** with the machines, appliances, instruments or apparatus of this Chapter are classified with those machines, appliances, etc.

This general rule **does not**, however, **apply to** :

(1) Parts or accessories which in themselves constitute articles falling in any particular heading of this Chapter or of **Chapter 84**, **85** or **91** (**other than** the residual **heading 84.87**, **85.48** or **90.33**. For example, a vacuum pump for an electron microscope remains a pump of **heading 84.14**; transformers, electro-magnets, capacitors, resistors, relays, lamps or valves, etc., remain classified in **Chapter 85**; the optical elements of **heading 90.01** or **90.02** remain in the headings cited regardless of the instruments or apparatus to which they are to be fitted; a clock or watch movement is always classified in **Chapter 91**; a photographic camera falls in **heading 90.06** even if it is of a kind designed for use with another instrument (microscope, stroboscope, etc.).

(2) Parts or accessories suitable for use with several categories of machines, appliances, instruments or apparatus falling in different headings of this Chapter are classified in **heading 90.33**, **unless** they are in themselves complete instruments, etc., specified in another heading (see paragraph (1) above).

(IV) MULTI-FUNCTION OR COMPOSITE MACHINES, APPARATUS, ETC.;

FUNCTIONAL UNITS

(Chapter Note 3)

Note 3 specifies that the provisions of Notes 3 and 4 to Section XVI apply also to this Chapter (see Parts (VI) and (VII) of the General Explanatory Note to Section XVI).

In general, multi-function machines are classified according to the principal function of the machine.

Multi-function machines are able to carry out different operations.

Where it is not possible to determine the principal function, and where, as provided in Note 3 to Section XVI, the context does not otherwise require, it is necessary to apply General Interpretative Rule 3 (c).

Composite machines or apparatus consisting of two or more machines or apparatus of different kinds, fitted together to form a whole, consecutively or simultaneously performing **separate** functions which are generally complementary and are described in different headings of this Chapter, are also classified according to the principal function of the composite machine or apparatus.

For the purposes of the above provisions, machines or apparatus of different kinds are taken to be **fitted together to form a whole** when incorporated one in the other or mounted one on the other, or mounted on a common base or frame or in a common housing.

Assemblies of machines or apparatus should not be taken to be fitted together to form a whole unless the machines or apparatus are designed to be permanently attached either to each other or to a common base, frame, housing, etc. This **excludes** assemblies which are of a temporary nature or are not normally built as a composite machine, apparatus, etc.

The bases, frames or housings may be provided with wheels so that the composite machines or apparatus can be moved about as required during use, **provided** they do not thereby acquire the character of an article (e.g., a vehicle) more specifically covered by a particular heading of the Nomenclature.

Floors, concrete bases, walls, partitions, ceilings, etc., even if specially fitted out to accommodate machines or apparatus should not be regarded as a common base joining such machines or apparatus to form a whole.

The provisions of Note 3 to Section XVI **need not be invoked** when the composite machines or apparatus are covered as such by a particular heading.''

This Chapter covers, as functional units, for example, the electrical (including electronic) instruments or apparatus which make up an **analogue or digital telemetering system**. These are essentially the following :

(I) Apparatus at the transmitting end :

(i) **A primary detector** (transducer, transmitter, analogue-digital converter, etc.) which transforms the quantity to be measured, whatever its nature, into a proportional current, voltage or digital signal.

(ii) **A measurement amplifier, transmitter and receiver basic unit** which (if necessary) boosts this current, voltage or digital signal to the level required by the pulse or frequency-modulated transmitter.

(iii) **A pulse or frequency-modulated transmitter** which transmits an analogue or digital signal to another station.

(II) Devices at the receiving end :

(i) **A pulse, frequency-modulated or digital signal receiver** which converts the information into an analogue or digital signal.

(ii) **A measurement amplifier or converter** which, if necessary, amplifies the analogue or digital signal.

(iii) **Indicating or recording instruments** calibrated in terms of the primary quantity and equipped with a mechanical pointer or opto-electronic display.

Telemetering systems are mainly used in oil, gas and production pipelines, water, gas and sewage disposal installations and environmental monitoring systems.

Line or radio transmitters and receivers for telemetering pulses remain in their respective headings (**heading 85.17**, **85.25** or **85.27**, as the case may be) **unless** they are combined as a single unit with the instruments and apparatus referred to in (I) and (II) above or the whole forms a functional unit within the meaning of Note 3 to Chapter 90; the complete unit then falls in this Chapter.

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In addition to the exclusions mentioned in the text of the Explanatory Notes, the following are always **excluded** from this Chapter :

(a) Articles of a kind used in machines, appliances or for other technical uses, of vulcanised rubber other than hard rubber (**heading 40.16**), of leather or of composition leather (**heading 42.05**) or of textile material (**heading 59.11**).

