

FOREWORD

1. The Supplementary Explanatory Notes (SEN) of the ASEAN Harmonized Tariff Nomenclature (AHTN) form part of the Protocol governing the implementation of the AHTN (AHTN Protocol, August 2003, Manila). The SEN were developed to assist users in determining the proper tariff classification of goods and commodities in the AHTN, that is, the ASEAN subheadings as defined in the AHTN Protocol.

2. Since the AHTN is based on, and is an extension of, the Harmonized Commodity Description and Coding System (HS), classification of goods and commodities in the AHTN should follow the General Interpretative Rules (GIRs) and Legal Notes of the HS, as well as the provisions of the legal instruments mentioned above. The SEN should also be read together with the Explanatory Notes (EN) to the HS. The SEN are useful in securing the uniform understanding and of interpretation of the provisions of the AHTN.

3. SEN 2017 has been amended in line with the HS 2022 amendments (including the amendments to the EN). SEN 2022 contains specific information on products of international trade of importance to ASEAN, as indicated by Member Countries. The SEN also serve to facilitate the understanding and interpretation of the scope of the ASEAN subheadings with the view to furthering the uniform classification of goods.

4. SEN 2022 should be used jointly with the HS and EN. In the case of any conflict between the text of the HS and EN and the SEN, the definitions provided in the HS and EN shall prevail.

5. Pictures, graphs, and diagrams of products in the SEN have only been provided for illustration only and not for commercial purposes.

6. The text of SEN 2022 has been provided in English, the working language of ASEAN.

Disclaimer.

Individual countries producing SEN are responsible for the contents thereof.

กฎหมาย

ABBREVIATIONS and SYMBOLS

A	Ampere(s)
AC	Alternating current
Ah	Ampere hour(s)
ASTM	American Society for Testing Materials
CAS	Chemical Abstracts Service
°C	degree(s) Celsius
cc	cubic centimetre(s)
CD-ROM	Compact Disc-Read Only Memory
cg	centigram(s)
cm	centimetre(s)
cm ³	cubic centimetre(s)
e.g.	for example
g	gram(s)
g.v.w.	gross vehicle weight
h	hour
ISO	International Organization for Standardization
kcal	kilocalorie(s)
kg	kilogram(s)
kHz	kilohertz
kN	kilonewton(s)
kPa	kilopascal(s)
kV	kilovolt(s)
m	metre(s)
m ²	square metre(s)
m ³	cubic metre(s)
mg	milligram(s)
Mg	Magnesium
MgO	Magnesium oxide
min	minute
min.	minimum
mm	millimetre(s)
mN	millinewton(s)
MPa	Megapascal(s)
N	Newton(s)
/	per
%	percent

CHAPTER 1

10102.29.11

OXEN

Oxen are castrated adult male bovine animals of the genus *Bos* of the species *Bos Taurus*.

They are trained as draft animals (pulling carts, wagons, plows etc) because of they are characteristically more massive, muscular, and sturdy. Most oxen weigh about the same as a mature bull of the same breed, but oxen often grow taller and leaner in the neck and chest.



Picture Group 1. Oxen

(Source: Indonesia)

CHAPTER 2

0207.14.91

0207.27.91

MECHANICALLY DEBONED OR SEPARATED MEAT

Mechanically deboned or separated meat (meat separated from bones by mechanical means) is a paste-like or batter-like meat product obtained by forcing turkey or chicken bones, with attached edible meat, under high pressure through a sieve or similar device to separate the bones from the edible meat tissue. Muscle and tissue are no longer distinctly visible. It is used for the manufacture of sausages, nuggets and similar products.



Picture 1. Process of Mechanical Deboning

(Source: Philippines)

0210.99.10

FREEZE-DRIED DICED CHICKEN

Freeze-dried diced chicken are chicken meat in the form of cubes preserved by freezing, then subjecting them to reduced pressure (a vacuum) and adding enough heat to allow the frozen water in the product to sublime from the solid phase to the gaseous phase.

(Source: Philippines)

CHAPTER 3

0301.93.10 0301.99.11 0301.99.42 0301.99.51

BREEDING CARP, OTHER THAN FRY; BREEDING MILKFISH AND GROUPEL, FRY; OTHER BREEDING FISH FRY; OTHER CARP, FOR BREEDING; BREEDING MILKFISH, OTHER THAN FRY

Breeding fish are accompanied by certification from the competent authorities as provided for under the national law.

General requirements on appearance:

- Well-proportioned body, no deformity, full and normal fins, no scratches, no grease loss, fish of even size, with no sign of disease and certified by competent authorities as fit for breeding

Activeness:

- Fish should be active, swift, swimming under the water in groups.

Weight and size:

- Depends on each species and hatchery time.

(Source: Viet Nam)

0301.99.22 0301.99.23 0301.99.42

OTHER CARP

Other carp included under 0301.99.22, 0301.99.23 and 0301.99.42 are those carps not included under subheading 0301.93, for example:

- Genus *Abramis*: Carp bream (*Abramis brama*)
- Genus *Aristichthys*: Bighead carp (*Aristichthys nobilis*)
- Genus *Barbodes*: Carnatic carp (*Barbodes carnaticus*)
- Genus *Culter*: Predatory carp (*Culter erythropterus*)
- Genus *Epalzeorhynchus*: Red-tailed black shark (*Epalzeorhynchus bicolor*) and Red-finned black shark or Rainbow shark (*Epalzeorhynchus frenatus*)
- Genus *Henicorhynchus*: Siamese mud carp (*Henicorhynchus siamensis*)

Source: <http://www.newworldencyclopedia.org/entry/Carp>

Refer to the link below to view a more detailed list of subfamilies and genera of carp.

https://en.wikipedia.org/wiki/Cyprinidae#Subfamilies_and_genera

(Source: Philippines)

0301.99.31

0301.99.32

0303.89.23

MILKFISH (*CHANOS CHANOS*)

Kingdom: *Animalia*

Class: *Actinopterygii*

Order: *Gonorynchiformes*

Family: *Chanidae*

Genus: *Chanos*

Species: *Chanos chanos*

Weight is not less than 800 grams.

The milkfish is found in fresh, marine as well as brackish water lives in brackish waters.

Size : up to 180 cm



Picture 1. Milkfish

(Source: Indonesia)

0301.99.33

0301.99.53

LEOPARD CORAL GROUPER (*PLECTROPOMUS LEOPARDUS*)

Kingdom: *Animalia*

Phylum: *Chordata*

Class: *Actinopterygii*

Order: *Perciformes*

Family: *Serranidae*

Genus: *Plectropomus*

Species: *Plectropomus leopardus*

Weight is not less than 600 grams.

Size: 35-120 cm

0301.99.55

HUMPBACK GROUPE (CROMILEPTES ALTIVELIS)

Kingdom: *Animalia*

Phylum: *Chordata*

Class: *Actinopterygii*

Order: *Perciformes*

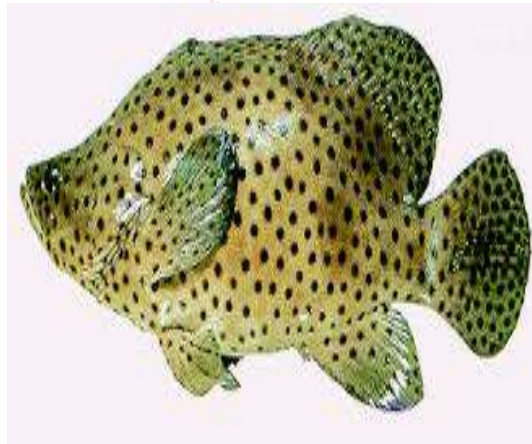
Family: *Serranidae*

Genus: *Cromileptes*

Species: *Cromileptes altivelis*

Weight is not less than 600 grams.

Size : up to 70 cm



Picture 1. Humpback Grouper

(Source: Indonesia)

0301.99.41

TILAPIAS (OREOCHROMIS SPP.)

Categorized as freshwater fish for consumption

- **Shape:** elongated and compressed body, big eye and bluish green at the edge.

- **Color:** silver with olive/grey/black bars, and often reddish during the breeding

season.

- **Size:** up to 60 cm



Picture 1. Tilapia

(Source: Indonesia)

0303.49.10

LONGTAIL TUNA (*THUNNUS TONGGOL*)

Kingdom: Animalia

Phylum: Chordata

Class: Actinopterygii

Order: Perciformes

Family: Scrombidae

Genus: Thunnus

Species: *Thunnus tonggol*

Weight is generally not less than 1000 grams.

Size around 70-145 cm.

Longtail tuna is one of several fish species of northern bluefin tuna.

Reference: FAO species catalogue. Vol. 2. Scrombrids of the world. p. 92-93.