(b) Parts of general use, as defined in Note 2 to Section XV, of base metal (**Section XV**) or similar goods of plastics (**Chapter 39**).

(c) Lifting or handling machinery (**headings 84.25** to **84.28** and **84.86**); fittings for adjusting work or tools on machine-tools or water-jet cutting machines, of **heading 84.66**, including fittings with optical devices for reading the scale (for example, "optical" dividing heads) but not those which are in themselves essentially optical instruments (for example, alignment telescopes); radar apparatus, radio navigational aid apparatus or radio remote control apparatus (**heading 85.26**).

(d) Spacecraft equipped with instruments or apparatus of this Chapter (**heading 88.02**).

(e) Toys, games, sports requisites and other articles of **Chapter 95**, and parts and accessories thereof.

(f) Capacity measures; these are classified according to their constituent material.

(g) Spools, reels or similar supports (classified according to their constituent material, for example, in **heading 39.23** or **Section XV**).

Chapter 91

Clocks and watches and parts thereof

Notes.

1.- This Chapter does not cover :

(a) Clock or watch glasses or weights (classified according to their constituent material);

(b) Watch chains (heading 71.13 or 71.17, as the case may be);

(c) Parts of general use defined in Note 2 to Section XV, of base metal (Section XV), or similar goods of plastics (Chapter 39) or of precious metal or metal clad with precious metal (generally heading 71.15); clock or watch springs are, however, to be classified as clock or watch parts (heading 91.14);

(d) Bearing balls (heading 73.26 or 84.82, as the case may be);

(e) Articles of heading 84.12 constructed to work without an escapement;

(f) Ball bearings (heading 84.82); or

(g) Articles of Chapter 85, not yet assembled together or with other components into watch or clock movements or into articles suitable for use solely or principally as parts of such movements (Chapter 85).

2.- Heading 91.01 covers only watches with case wholly of precious metal or of metal clad with precious metal, or of the same materials combined with natural or cultured pearls, or precious or semi-precious stones (natural, synthetic or reconstructed) of headings 71.01 to 71.04. Watches with case of base metal inlaid with precious metal fall in heading 91.02.

3.- For the purposes of this Chapter, the expression "watch movements" means devices regulated by a balance-wheel and hairspring, quartz crystal or any other system capable of determining intervals of time, with a display or a system to which a mechanical display can be incorporated. Such watch movements shall not exceed 12 mm in thickness and 50 mm in width, length or diameter.

4.- Except as provided in Note 1, movements and other parts suitable for use both in clocks or watches and in other articles (for example, precision instruments) are to be classified in this Chapter.

GENERAL

This Chapter covers certain apparatus designed mainly for measuring time or for effecting some operation in relation to time. It includes timepieces suitable for carrying on the person (watches and stop-watches), other timepieces (ordinary clocks, clocks with watch movements, alarm clocks,

marine chronometers, clocks for motor vehicles, etc.), and also time recording apparatus, time interval measuring instruments and time switches; in general, it also covers parts of these articles.

The articles of this Chapter may be of any material (including precious metals) and they may be decorated or trimmed with natural or cultured pearls, or natural, synthetic or reconstructed precious or semi-precious stones (see the Explanatory Notes to headings 91.11 and 91.12).

The classification of clocks and watches combined with some other object (an article of furniture, a lamp, inkstand, paperweight, writing-pad, tobacco jar, cigarette or cigar lighter, handbag, powder compact, cigarette case, propelling-pencil, walking-stick, etc.) is governed by the Rules for the Interpretation of the Nomenclature. The mere inclusion of internal lighting does not remove clocks or watches from this Chapter.

In addition to the exclusions specified in the Explanatory Note to each heading, this Chapter **excludes**, *inter alia* :

(a) Sundials and hour-glasses (classified according to their constituent material).

(b) Musical automatons (mechanical singing birds and the like) and musical boxes without time dials (**heading 92.08**).

(c) Toy clocks and watches and Christmas tree accessories in the form of clocks or watches, such as those without clock or watch movements (**heading 95.03** or **95.05**).

(d) Automata and other animated displays of a kind used for shop window dressing (**heading 96.18**).

(e) Works of art, collectors' pieces, and antiques (**Chapter 97**).

A clock or watch is composed of two main parts : the **movement** and the **container** for the movement (case, cabinet, etc.).

Mechanical watch or clock movements consist of the following parts :

(1) The **body or frame** usually consists of the plate and the bridges. The plate, to which the bridges are fixed by screws and pins, is the basic support of the movement. Some bodies or frames incorporate, apart from the bridges and the plate proper, one or more additional plates (called, for example, dial plate, lower plate cover) intended to hold in place certain parts of the movement (motion work, alarm mechanism, etc.).

(2) The **device which drives the movement**, usually consisting of weights or springs; the source of energy may also be electricity, or changes in temperature or atmospheric pressure.

(3) The **train**, i.e., the succession of toothed wheels which connects the driving device to the escapement and enables time to be measured.

(4) The **motion work**, i.e., the series of parts which links the motion of the minute hand to that of the hour hand. In movements with a dial plate, the motion work is generally located between the dial plate and the plate.

(5) The **escapement**; this provides the pendulum or balance and hairspring with the necessary energy and ensures that the motion of the train is controlled.

The most usual types of escapement are the anchor or lever, the pin-pallet, the cylinder and the detent.

(6) The **regulating device**; this regulates the motion produced by the driving mechanism. It consists of a pendulum, a balance-wheel and hairspring combination, a tuning fork, a piezo-electric quartz crystal or any other system capable of determining intervals of time.

(7) The **winding and hand setting mechanism** (operated by a push piece, a draw piece, or a rocking bar, etc.).

The assembled movement, together with the dial and hands, is fitted in the container or case.

The balance-wheel, the escapement parts and the train parts are finely pivoted. In the cheaper types of clocks and watches, they are pivoted directly in the metal of the plate and bridges, but in better instruments the bearings are jewelled to resist wear.

Clocks and watches may be equipped with a striking work, an alarm mechanism or a set of chimes. Each of these devices requires a special movement.

Mechanical clocks and watches may be wound by hand, by electricity or automatically.

*

* *

The apparatus of this Chapter may be electrical (including electronic), e.g. :

(A) **Clocks using a dry battery or an accumulator with a low running reserve** (of the order of a few minutes). These clocks have a conventional balance-wheel and hairspring combination or a pendulum, the spring being periodically rewound by an electro-magnet.

(B) **Clocks connected to the mains, with a high running reserve** (several hours). These are also equipped with a normal balance-wheel and hairspring combination or pendulum, the spring or weight being rewound periodically by an electric motor (synchronous, induction, etc.).

(C) **Pendulum clocks driven from a dry battery, an accumulator or the mains**; the pendulum is kept swinging by means of an electro-magnetic device.

(D) **Clocks and watches powered by a dry battery or an accumulator**, with a **regulating device** (tuning fork, piezo-electric quartz crystal, etc.) which is kept oscillating by an **electronic circuit**.

(E) **Synchronous motor clocks**. These are connected to a controlled frequency current and therefore consist solely of the motor and the train, without a controlling device.

Electric clock systems are dealt with more specifically in the Explanatory Note to heading 91.05.

Some electric clocks are equipped with devices for setting them to the correct time by remote control.

*

* *

For the purposes of Note 3 to this Chapter, which defines watch movements, the following methods of measurement apply :

(a) **Measurement of thickness**

The thickness of a movement is the distance from the outer plane of the dial support (or the visible surface of the display if the latter is incorporated in the movement) to the furthest opposite outer plane, without taking account of any screws, nuts or other fixed parts projecting beyond that plane.

(b) **Measurement of width, length or diameter**

As appropriate, the width, length or diameter (which are determined by their axis of symmetry) is to be measured without taking the winding spindle or crown into consideration.

Chapter 92

Musical instruments; parts and accessories of such articles

Notes.

1.- This Chapter does not cover :

(a) Parts of general use, as defined in Note 2 to Section XV, of base metal (Section XV), or similar goods of plastics (Chapter 39);

(b) Microphones, amplifiers, loud-speakers, head-phones, switches, stroboscopes or other accessory instruments, apparatus or equipment of Chapter 85 or 90, for use with but not incorporated in or housed in the same cabinet as instruments of this Chapter;

(c) Toy instruments or apparatus (heading 95.03);

(d) Brushes for cleaning musical instruments (heading 96.03), or monopods, bipods, tripods and similar articles (heading 96.20); or

(e) Collectors' pieces or antiques (heading 97.05 or 97.06).

2.- Bows and sticks and similar devices used in playing the musical instruments of heading 92.02 or 92.06 presented with such instruments in numbers normal thereto and clearly intended for use therewith, are to be classified in the same heading as the relative instruments.

Cards, discs and rolls of heading 92.09 presented with an instrument are to be treated as separate articles and not as forming a part of such instrument.

GENERAL

This Chapter covers :

(A) Musical instruments (headings 92.01 to 92.08).

(B) Parts and accessories of these instruments (heading 92.09).

Some musical instruments (pianos, guitars, etc.) may have an electrical sound pick-up and amplifying device; they nevertheless remain classified in their respective headings in this Chapter, **provided** that, without the electrical equipment, they can still be used like the similar conventional-type instruments. The electrical equipment itself, **unless** forming an integral part of the instrument or housed in the same cabinet as the instrument, is however in all cases **excluded** (**heading 85.18**).