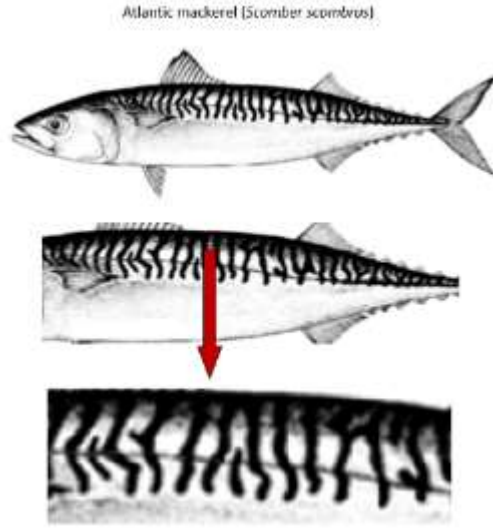


Picture 1. Longtail Tuna

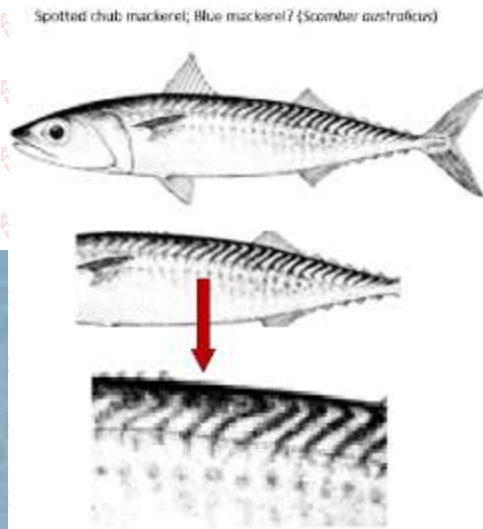
(Source: Indonesia)

0303.54.10

MACKEREL (SCOMBER SCOMBRUS, SCOMBER AUSTRALASICUS)



Picture 1. Atlantic Mackerel (*Scomber scombrus*)



Picture 2. Blue Mackerel (*Scomber australasicus*)

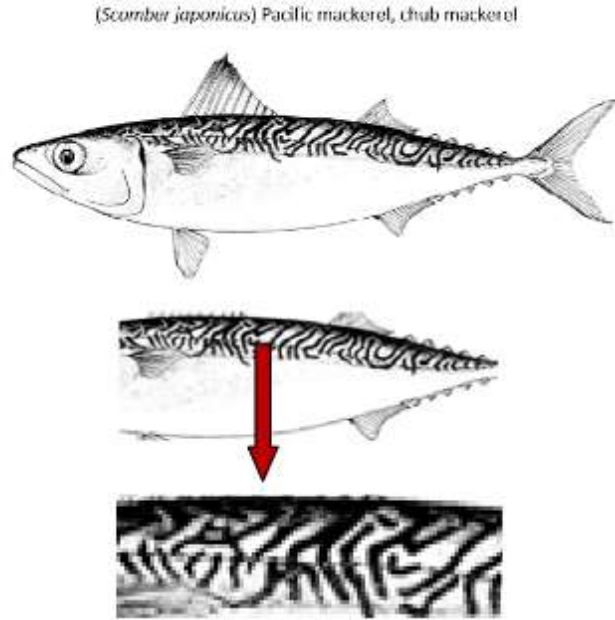
(Source: Indonesia)

0303.54.20

PACIFIC MACKEREL (SCOMBER JAPONICUS)

- Categorized to marine fish, in Atlantic, Indian and Pacific Oceans
- The shape: head is conical, the mouth is slightly tilted, and the eye is completed with eyelid.

The color: silver on the sides and blackish pattern on the head to the caudal fin.



Picture 1. Pacific Mackerel (*Scomber japonicus*)

(Source: Indonesia)

0304.89.10

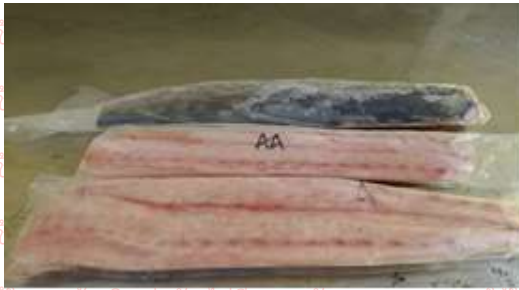
MAHI-MAHI (*CORYPHAENA HIPPURUS*)

Kingdom: *Animalia*
Class: *Actinopterygii*
Order: *Perciformes*
Family: *Coryphaenidae*
Genus: *Coryphaena*
Species: *Coryphaena hippurus*

The appearance of mahi-mahi fillet is identified by blood-line on the middle of fillet slice elongated to wholly fish body structure (tail-head).



Picture 1. Mahi-mahi



Picture 2. Mahi-mahi, processed to be fillet

(Source: Indonesia)

0304.99.90

SURIMI (MINCED FISH MEAT)

Frozen surimi is a fish protein product made for further processing. It is made from headed, gutted, cleaned and mechanically deboned fresh fish. Deboned fish meat is then washed, refined, minced and dewatered, and then mixed with cryoprotective food ingredients and frozen.

Cryoprotectants are added to prevent protein denaturation in the frozen state, so that the minced fish meat can be frozen and yet retain the capacity to form gel when heat-treated after thawing. Sugars and/or polyhydric alcohols are commonly used as cryoprotectants.

Reference :

1. Code of Practice for Fish and Fishery Products, First Edition, World Health Organization Food and Agriculture Organization of the United Nations (FAO).
2. Benjakul et al., 2004; Guennegues and Morrissey, 2005; Perez-Mateos and Lanier, 2006; Rawdkuen et al., 2008; Campo-Deano and Tovar, 2009.

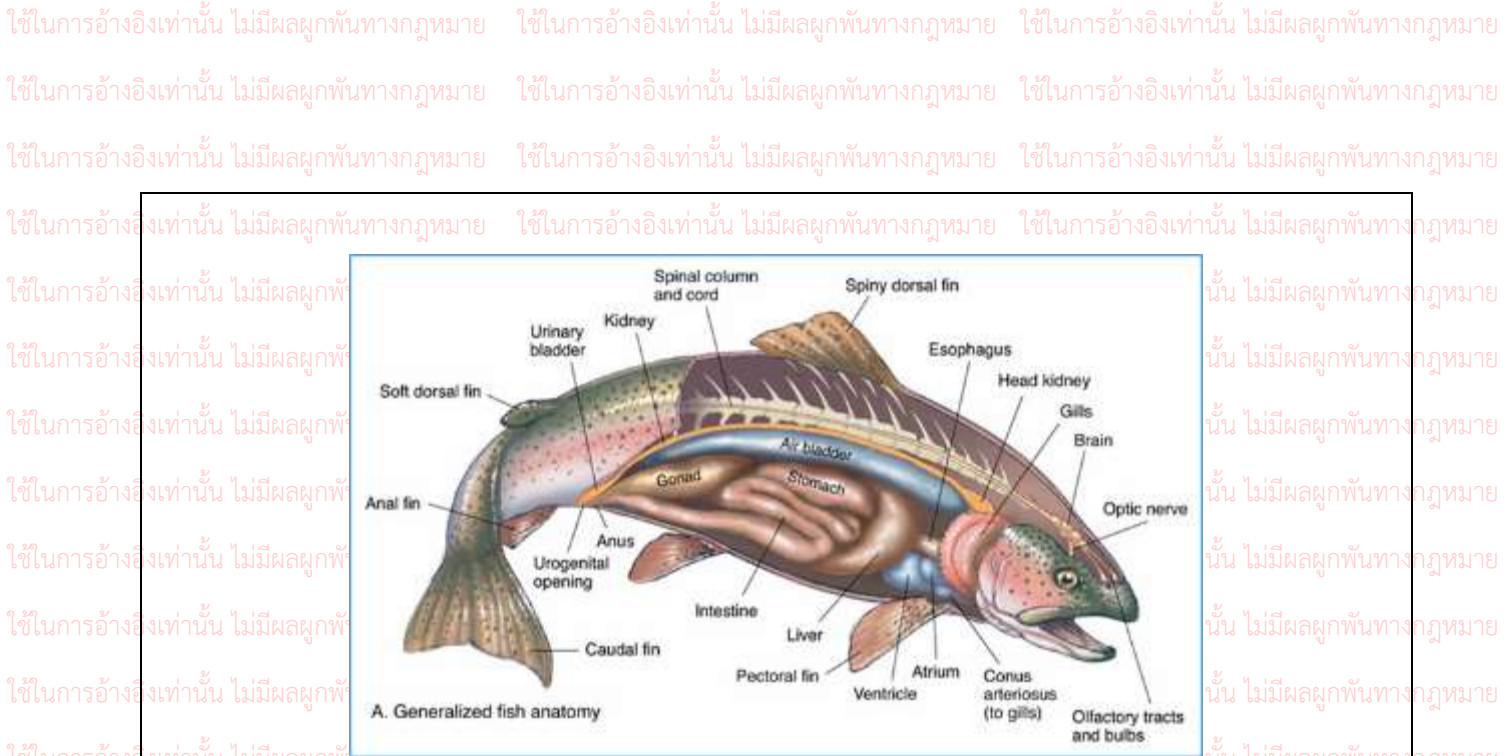


Picture 1. Surimi

(Source: Indonesia)