Electrical or electronic instruments (other than the automatic pianos of heading 92.01) which are not suitable for playing without the electrical or electronic equipment fall in heading 92.07 (see the corresponding Explanatory Note). The latter heading therefore covers, for example, electrostatic, electronic or similar guitars, organs, pianos, accordions, carillons.

The instruments and apparatus of this Chapter may be of any material, including precious metal or metal clad with precious metal, and may incorporate precious or semi-precious stones (natural, synthetic or reconstructed).

In accordance with Note 2 to this Chapter, bows and plectra used in playing the string musical instruments of heading 92.02, and sticks (including soft-headed sticks) and mallets for percussion musical instruments of heading 92.06, when presented with those instruments in numbers normal thereto and clearly intended for use therewith, are to be classified with the relative instruments and **not** in heading 92.09. However, cards, discs and rolls of heading 92.09 presented with an instrument are to be treated as separate articles and not as forming a part of such instrument.

In addition to the exclusions specifically mentioned in the Explanatory Notes below, this Chapter also **excludes** :

(a) Electronic musical modules (**heading 85.43**).

(b) Musical instruments which can be clearly recognised as toys because of the character of the material used, their rougher finish, the lack of musical qualities or by any other characteristics (**Chapter 95**). Examples include certain mouth organs, violins, accordions, trumpets, drums, musical boxes.

(c) Collectors' pieces (**heading 97.05**) (e.g., instruments having an historical or ethnographical interest), or antiques of an age exceeding 100 years (**heading 97.06**).

Chapter 93

Arms and ammunition; Parts and accessories thereof

Notes.

1.- This Chapter does not cover :

(a) Goods of Chapter 36 (for example, percussion caps, detonators, signalling flares);

(b) Parts of general use, as defined in Note 2 to Section XV, of base metal (Section XV), or similar goods of plastics (Chapter 39);

(c) Armoured fighting vehicles (heading 87.10);

(d) Telescopic sights and other optical devices suitable for use with arms, unless mounted on a firearm or presented with the firearm on which they are designed to be mounted (Chapter 90);

(e) Bows, arrows, fencing foils or toys (Chapter 95); or

(f) Collectors' pieces or antiques (heading 97.05 or 97.06).

2.- In heading 93.06, the reference to "parts thereof" does not include radio or radar apparatus of heading 85.26.

GENERAL

This Chapter covers :

(1) Arms of all descriptions designed for ground, sea or air warfare, for use by military armed forces or by the police or other organised services (customs, frontier guards, etc.).

(2) Arms for use by private persons for defence, hunting, target shooting (e.g., in miniature ranges, shooting galleries or fairground stands), etc.

(3) Other devices which operate by the firing of an explosive charge (e.g., line-throwing guns and Very pistols).

(4) Ammunition and missiles (**other than** articles of **Chapter 36**).

Subject to a few **exceptions** (see the Explanatory Notes to headings 93.05 and 93.06), the Chapter also includes parts and accessories of arms and parts of ammunition.

Telescopic sights and other optical devices suitable for use with arms and mounted thereon, or presented with the firearms on which they are designed to be mounted, are classified with the arm. Otherwise presented, such optical devices are **excluded** (**Chapter 90**).

Vehicles are excluded from this Chapter even if they are designed solely for military use, and whether or not they are fitted with weapons. The Chapter therefore **excludes**, for example, armoured railway vehicles (**Chapter 86**), tanks and armoured cars (**heading 87.10**), military aircraft (**heading 88.01, 88.02** or **88.06**), and warships (**heading 89.06**). However, separately presented arms for these vehicles, etc. (guns, machine-guns, etc.), fall in this Chapter (see the Explanatory Note to heading 93.01 with regard to certain arms mounted on railway or road vehicles).

The following are also **excluded** from this Chapter :

(a) Steel helmets and other military headgear (**Chapter 65**).

(b) Personal protective armour, e.g., cuirasses, coats of mail, bullet-proof jackets, etc. (classified according to their constituent materials).

(c) Cross-bows, bows and arrows for archery, and arms having the character of toys (**Chapter 95**).

(d) Collectors' pieces and antiques (**heading 97.05** or **97.06**).

The arms and parts thereof of this Chapter may contain precious metal, metal clad with precious metal, natural or cultured pearls, precious and semi-precious stones (natural, synthetic or reconstructed), tortoise-shell, mother-of-pearl, ivory and similar materials.

Chapter 94

Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; luminaires and lighting fittings, not elsewhere specified or included; illuminated signs, illuminated name-plates and the like; prefabricated buildings

Notes.

1.- This Chapter does not cover :

(a) Pneumatic or water mattresses, pillows or cushions, of Chapter 39, 40 or 63;

(b) Mirrors designed for placing on the floor or ground (for example, cheval-glasses (swing-mirrors)) of heading 70.09;

(c) Articles of Chapter 71;

(d) Parts of general use as defined in Note 2 to Section XV, of base metal (Section XV), or similar goods of plastics (Chapter 39), or safes of heading 83.03;

(e) Furniture specially designed as parts of refrigerating or freezing equipment of heading 84.18; furniture specially designed for sewing machines (heading 84.52);

(f) Lamps or light sources and parts thereof of Chapter 85;

(g) Furniture specially designed as parts of apparatus of heading 85.18 (heading 85.18), of heading 85.19 or 85.21 (heading 85.22) or of headings 85.25 to 85.28 (heading 85.29);

(h) Articles of heading 87.14;

(ij) Dentists' chairs incorporating dental appliances of heading 90.18 or dentists' spittoons (heading 90.18);

(k) Articles of Chapter 91 (for example, clocks and clock cases);

(l) Toy furniture or toy luminaires and lighting fittings (heading 95.03), billiard tables or other furniture specially constructed for games (heading 95.04), furniture for conjuring tricks or decorations (other than lighting strings) such as Chinese lanterns (heading 95.05); or

(m) Monopods, bipods, tripods and similar articles (heading 96.20).

2.- The articles (other than parts) referred to in headings 94.01 to 94.03 are to be classified in those headings only if they are designed for placing on the floor or ground.

The following are, however, to be classified in the above-mentioned headings even if they are designed to be hung, to be fixed to the wall or to stand one on the other :

(a) Cupboards, bookcases, other shelved furniture (including single shelves presented with supports for fixing them to the wall) and unit furniture;

(b) Seats and beds.

3.- (A) In headings 94.01 to 94.03 references to parts of goods do not include references to sheets or slabs (whether or not cut to shape but not combined with other parts) of glass (including mirrors), marble or other stone or of any other material referred to in Chapter 68 or 69.

(B) Goods described in heading 94.04, presented separately, are not to be classified in heading 94.01, 94.02 or 94.03 as parts of goods.

4.- For the purposes of heading 94.06, the expression "prefabricated buildings" means buildings which are finished in the factory or put up as elements, presented together, to be assembled on site, such as housing or worksite accommodation, offices, schools, shops, sheds, garages or similar buildings.

Prefabricated buildings include modular "building units" of steel, normally presented in the size and shape of a standard shipping container, but substantially or completely prefitted internally. Such modular building units are normally designed to be assembled together to form permanent buildings

GENERAL

This Chapter covers, **subject** to the exclusions listed in the Explanatory Notes to this Chapter :

(1) All furniture and parts thereof (headings 94.01 to 94.03).

(2) Mattress supports, mattresses and other articles of bedding or similar furnishing, sprung, stuffed or internally fitted with any material, or of cellular rubber or plastics, whether or not covered (heading 94.04).

(3) Luminaires and lighting fittings and parts thereof, not elsewhere specified or included, of any material (**excluding** those of materials described in Note 1 to Chapter 71), and illuminated signs, illuminated name-plates and the like, having a permanently fixed light source, and parts thereof not elsewhere specified or included (heading 94.05).

(4) Prefabricated buildings (heading 94.06).

For the purposes of this Chapter, the term "furniture" means :

(A) Any "movable" articles (**not included** under other more specific headings of the Nomenclature), which have the essential characteristic that they are constructed for placing on the floor or ground, and which are used, mainly with a utilitarian purpose, to equip private dwellings, hotels, theatres, cinemas, offices, churches, schools, cafés, restaurants, laboratories, hospitals, dentists' surgeries, etc., or ships, aircraft, railway coaches, motor vehicles, caravan-trailers or similar means of transport. (It should be noted that, for the purposes of this Chapter, articles are considered to be "movable" furniture even if they are designed for bolting, etc., to the floor, e.g., chairs for use on ships). Similar articles (seats, chairs, etc.) for use in gardens, squares, promenades, etc., are also included in this category.

(B) The following :

(i) Cupboards, bookcases, other shelved furniture (including single shelves presented with supports for fixing them to the wall) and unit furniture, designed to be hung, to be fixed to the wall or to stand one on the other or side by side, for holding various objects or articles (books, crockery, kitchen utensils, glassware, linen, medicaments, toilet articles, radio or television receivers, ornaments, etc.) and separately presented elements of unit furniture.

(ii) Seats or beds designed to be hung or to be fixed to the wall.

Except for the goods referred to in subparagraph (B) above, the term "furniture" **does not apply** to articles used as furniture but designed for placing on other furniture or shelves or for hanging on walls or from the ceiling.

It therefore follows that this Chapter **does not cover** other wall fixtures such as coat, hat and similar racks, key racks, clothes-brush hangers and newspaper racks, nor furnishings such as radiator screens. Similarly, the Chapter **excludes** the following types of goods **not** designed for placing on the floor : small articles of cabinet-work and small furnishing goods of wood (**heading 44.20**), and office equipment (e.g., sorting boxes, paper trays) of plastics or of base metal (**heading 39.26** or **83.04**).