0305.59.21
ANCHOVIES
(<i>STOLEPHORUS SPP.</i>, <i>COILIA SPP.</i>, <i>SETIPINNA SPP.</i>, <i>LYCOTRISSA SPP.</i>, <i>THRYSSEA SPP.</i> AND <i>ENCRASICHOLINA SPP.</i>)
Family: Engraulidae
FAO Names: <i>E. Anchovies</i>
<p>1. Anchovies (<i>Engraulis spp</i> (8 species) are anchovies species that are found in European countries, California, Argentina, Australia, South Africa and Japan.</p> <p>2. Anchovies (<i>Stolephous spp.</i> (18 species), <i>coilia spp.</i> (12 species), <i>Setipinne spp.</i> (7 species), <i>Lycotrissa crocodilus</i> and <i>Thryssa spp.</i> (24 species), <i>Encrasicholina spp.</i> (5 species)) are mostly found in ASEAN waters</p> <p>There are other species such as <i>Anchoviella spp.</i>(15 species), <i>Anchoa spp.</i>(34 species), <i>Anchovia spp.</i> (3 species) <i>Centgraulia spp.</i>(2 species), <i>Jurengrualiajurunesis.</i>, <i>Peterngualisatherinoides</i>, <i>Lycengraulis spp.</i>(3 species), <i>Amazonsprattus scintilla</i>, <i>Encrasicholina spp.</i>(5 species) and <i>Papuengraulismicropinna</i>. No habitat in Asian waters.</p> <p>(Based on FAO Species Catalogue Vol. 7, Clupeoid Fishes Of The World). (Source: Malaysia)</p>

0305.72.11	0305.72.19
FISH MAWS	
<p>The fish maw or swim bladder, gas bladder or air bladder is an internal gas-filled organ that contributes to the ability of a fish to maintain its buoyancy, and thus to stay at the current water depth without having to waste energy in swimming. The swim bladder is also used as a stabilizing agent because in the upright position the center of mass is below the center of volume due to the dorsal position of the swim bladder.</p> <p>In the trade of fishery industries, whole fresh fish including part of fish (e.g. fillets, meat, liver, maw, roes, tails etc.) are separated by type of fish. The sorting or separating according to type of fish is very important in terms or pricing, identification, for processing to make into other product such as minced fish, dried fish product, smoked product, salted fish product or other prepared product based on fish.</p> <p>Quality fish maw should have an amber and clear colour, smooth and delightful texture. The darker the colour (golden yellow), less translucency (dark brown), less white tissues and more wrinkles, meaning older the fish maw is, thus, the more medical benefits. The medical benefit in fish maw works best after storage in a dry place for 1 to 3 years when the fishy smell and stickiness of gluten are reduced.</p>	



Picture 1. General Fish Anatomy



Picture 1. Fresh Eel Maws



Picture 2. Fresh Cod Maws



Picture 3. Dried Cod fish maws



(Source: Malaysia)

CHAPTER 4

0404.10.11

0404.10.91

WHEY, FIT FOR HUMAN CONSUMPTION

Whey, fit for human consumption, is clean (i.e., prepared and handled in accordance with hygienic standards for food handling and preparation) and accepted by competent authorities as fit for human consumption. It may be in liquid, paste or solid (including frozen) form, and may be concentrated (e.g., in powder) or preserved. It is generally used as an ingredient, as a source of protein, in various food preparations.

(Source: Philippines)

CHAPTER 6

0602.90.40

BUDED STUMPS OF THE GENUS *HEVEA*

Budded stumps of the genus *Hevea* are budded rootstock with trimmed lateral roots. Bare root budded stumps are produced by bud-grafting the rootstock planted in an in-ground nursery. When the bud-grafting is successful, the rootstock is extracted from the in-ground nursery, it is then cut-back about five cm from the upper part of the bud patch and the lateral roots are trimmed closest to the tap root.



Picture 1. Budded stumps



Picture 2. Insertion of bud patch



Picture 3. Marking of bud patch

(Source: Malaysia)

0602.90.50

SEEDLINGS OF THE GENUS *HEVEA*

Seedlings of the genus *Hevea* are germinated rubber tree seeds with a root length of about 1 to 2 cm.



Picture 1. *Hevea* seedlings

(Source: Malaysia)

0602.90.60

BUDWOOD OF THE GENUS HEVEA

Budwood of the genus *Hevea* consists of a branch harvested at the green or brown stage from the nursery or a mother tree. Good green budwood can be harvested from the nursery about three to four months after the first day of bud sprouting. Brown budwood can be obtained later than four months.

Depending on clones, the length of the budwood is often 60 cm, and two to three buds can be found on the budwood. Budwood of clonal materials is green or green-brown in colour.

Budwood is harvested from the nursery and sorted before dispatch, rejecting those that have been badly bruised or diseased. Green budwood has a minimum length of 30cm with a minimum of two usable bud eyes each.



(Source: Malaysia)

CHAPTER 7

0701.90.10

CHIPPING POTATOES

Chipping potatoes are tubers which specifically grown to meet the needs of potato chip makers. In appearance, a chipping potato is more round than the typical potato and has a lighter colour and easily rubbed-off skin. The low sugar levels of these potatoes allows them to fry up with a nice, white to very light, slightly gold colour.

Some of the varieties of potatoes suitable for making chips are: Alturas, Andover, Atlantic, Chipeta, Dakota Pearl, Ivory Chip, Kennebec, Lachipper, Marcy, Megachip, Norvalley, Norwis, Pike, Reba, Snowden, NY115, Dakota Diamon, Yukon gem, Saturna, Lady Rosetta, Lady Claire, Coliban, Markies, Fianna, Hardie, Pirol, Sassy.

(Source: Philippines)

0704.90.10

ROUND (DRUMHEAD) CABBAGES

Round cabbage or drumhead cabbage is a type of cabbage having a compact round head with white-veined leaves. It is available in two colours—light green (*Brassicaoleraceae var. capitata*) and purple/red (*Brassicaoleraceae var. capitata f. rubra*).

Kelbarga	Cruciferae
Name ilmiah	Brassica oleraceae var. Capitata
Name tempelan	Kubis, Kubis Bulat
Label pertumbuhan	Manegak





0704.90.20 CHINESE MUSTARD

Chinese mustard (*Brassica juncea*) or in Cantonese -Kai Choi, also known as green mustard cabbage. Cabbage (*Brassica oleracea*) is the same family species with Chinese mustard – brassica. *Brassica juncea* belongs to the *Cruciferae (Brassicaceae)* plant family, commonly known as the mustard family.

The name is derived from the shape of the flowers that have four diagonally opposed petals in the form of a cross. *Brassica juncea* has pale green foliage, with a few hairs on the first leaves and leaf blades that terminate well up the petiole. Mature *Brassica juncea* plants grow to a height of one to two meters. The lower leaves are deeply lobed, while the upper leaves are narrow and entire.



Cabbage
Cabbage (*Brassica oleracea*), vegetable and fodder plant the various forms of which are said to have been developed by long cultivation from the wild, or sea, cabbage (*Brassica*

oleracea) found near the seacoast in various parts of England and continental Europe. The common horticultural forms of *Brassica oleracea* may be classified according to the plant parts used for food and the structure or arrangement of those parts:

- (1) **Leaves:**
 - i. loose or open foliage- (e.g. kale and collards)
 - ii. Leaves folded into compact heads leaves (large terminal heads)—(e.g., common cabbage and savoy cabbage)
 - iii. Small axillary heads—(e.g., Brussels sprouts);
- (2) **Flowers:** flower much thickened and modified - (e.g. cauliflower and heading broccoli);
- (3) **Stem:** stem much expanded to a bulbous structure- (e.g. kohlrabi).