However, equipment (cupboards, radiator screens, etc.) built-in or designed to be built-in, presented at the same time as the prefabricated buildings of heading 94.06 and forming an integral part thereof, remain classified in that heading.

Headings 94.01 to 94.03 cover articles of furniture **of any material** (wood, osier, bamboo, cane, plastics, base metals, glass, leather, stone, ceramics, etc.). Such furniture remains in these headings whether or not stuffed or covered, with worked or unworked surfaces, carved, inlaid, decoratively painted, fitted with mirrors or other glass fitments, or on castors, etc.

It should, however, be noted that furniture is **excluded** if it incorporates more than minor components (e.g., monograms, bands, ferrules, etc.) of precious metal or of metal clad with precious metal (**Chapter 71**).

Articles of furniture presented **disassembled** or **unassembled** are to be treated as assembled articles of furniture, **provided** the parts are presented together. This applies whether or not the furniture incorporates sheets, fittings or other parts of glass, marble or other materials (e.g., a wooden table with a glass top, a wooden wardrobe with a mirror, a sideboard with a marble top).

PARTS

This Chapter only covers parts, whether or not in the rough, of the goods of headings 94.01 to 94.03 and 94.05, when identifiable by their shape or other specific features as parts designed solely or principally for an article of those headings. They are classified in this Chapter when not more specifically covered elsewhere.

Parts of prefabricated buildings of heading 94.06, presented separately, are in all cases classified in their own appropriate headings.

In addition to the exclusions referred to in the individual Explanatory Notes below, this Chapter also **excludes** :

(a) Beadings and mouldings, of **heading 44.09**.

(b) Grooved strips of particle board, covered with plastics or other materials, intended to be cut and then folded along these cuts into a "U" shape so as to form parts of furniture (e.g., partitions of a drawer) (**heading 44.10**).

(c) Sheets of glass (including mirrors), marble or other stone or of any other material referred to in **Chapter 68** or **69**, whether or not cut to shape, unless they are combined with other parts which clearly identify them as parts of furniture (e.g., a mirror-door for a wardrobe).

(d) Springs, locks and other parts of general use as defined in Note 2 to Section XV, of base metal (Section XV), and similar goods of plastics (**Chapter 39**).

(e) Toy furniture and toy lamps or lighting fittings (**heading 95.03**).

(f) Collectors' pieces and antiques (**Chapter 97**).

Chapter 95

Toys, games and sports requisites; parts and accessories thereof

Notes.

1.- This Chapter does not cover :

(a) Candles (heading 34.06);

(b) Fireworks or other pyrotechnic articles of heading 36.04;

(c) Yarns, monofilament, cords or gut or the like for fishing, cut to length but not made up into fishing lines, of Chapter 39, heading 42.06 or Section XI;

(d) Sports bags or other containers of heading 42.02, 43.03 or 43.04;

(e) Fancy dress of textiles, of Chapter 61 or 62; sports clothing and special articles of apparel of textiles, of Chapter 61 or 62, whether or not incorporating incidentally protective components such as pads or padding in the elbow, knee or groin areas (for example, fencing clothing or soccer goalkeeper jerseys);

(f) Textile flags or bunting, or sails for boats, sailboards or land craft, of Chapter 63;

(g) Sports footwear (other than skating boots with ice or roller skates attached) of Chapter 64, or sports headgear of Chapter 65;

(h) Walking-sticks, whips, riding-crops or the like (heading 66.02), or parts thereof (heading 66.03);

(ij) Unmounted glass eyes for dolls or other toys, of heading 70.18;

(k) Parts of general use, as defined in Note 2 to Section XV, of base metal (Section XV), or similar goods of plastics (Chapter 39);

(l) Bells, gongs or the like of heading 83.06;

(m) Pumps for liquids (heading 84.13), filtering or purifying machinery and apparatus for liquids or gases (heading 84.21), electric motors (heading 85.01), electric transformers (heading 85.04) , discs, tapes, solid-state non-volatile storage devices, "smart cards" and other media for the recording of sound or of other phenomena, whether or not recorded (heading 85.23), radio remote control apparatus (heading 85.26) or cordless infrared remote control devices (heading 85.43);

(n) Sports vehicles (other than bobsleighs, toboggans and the like) of Section XVII;

(o) Children's bicycles (heading 87.12);

(p) Unmanned aircraft (heading 88.06);

(q) Sports craft such as canoes and skiffs (Chapter 89), or their means of propulsion (Chapter 44 for such articles made of wood);

(r) Spectacles, goggles or the like, for sports or outdoor games (heading 90.04);

(s) Decoy calls or whistles (heading 92.08);

(t) Arms or other articles of Chapter 93;

(u) Electric garlands of all kinds (heading 94.05);

(v) Monopods, bipods, tripods and similar articles (heading 96.20);

(w) Racket strings, tents or other camping goods, or gloves, mittens and mitts (classified according to their constituent material); or

(x) Tableware, kitchenware, toilet articles, carpets and other textile floor coverings, apparel, bed linen, table linen, toilet linen, kitchen linen and similar articles having a utilitarian function (classified according to their constituent material).