CABBAGE	DESCRIPTION	BRASSICA OLERACEA SPECIES
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<p>Broccoli Broccoli is an edible green plant in the cabbage family, whose large flowering head is used as a vegetable.</p>	<p>Variety <i>Brassica oleracea</i> L. var. <i>botrytis</i> L.</p>	
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Flowering head

<p>Brussels sprout The Brussels sprout is a cultivar in the group of cabbages (<i>Brassica oleracea</i>), grown for its edible buds (small axillary heads)</p>	<p>Variety <i>Brassica oleracea</i> L. var. <i>gemmifera</i> DC.</p>	
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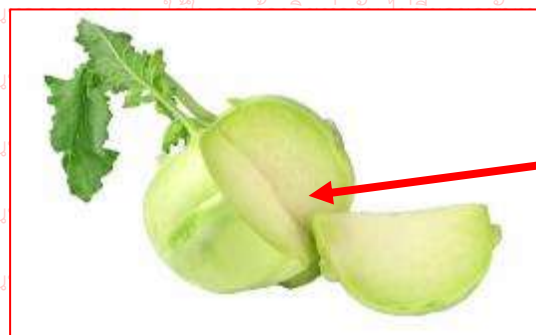
Edible bud

Kohlrabi

Kohlrabi (German turnip or turnip cabbage) (*Brassica oleracea* Variety *Brassica oleracea L. var. gongyloides* group) is an annual vegetable, and is a low, stout cultivar of cabbage. The stem much expanded to a bulbous structure is used as vegetable.



Expanded stem



Expanded stem

Kale

Kale or borecole (*Brassica oleracea* *Acephala* *Brassica Group*) is a vegetable with green or purple leaves, in which the central leaves do not form a head (leaves loose or open foliage).

ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย

ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย

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ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย

Leaves loose or open foliage

ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย

ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย

ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย

Collard Collard greens (collards) is the American English *Brassicaceae*/*Cruciferae* term for various loose-leafed cultivars of *Brassica oleracea* (cabbage Family)



leaves
loose or
open
foliage



Cabbage Cabbage (*Brassica oleracea* or variants) is a leafy green or purple biennial plant, grown as an annual vegetable crop for its dense-leaved heads. (*Brassica oleracea* or variants)



Round
Headed



Round headed cabbage

Chinese mustard

Brassica juncea, mustard greens, Indian mustard, *Brassica juncea* Chinese mustard, Kai Choi or leaf mustard is a species of mustard plant.



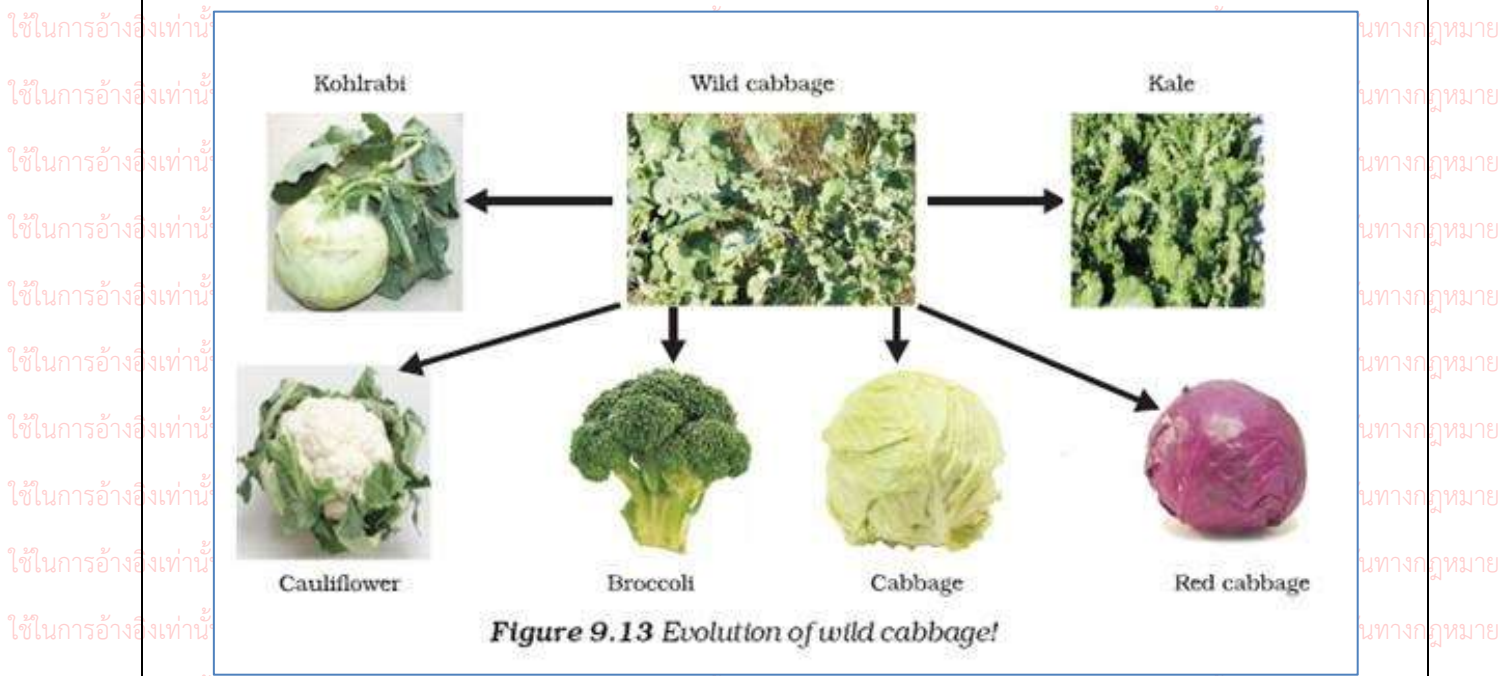
Leaves loose or open foliage



ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย



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0708.20.10

FRENCH BEANS

French bean (*British English*) (*Phaseolus spp.*), the common bean (also known as the string bean, garden bean, green bean, field bean, flageolet bean, haricot bean, pop bean, or snap bean.



Picture 1 and 2. French Beans

(Source: Malaysia)

CHAPTER 8

0801.19.10

YOUNG COCONUT

Young coconut refers to the whole fruit (which is between 7 to 8 months old) with water and gelatinous kernel. It is mainly traded for drinking its natural water "coconut water". Sometimes the green shell is partially husked to reduce shipping weight.



Pictures 1. Young coconut

Coconuts: Young versus Mature

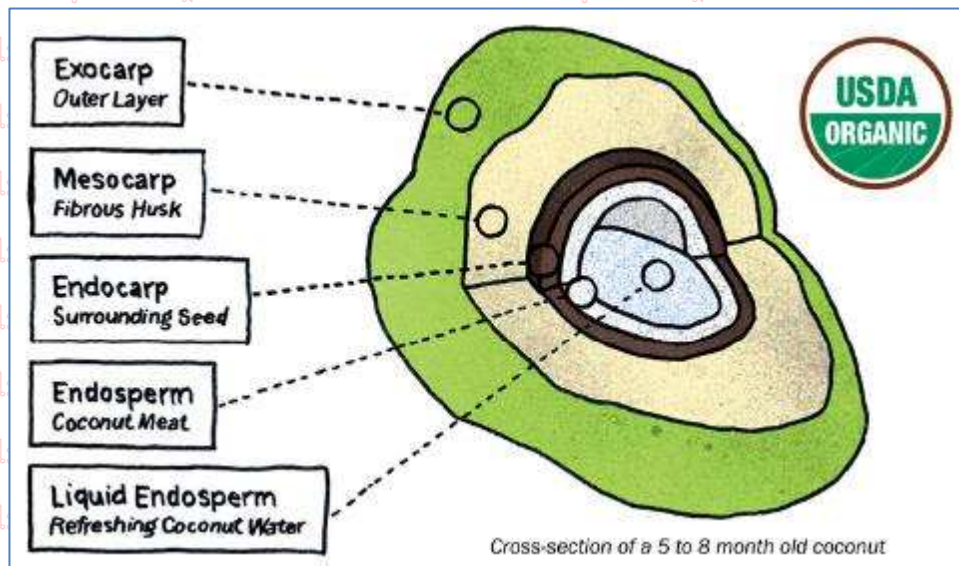
There are several different ways to enjoy fresh coconuts, which can be young or mature. Young coconuts have either a green shell or a white "husk" if the outer shell has been removed, while mature coconuts are brown, hairy variety. The nutrients and physical characteristics change as a coconut matures.

Young coconuts have more 'water' and soft, gel-like meat, and mature coconuts have firm meat and less 'water'. Fresh coconuts for drinking are typically harvested from the tree while they are green, each can contain between 200 ml to 1 l. Any nuts younger than five months of age tend to be in coarse taste. Young coconut should be harvested at 7 to 8 months maturity to obtain the maximum volumes of water and the delicious gelatinous meat (kernel).

The major chemical constituents of coconut water are sugars and minerals and minor ones are fat and nitrogenous substances.