2.- This Chapter includes articles in which natural or cultured pearls, precious or semi-precious stones (natural, synthetic or reconstructed), precious metal or metal clad with precious metal constitute only minor constituents.

3.- Subject to Note 1 above, parts and accessories which are suitable for use solely or principally with articles of this Chapter are to be classified with those articles.

4.- Subject to the provisions of Note 1 above, heading 95.03 applies, *inter alia*, to articles of this heading combined with one or more items, which cannot be considered as sets under the terms of General Interpretative Rule 3 (b), and which, if presented separately, would be classified in other headings, provided the articles are put up together for retail sale and the combinations have the essential character of toys.

5.- Heading 95.03 does not cover articles which, on account of their design, shape or constituent material, are identifiable as intended exclusively for animals, for example, "pet toys" (classification in their own appropriate heading).

6.- For the purposes of heading 95.08 :

(a) The expression "amusement park rides" means a device or combination of devices or equipment that carry, convey, or direct a person or persons over or through a fixed or restricted course, including watercourses, or within a defined area for the primary purposes of amusement or entertainment. Such rides may be combined within an amusement park, theme park, water

park or fairground.These amusement park rides do not include equipment of a kind commonly installed in residences or playgrounds;

(b) The expression "water park amusements" means a device or combination of devices or equipment that are characterised by a defined area involving water, with no purposes built path. Water park amusements only include equipment designed specifically for water parks; and

(c) The expression "fairground amusements" means games of chance, strength or skill, which commonly employ an operator or attendant and may be installed in permanent buildings or independent concession stalls. Fairground amusements do not include equipment of heading 95.04.

This heading does not include equipment more specifically classified elsewhere in the Nomenclature.

Subheading Note.

1.- Subheading 9504.50 covers :

(a) Video game consoles from which the image is reproduced on a television receiver, a monitor or other external screen or surface; or

(b) Video game machines having a self-contained video screen, whether or not portable.

This subheading does not cover video game consoles or machines operated by coins, banknotes, bank cards, tokens or by any other means of payment (subheading 9504.30).

GENERAL

This Chapter covers toys of all kinds whether designed for the amusement of children or adults. It also includes equipment for indoor or outdoor games, appliances and apparatus for sports, gymnastics or athletics, certain requisites for fishing, hunting or shooting, and roundabouts and other fairground amusements.

Each of the headings of this Chapter also covers identifiable parts and accessories of articles of this Chapter which are suitable for use solely or principally therewith, and **provided** they are **not** articles excluded by Note 1 to this Chapter.

The articles of this Chapter may, in general, be made of any material **except** natural or cultured pearls, precious or semi-precious stones (natural, synthetic or reconstructed), precious metal or metal clad with precious metal. They may, however, incorporate **minor constituents** made of these materials.

Apart from the articles excluded in the following Explanatory Notes, this Chapter also **excludes** :

(a) Fireworks or other pyrotechnic articles of **heading 36.04**.

(b) Rubber tyres and other articles of **heading 40.11, 40.12** or **40.13**.

(c) Tents and camping goods (generally **heading 63.06**).

(d) Pumps for liquids (**heading 84.13**), filtering or purifying machinery and apparatus for liquids or gases (**heading 84.21**), electric motors (**heading 85.01**), electric transformers (**heading 85.04**), discs, tapes, solid-state non-volatile storage devices, "smart cards" and other media for the recording of sound or of other phenomena, whether or not recorded (**heading 85.23**), radio remote control apparatus (**heading 85.26**) or cordless infrared remote control devices (**heading 85.43**).

(e) Arms and other articles of **Chapter 93**.

Chapter 96

Miscellaneous manufactured articles

Notes.

1.- This Chapter does not cover :

(a) Pencils for cosmetic or toilet uses (Chapter 33);

(b) Articles of Chapter 66 (for example, parts of umbrellas or walking-sticks);

(c) Imitation jewellery (heading 71.17);

(d) Parts of general use, as defined in Note 2 to Section XV, of base metal (Section XV), or similar goods of plastics (Chapter 39);

(e) Cutlery or other articles of Chapter 82 with handles or other parts of carving or moulding materials; heading 96.01 or 96.02 applies, however, to separately presented handles or other parts of such articles;

(f) Articles of Chapter 90 (for example, spectacle frames (heading 90.03), mathematical drawing pens (heading 90.17), brushes of a kind specialised for use in dentistry or for medical, surgical or veterinary purposes (heading 90.18));

(g) Articles of Chapter 91 (for example, clock or watch cases);

(h) Musical instruments or parts or accessories thereof (Chapter 92);

(ij) Articles of Chapter 93 (arms and parts thereof);

(k) Articles of Chapter 94 (for example, furniture, luminaires and lighting fittings);

(l) Articles of Chapter 95 (toys, games, sports requisites); or

(m) Works of art, collectors' pieces or antiques (Chapter 97).