	Mature Coconut Water	Tender/young Coconut Water
Total solids%	5.4	6.5
Reducing sugars %	0.2	4.4
Minerals %	0.5	0.6
Protein %	0.1	0.01
Fat %	0.1	0.01
Acidity mg %	60.0	120.0
pH	5.2	4.5
Potassium mg%	247.0	290.0
Sodium mg%	48.0	42.0
Calcium mg%	40.0	44.0
Magnesium mg %	15.0	10.0
Phosphorous mg%	6.3	9.2
Iron mg%	79.0	106.0
Copper mg%	26.0	26.0

Table 1. Approximate Analysis of Mature and tender/young Coconut Water



Picture 2. Structure of coconut

(Source: Malaysia)

0803.90.10

LADY'S FINGER BANANA

Lady Finger bananas (*Musa acuminata*) also known as Sugar bananas, Finger bananas, Fig bananas, Date bananas or Sucrier. Their fruits are small about (8- 12.5 cm) in length, diameter 3 – 4 cm and light yellow thin-skinned, very sweet and aromatic. Lady Finger bananas are eaten fresh or used in desserts. They are known for being sweeter than the standard banana.

ASEAN Countries

Local Name

Brunei Darussalam

Pisang Mas

Cambodia

Chek Pong Moan (chicken egg banana)

Indonesia

Pisang Mas

Laos

Kuay Khai

Malaysia

Pisang Mas

Myanmar

Nga Pyaw Thee

The Philippines

Señorita

Singapore

Pisang Mas

Thailand

Kluay Khai (egg banana)

Vietnam

Chuoi Ngu or Chuoi Cau

Table 1. Names of Lady's finger banana in ASEAN Countries



Pictures 1, 2 and 3. Lady Finger bananas (*Musa acuminata*)

(Source: Malaysia)

0803.90.20

CAVENDISH BANANA (*MUSA ACUMINATA*)

Cavendish bananas are the fruits of one of a number of banana cultivars belonging to the Cavendish subgroup of the AAA banana cultivar group. The same term is also used to describe the plants on which the bananas grow. They include commercially important cultivars like 'Dwarf Cavendish'.



Picture 1. Cavendish Banana

Source of Image : <https://bibitbunga.com/product/tanaman-pisang-cavendish/>

(Source: Malaysia)

0803.90.30

CHESTNUT BANANA (HYBRID OF *MUSA ACUMINATA* AND *MUSA BALBISIANA* CULTIVAR BERANGAN)

Chestnut banana, scientifically known as hybrid of *Musa acuminata* and *Musa balbisiana* (a cultivated variety of Berangan) is the most produced fruit and consumed fresh. The flesh is reddish, soft, sweet and fragrant.

Scientific name:	<i>Musa acuminata</i> × <i>Musa balbisiana</i> c.v. Berangan
Common name:	Pisang Berangan, Chestnut banana
Type:	Fruit plant
Origin:	Cultivar

ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย



Picture 1 : Chesnut Banana

Source of Image : <https://www.fruitwerkz.com/products/pisang-berangan>

(Source: Malaysia)

ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย

0805.50.10

LEMON (*CITRUS LIMON*, *CITRUS LIMONUM*)

Common name: Lemons

Scientific name: *Citrus limon*

Local name in Malaysia : Limau Lemon or Limau Asam



Pictures 1. Lemon

Common name: Sweet Lemon

Scientific name: *Citrus limonum*

Local name in Malaysia : Limau Susu



Pictures 2. Sweet Lemon

ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย

ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย

ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย

(Source: Malaysia)

0805.50.20

LIMES (CITRUS AURANTIFOLIA, CITRUS LATIFOLIA)

Common name: Limes

Scientific name: *Citrus aurantifolia*

Local name in Malaysia: Limau Nipis



Picture 1. Lime

Common name: Kaffir Limes

Scientific name: *Citrus latifolia*

Local name in Malaysia: Limau Purut



Pictures 2. Kaffir Lime or Limau Purut

(Source: Malaysia)

0810.90.10

LONGANS; MATA KUCING

Longan or *Dimocarpus longan* or *Euphoria longan* (*Sapindaceae* family) also known as dragons eye. The fruits, in drooping clusters, are globes, 2 - 2.8 cm in diameter, with thin, brittle, yellow-brown to light reddish-brown rind, more or less rough (pebbled).



Picture 1. Longan

Mata Kucing - *Euphoria malaiense* (*Sapindaceae* family) literally translated means cats eye. The fruits are round, up to 2cm in diameter (some larger) with a rough, brownish skin, fruit borne on small bunches. The flesh is translucent, white and sweet. The flesh thickness varies but is generally about 5.0 mm thick whilst the seed is large in comparison to the flesh.



Picture 2. Mata Kuching

(Source: Malaysia)

0810.90.94

POMEGRANATE (*PUNICA SPP.*), SOURSOP OR SWEETSOPS (*ANNONA SPP.*), BELL FRUIT (*SYZYGIIUM SPP.*, *EUGENIA SPP.*), MARIAN PLUM (*BOUEA SPP.*), PASSION FRUIT (*PASSIFLORA SPP.*), COTTONFRUIT (*SANDORICUM SPP.*), JUJUBE (*ZIZIPHUS SPP.*) AND TAMPOI OR RAMBAI (*BACCAUREA SPP.*)

These are local fruits that are grown or produced and processed in ASEAN Member States.

1. Pomegranate

Common name: Pomegranate

Scientific name: *Punica granatum*

Local name in Malaysia: Delima



Picture 1. Pomegranate

2. Soursop

Common name: Soursop

Scientific name: *Annona muricata*

Local name in Malaysia: Durian Belanda/Nona

Local name in Indonesia: Sirsak



Picture 2. Soursop

3. Sweetsop

Common name: Sweetsop

Scientific name: *Annona squamosa*

Local name in Malaysia: Nona serikaya



Picture 3. Sweetsop

4. Bell fruit

Common name: Bell fruit

Scientific name: *Syzygium aqueum*, *Eugenia aquea*

Local name in Malaysia: Jambu Air



Picture 5. Bell fruit/Jambu Air



Picture 6. Bell fruit

MY Local Name: Jambu Bol (*Syzygium malaccanese*)



Picture 7. Bell fruit

MY Local Name: Jambu Mawar (*Syzygium jambos*, *Eugenia jambos*)



Picture 8. Bell fruit

MY Local Name: Jambu Semarang (*Syzygium samarangense*, *Eugenia javanica*)

5. Marian Plum

Common name: Marian Plum

Scientific name: *Bouea macrophylla*

Local name in Malaysia: Kundang



Picture 9. Marian Plum

6. Passion fruit

Common name: Markisa

Scientific name: *Passiflora* spp.

Local name in Malaysia: Buah susu



Picture 10. Passion fruit

7. Cottonfruit

Common name: Cottonfruit

Scientific name: *Sandoricum koetjape*, *Sandoricum indicum*, *Sandoricum nervosum*

Local names in Malaysia: Kecapi/ Sentol/ Sentul/ Santol

Local names in Thailand: Krathon/Sathon



Picture 11. Cottonfruit

8. Jujube

Common name: Jujube

Scientific name: *Ziziphus spp.*

Local name in Malaysia: Bidara



9. Tampoi or Rambai

Common name: Rambai

Scientific name: *Baccaurea motleyana*

Local name in Malaysia: Rambai or tampoi

(Source: Malaysia)

Picture 12. Jujube



Picture 13. Tampoi or Rambai

0802.12.10

BLANCHED ALMOND

Almond in shell selected from quality stocks, are shelled, sorted, washed, steamed at 90-100°C, and peeled to remove the skin, are known as blanched almonds. They are sorted and maybe cut into style (sliced, slivered, diced) and specific sizes as required, and are dried and packaged.



Picture 1. Blanched Whole Almonds



Picture 2. Blanched Sliced Almonds

CHAPTER 9

0901.11.20

0901.21.11

ARABICA COFFEE

- **Physical:** The shape of seed tends to be oval and longer than Robusta.
- **The content of caffeine:** generally 0.8 - 1.4%, so it is not too bitter but has a higher acidity.
- **Aroma and texture:** smells like fruits or flowers, some have aroma of nuts and feels smoother.
- **Usage:** Widely used as fine coffee / specialty coffee, or other coffee.



Picture 1. Arabica coffee bean



Arabica

Picture 2. Arabica coffee beans

(Source: Indonesia)

0901.11.30

0901.21.12

ROBUSTA COFFEE

- **Physical:** Coffee beans are rounder and often larger.
- **The content of caffeine:** generally 1.7 - 4% percent so that it is bitter and its acidity is low.
- **Aroma and texture:** Tends to have the aroma of chocolate, nuts and soil and slightly has coarser taste.

• Usage: Widely used as an ingredient in instant coffee or basic ingredients or a mixture of espresso because of its high caffeine content.



Picture 1. Robusta coffee bean



Robusta

Picture 2. Robusta coffee beans

(Source: Indonesia)

CHAPTER 10

1001.99.12 1001.99.19

WHEAT AND MESLIN, FIT FOR HUMAN CONSUMPTION

Wheat or Meslin fit for human consumption are those clean, healthy and accepted by competent authorities as fit for human consumption. Such grains are used for food production, such as flour.

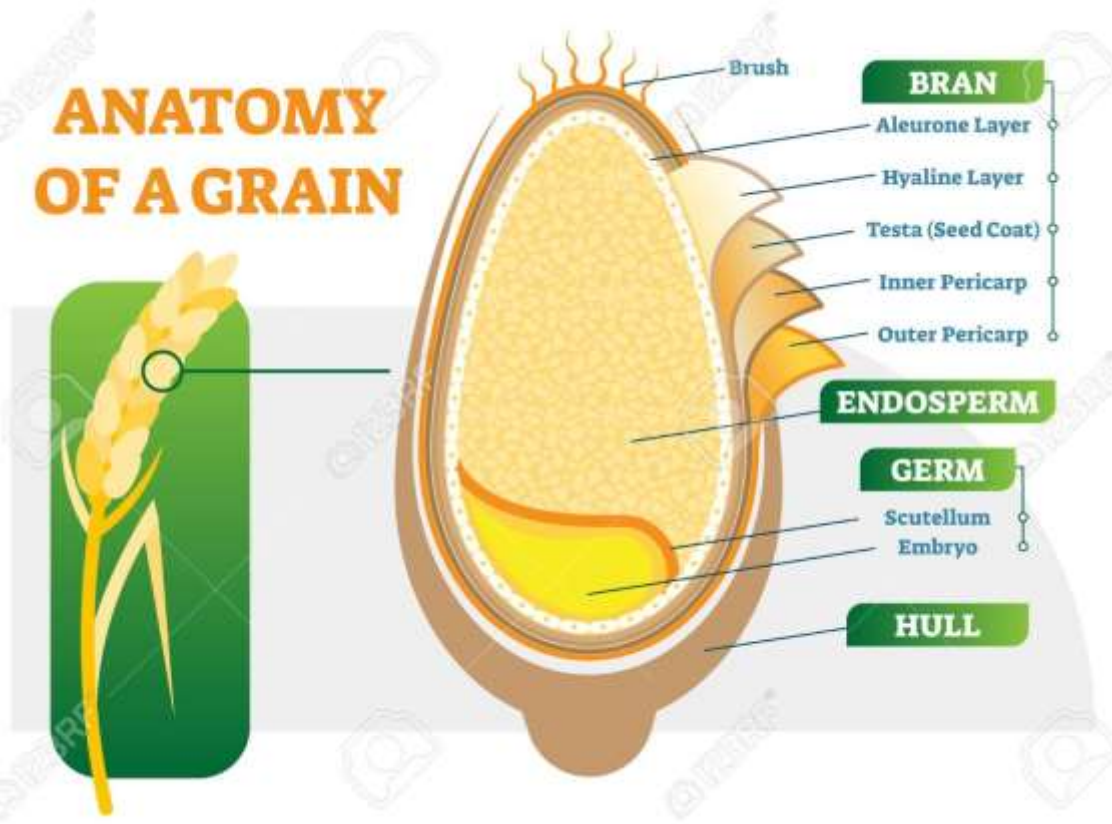
(Source: Philippines)

1001.99.12

WHEAT GRAIN, WITHOUT THE EXTREME OUTER LAYER

Wheat grain's hull (the extreme outer layer) is formed in such a way that it remains attached to the cob when the grain is detached from the cob. As a result, without threshing or other human intervention for hulling, the wheat grain in natural unworked status does not have a hull. Therefore, "unprocessed wheat grain without hull" should remain in Heading 10.01, because the Legal Note 1 (B) to Chapter 10 does not apply as the hull is removed naturally, and not due to any human intervention or other working.

ANATOMY OF A GRAIN



Picture 1. Anatomy of a Grain

(Source: Indonesia/Consultant)

1001.99.99

WHEAT (NOT FIT FOR HUMAN CONSUMPTION)

The wheat covered by this subheading is distinct from that which is fit for human consumption due to the presence of damaged, broken, dirty and weevil infested kernels. It may also contain sprouted grains and has a moisture content of more than 12% by weight. Its gluten content is 2.7% by weight, maximum. This wheat is of a kind used for animal feed.

(Source: Philippines)

1005.90.10

POPCORN

Popcorn is also known as popping corn, is a type of corn (maize, *Zea mays var. everta*) that expands from the kernel and puffs up when heated. Popcorn is able to pop because, like amaranth grain, sorghum, quinoa, and millet, its kernels have a hard moisture-sealed hull and a dense starchy interior. Pressure builds inside the kernel, and a small explosion

(or "pop") is the end result. Some strains of corn are now cultivated specifically as popping corn.



Picture 1. Popcorn

(Source: Philippines)

1005.90.91

CORN, FIT FOR HUMAN CONSUMPTION

Corn fit for human consumption are those clean, healthy and accepted by competent national authorities. Such corn usually has aflatoxin content of maximum 20 ppb and moisture not more than 14%.

(Source : Indonesia)

1006.20.10

1006.30.40

HOM MALI RICE

Hom Mali rice, also known as "Thai Hom Mali rice", (*Oryza sativa*, var. Kao Dok Mali 105 and RD15) means husked or hulled rice of non-glutinous fragrant rice varieties. Hom Mali rice kernel is long grained; the average length of the whole kernel without any broken part should not be less than 7 mm. Ratio of the average length against the average width of the whole kernel without any broken part should not be less than 3.2:1. Hom Mali rice should have an amylose content of not less than 13% but not more than 18% by weight and have moisture content of 14% by weight.

(Source: Thailand)

1006.30.30

GLUTINOUS RICE

The predominant characteristic of glutinous rice, a generally starchy rice, is its sticky glue-like consistency. It tends to cling together when cooked, and is used mainly for rice dumplings, rice cakes and rice balls. Its appearance is characterized by chalk-like opaque grain.

1006.30.50

BASMATI RICE

Basmati rice is a variety of long, slender-grained fragrant rice. It has a typical pandan-like (*Pandanus amaryllifolius* leaf) flavour caused by the aroma compound 2-acetyl-1-pyrroline. Basmati grains contain about 0.09 ppm of this aromatic chemical compound naturally, a level that is about 12 times more than non-basmati rice varieties, giving basmati its distinctive spicy fragrance and flavour.



Picture 1. Basmati Rice

(Source: Indonesia)