2.- In heading 96.02 the expression "vegetable or mineral carving material" means :

(a) Hard seeds, pips, hulls and nuts and similar vegetable materials of a kind used for carving (for example, corozo and dom);

(b) Amber, meerschaum, agglomerated amber and agglomerated meerschaum, jet and mineral substitutes for jet.

3.- In heading 96.03 the expression "prepared knots and tufts for broom or brush making" applies only to unmounted knots and tufts of animal hair, vegetable fibre or other material, which are ready for incorporation without division in brooms or brushes, or which require only such further minor processes as trimming to shape at the top, to render them ready for such incorporation.

4.- Articles of this Chapter, other than those of headings 96.01 to 96.06 or 96.15, remain classified in the Chapter whether or not composed wholly or partly of precious metal or metal clad with precious metal, of natural or cultured pearls, or precious or semi-precious stones (natural, synthetic or reconstructed). However, headings 96.01 to 96.06 and 96.15 include articles in which natural or cultured pearls, precious or semi-precious stones (natural, synthetic or reconstructed), precious metal or metal clad with precious metal constitute only minor constituents.

GENERAL

This Chapter covers carving and moulding materials and articles of these materials, certain brooms, brushes and sieves, certain articles of haberdashery, certain articles of writing and office equipment, certain requisites for smokers, certain toilet articles, certain sanitary absorbent products (sanitary towels (pads) and tampons, napkins and napkin liners and similar articles, of any material) andvarious other articles **not more specifically covered** by other headings in the Nomenclature.

The articles described in **headings 96.07 to 96.14 and 96.16 to 96.18** may be made wholly or partly of natural or cultured pearls, of precious or semi-precious stones (natural, synthetic or reconstructed), or of precious metal or metal clad with precious metal. However, the articles described in **headings 96.01 to 96.06 and 96.15** may incorporate those materials as **minor constituents** only.

Works of art, collectors' pieces and antiques

Notes.

1.- This Chapter does not cover :

(a) Unused postage or revenue stamps, postal stationery (stamped paper) or the like, of heading 49.07;

(b) Theatrical scenery, studio back-cloths or the like, of painted canvas (heading 59.07) except if they may be classified in heading 97.06; or

(c) Pearls, natural or cultured, or precious or semi-precious stones (headings 71.01 to 71.03).

2.- Heading 97.01 does not apply to mosaics that are mass-produced reproductions, casts or works of conventional craftsmanship of a commercial character, even if these articles are designed or created by artists.

3.- For the purposes of heading 97.02, the expression "original engravings, prints and lithographs" means impressions produced directly, in black and white or in colour, of one or of several plates wholly executed by hand by the artist, irrespective of the process or of the material employed by him, but not including any mechanical or photomechanical process.

4.- Heading 97.03 does not apply to mass-produced reproductions or works of conventional craftsmanship of a commercial character, even if these articles are designed or created by artists.

5.- (A) Subject to Notes 1 to 4 above, articles of this Chapter are to be classified in this Chapter and not in any other Chapter of the Nomenclature.

(B) Heading 97.06 does not apply to articles of the preceding headings of this Chapter.

6.- Frames around paintings, drawings, pastels, collages or similar decorative plaques, engravings, prints or lithographs are to be classified with those articles, provided they are of a kind and of a value normal to those articles. Frames which are not of a kind or of a value normal to the articles referred to in this Note are to be classified separately.

GENERAL

This Chapter covers :

(A) Certain works of art : paintings, drawings and pastels, executed entirely by hand, and collages, mosaics and similar decorative plaques (heading 97.01); original engravings, prints and lithographs (heading 97.02); original sculptures and statuary (heading 97.03).

(B) Postage or revenue and similar stamps, stamp-postmarks, first-day covers, postal stationery (stamped paper) and the like, used or unused, **other than** those **of heading 49.07** (heading 97.04).

(C) Collections and collectors' pieces of zoological, botanical, mineralogical, anatomical, historical, archaeological, palaeontological, ethnographic or numismatic interest (heading 97.05).

(D) Antiques of an age exceeding 100 years (heading 97.06).

Articles of this Chapter may include articles of cultural significance that are subject to export or import restrictions.

It should, however, be noted that such articles are classified in **other Chapters** of the Nomenclature if they do not comply with the conditions arising from the terms of the Notes or headings of this Chapter.

Articles of a kind described in headings 97.01 to 97.05 remain classified in those headings even if they are of an age exceeding 100 years.