1006.30.60

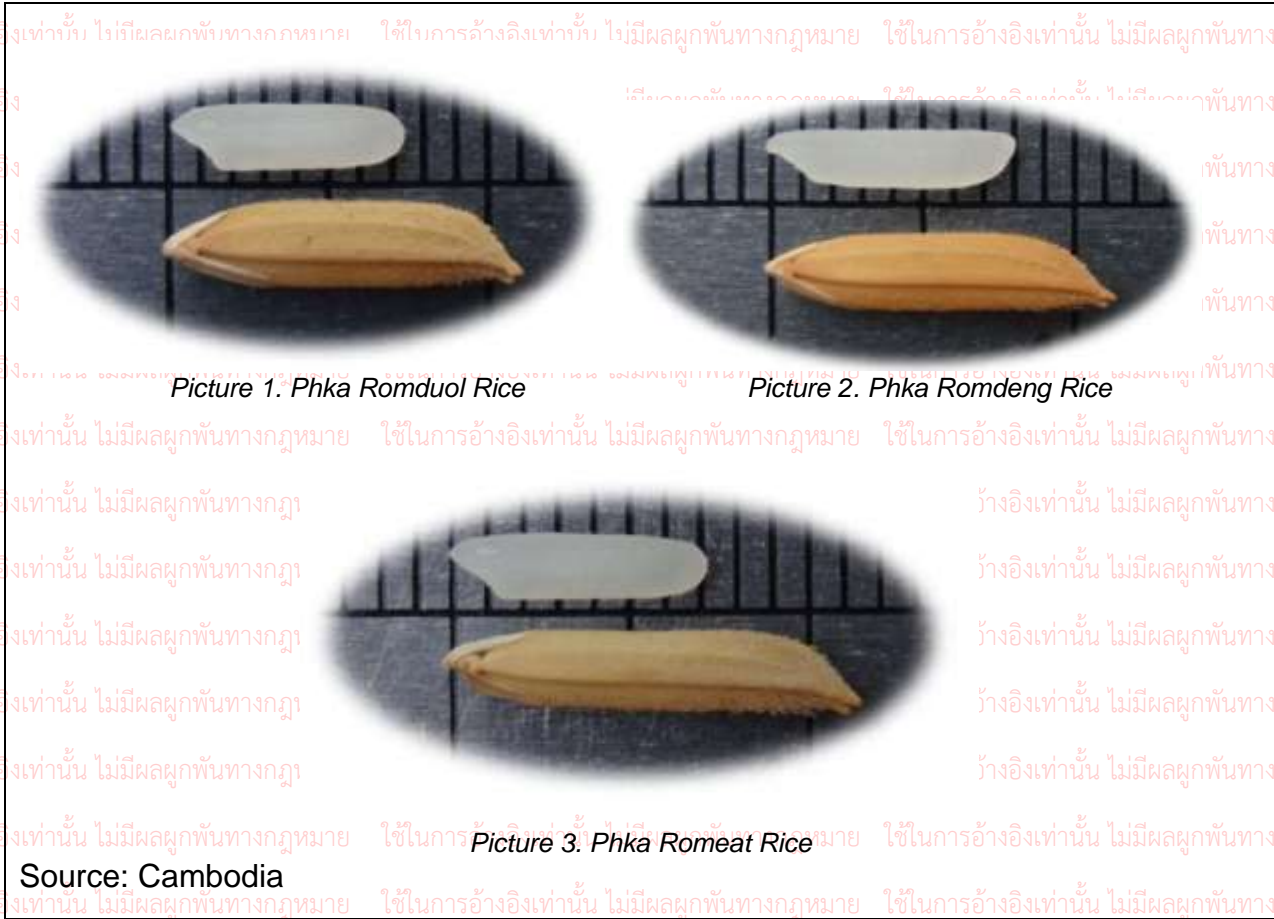
MALYS RICE

Malys rice (*Oryza Sativa L.* also known as “Malys Angkor rice”) refers to premium aromatic wet-season photo period-sensitive rice varieties, of which the grain is having a strong natural, unique scent. It is usually extra well-milled, and the kernel is extra-long, equal to or longer than 7 mm. (Ratio between the length and the thickness is not less than 3.5).

Amylose content of Malys rice is not less than 13.8% but not more than 15.2% by weight. Moisture content is not more than 14% by weight. Its purity is not less than 92% within the maximum amount of yellow and chalky kernel are 0.1% and 3.0%.

Malys rice of this AHTN line is limited to the following varieties:

No	Scientific Name
1	<i>Oryza Sativa L.var Phka Rumduol</i>
2	<i>Oryza Sativa L.var Phka Rumdeng</i>
3	<i>Oryza Sativa L.var Phka Romeat</i>
4	<i>Oryza Sativa L.var Somaly</i>



Picture 1. Phka Romduol Rice

Picture 2. Phka Romdeng Rice

Picture 3. Phka Romeat Rice

Source: Cambodia

1006.30.70

OTHER FRAGRANT RICE

Fragrant rice, also known as aromatic rice, is a type of premium rice which has a natural fragrance and characteristic aroma. Fragrant rice generally has a medium to long grain shape. Example of fragrant rice varieties included here are Ambemohar, Sen Kra-ob, Sen Pidao, Phka Chansensor, etc.

(Source : Indonesia)

1006.40.10 **1006.40.90**

BROKEN RICE

Broken rice is a by-product of the rice milling industry. From the nutritional point of view, broken rice is as good as whole rice. However, broken rice has a low economic value as compared to whole rice.



Picture 1. Broken rice

Broken rice, of a kind used for animal feed

Generally, broken rice is of poor quality due to the presence of husks, bran, grit, stones and clay particles. Broken rice can be marketed as animal feed. Physically, feed grade broken rice is easily identifiable by its appearance, based on its mixed content of broken polished rice (white colour), bran, husks (brownish colour) and grit, stones and clay particles (blackish colour).

For the purposes of AHTN classification this product is classified as broken rice of a kind used for animal feed of subheading 1006.40.10.

The quality of broken rice can be improved by re-milling to separate the polished broken rice from the husks, bran and other impurities. It can then be marketed for human consumption.



Picture 2. Broken rice

Broken rice suitable for human consumption

For the purposes of AHTN classification this product is classified as other broken rice of subheading 1006.40.90.

(Source: Malaysia)

CHAPTER 11

1101.00.11

FORTIFIED WHEAT FLOUR

Fortified wheat flour is a powder made from the endosperm of wheat grain, for example, of the species *Triticum aestivum* L. (club wheat) or *Triticum compactum*, a mixture of both or containing one or more of the following nutrients/fortificants: Thiamine, Riboflavin, Folic Acid, Iron, Zinc or other elements.

For the purposes of determining the permitted nutrient/fortificant, this heading only covers those wheat flour which are regarded as "fortified" by the competent national authorities.

(Source: Indonesia)

CHAPTER 12

1207.10.10

PALM NUTS SUITABLE FOR SOWING/PLANTING

Palm nuts suitable for sowing/planting should be accompanied by a certificate issued by the relevant authorities in the exporting country that they are of a quality suitable for sowing/planting.



Picture 1. Palm nuts suitable for sowing



Picture 2. Palm Nuts



Picture 3. Selecting high quality oil palm seeds



Picture 4. Oil palm nursery stock

(Source: Malaysia)

1211.90.13

RAUWOLFIA SERPENTINA ROOTS

Rauwolfia roots are roots of plants in the *Apocynaceae* family. Roots of this plant, i.e, *Rauwolfia serpentina* roots or Rauwolfia roots, produce the alkaloid reserpine which is the essential ingredient in many medicines for the treatment of mental illness and hypertension.



Picture 1. Rauwolfia root

1211.90.95

AGARWOOD (GAHARU) CHIPS

Agarwood, also known as oud, oodh or agar, is a dark resinous heartwood that forms in *Aquilaria* and *Gyrinops* treespecies in Southeast Asia, with Indonesia, Malaysia, Vietnam, Cambodia, Thailand, Laos and Papua New Guinea.This resin is produced as a result of pathological or wounding processes. Trees, ocassionally become infected with a parasite mould secrete a fragrant, protective oil into wounded areas (roots, branches or sections of the trunk), which gradually become harder and dark brown to black. The heartwood (central part of a tree, which is darker in color than the sapwood) is relatively light and pale color before infection. Normally harvesters would cut only the infected parts or cutting down the tree. Agarwood (dark brown /black parts) can be traded in many forms, from large lumps of wood to woodchips, wood powder or sawdust,leaves for tea, distilled oil and manufactured products such as incense and perfumes.

Gaharu tree species	
1.	<i>Aquilariamicrocarpa</i>
2.	<i>Aquilariamalaccensis</i>
4.	<i>Aquilariamicrocarpa</i>
5.	<i>Aquilaria. beccariana</i>
6.	<i>Aquilariacummingiana</i>
8.	<i>Gyrinopsversteegii</i>



Picture 1. Dried agarwood



Picture 2. Dried agarwood

(Source: Malaysia)

1211.90.97

BARK OF PERSEA (PERSEA KURZII KOSTERM)

“Persea Kurzii Kosterm” (*Lauraceae*) is an aromatic tree with a thick bark. It is generally found in dry evergreen forests and dry dipterocarp forests in Southeast Asia. Its bark is used mostly in making joss sticks.

(Source: Thailand)

1212.21.11

EUCHEUMA SPINOSUM

Scientific name/Genus

Eucheuma spinosum is a genus of red algae (*Rhodophyta*)

Dimension, color, special identification

Has rounded cylindrical or compressed thallus , irregular branches, has a little spike spreading in all of thallus. It can be red, reddish, brown, and yellowish green. Dimension (mature seaweed) is around 20-30 cm



Picture 1. Fresh

Picture 2. Dried

(Source: Indonesia)

1212.21.12

EUCHEUMA COTTONII

Scientific name/Genus	<i>Eucheuma cottonii</i> is a genus of red algae (<i>Rhodophyta</i>)
Dimension, color, special identification	Has rounded cylindrical or compressed thallus, irregular branches (di-tricotomus), and also has blue nodule and spines. It can be red, reddish brown, yellowish green. Dimension (mature seaweed) is around 20-30 cm



Picture 1. Fresh

Picture 2. Dried

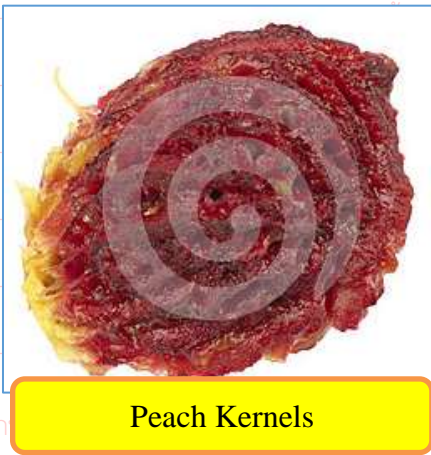
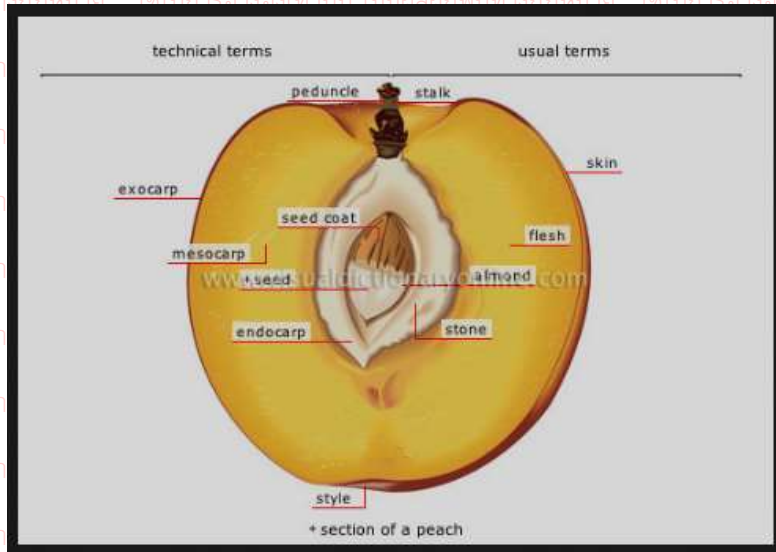
(Source: Indonesia)

1212.99.10

STONES AND KERNELS OF APRICOT, PEACH (INCLUDING NECTARINE) OR PLUM

A stone fruit, also called a drupe or pits, is a fruit with a large "stone" inside. The stone is sometimes called the seed, but that is a mistake, the seed is inside the stone. Prunus is

a genus of trees and shrubs, which includes the plums, cherries, peaches, nectarines, apricots and almonds. The fruit from this genus are commonly called the stone fruit.





Plum stones



Nectarine stones

(Source: Malaysia)

CHAPTER 13

1302.39.11

1302.39.12

SEMI REFINED AND REFINED POWDER CARRAGEENAN



Picture 1. Refined Carrageenan (RC) and Semi-Refined Carrageenan (SRC) Powder
In powder form, RC is whiter than SRC



Picture 2. Refined Carrageenan and Semi-Refined Carrageenan
Diluted in fresh water, RC is clearer than SRC

SRC Manufacturing Process

Semi-Refined Carrageenan Process



Picture 3. Manufacturing Process of Semi-Refined Carrageenan

RC Manufacturing Process

Refined Carrageenan Process



Picture 4. Manufacturing Process of Refined Carrageenan

(Source: Indonesia)

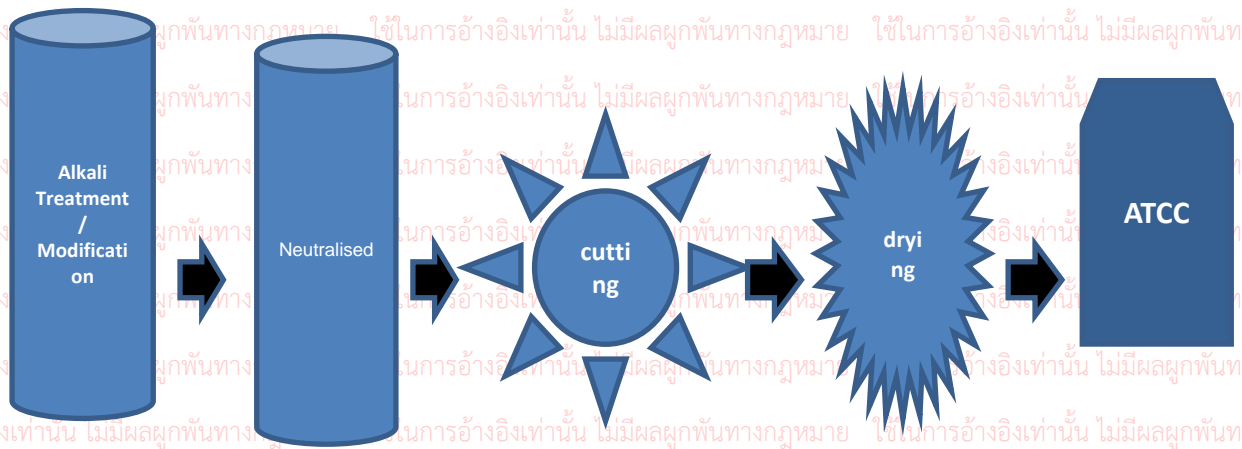
1302.39.13

ALKALI TREATED CARRAGEENAN CHIPS (ATCC)

Alkali Treated Carrageenan Chips are chips made from seaweed, mostly of the species *Euchema cottoni*, which have been treated with alkali to modify the structure of the seaweed, and extract the carrageenan, then chopped prior to drying.



Picture 1. Chips of alkali treated carrageenan.



Picture 2. Manufacturing Process of Alkali Treated Carrageenan Chips

(Source: Indonesia)

CHAPTER 14

1401.20.21

1401.20.29

SPLIT-CORE RATTANS

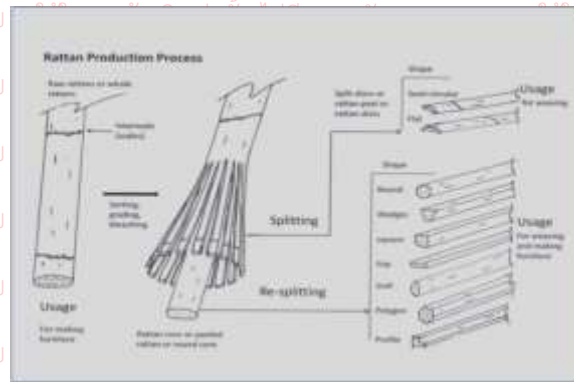
Rattan canes are divided longitudinally by peeling to produce weaving and binding material. The peeling process involves removing the hard outer skin from the core. The core then undergoes splitting processes to produce various cross-sectional shapes and sizes of rattan for weaving or furniture making.



Whole Rattan of various diameter sizes
Internodes or scales



Picture 1. Split-core rattans



Picture 2. Rattan production process

(Source: Malaysia)

1401.20.30

SPLIT-SKIN RATTANS

Split-skin rattan is produced by the splitting of the outer skin of the rattan into strands. Split skin rattan in thicknesses of 1.5 – 3 mm is used for weaving, while such rattan in thicknesses of 4 – 6 mm is used for plaiting. Please see SEN under 1401.20.21 – 1401.20.29 for splitting process.

(Source: Malaysia)

CHAPTER 15

15.11

PALM OIL AND ITS FRACTIONS, WHETHER OR NOT REFINED, BUT NOT CHEMICALLY MODIFIED

Palm oil is obtained from the flesh of the oil palm fruit (*Elaeisguineensis*) and has a balanced ratio of unsaturated and saturated fatty acids. Typically, it contains 40% by volume of oleic acid (mono-unsaturated fatty acid), 45% by volume of palmitic acid and 5% by volume of stearic acid (saturated fatty acid). Crude palm oil is deep orange-red in colour due to the high content of natural carotenes. Fractionation separates oil into liquid, called palm olein, and solid fractions, called palm stearin.



Liquid portion

Solid fraction

(Source: Malaysia)

1511.90.41 1511.90.42 1511.90.49

FRACTIONS OF UNREFINED PALM OIL

These are solid fractions or liquid fractions obtained by fractionation of crude palm oil by several industrial methods, for example crystallization at controlled temperatures. These fractions have not undergone processing in order to improve their physical characteristics.

1513.11.10

VIRGIN COCONUT OIL

Virgin Coconut Oil (VCO) is the natural oil obtained by mechanical extraction from fresh, mature kernel of the coconut.

There are two main methods of producing virgin coconut oil:

1. “Dry process” In this method, the grated fresh coconut meat is dried first, then the oil is pressed out of the dried coconut meat, followed by settling and filtration of the extracted oil. This method allows for easier mass production of virgin coconut oil.

2. "Wet process". In this method, the "coconut milk" is extracted from grated fresh coconut meat without drying the meat first. The oil is then further separated from the water. Methods which can be used to separate the oil from the water include boiling, fermentation, refrigeration, enzymes and mechanical centrifuge.

Virgin coconut oil is commonly used as a moisturizer for skin and hair and for human consumption.



Picture 1. Sample of Virgin Coconut Oil

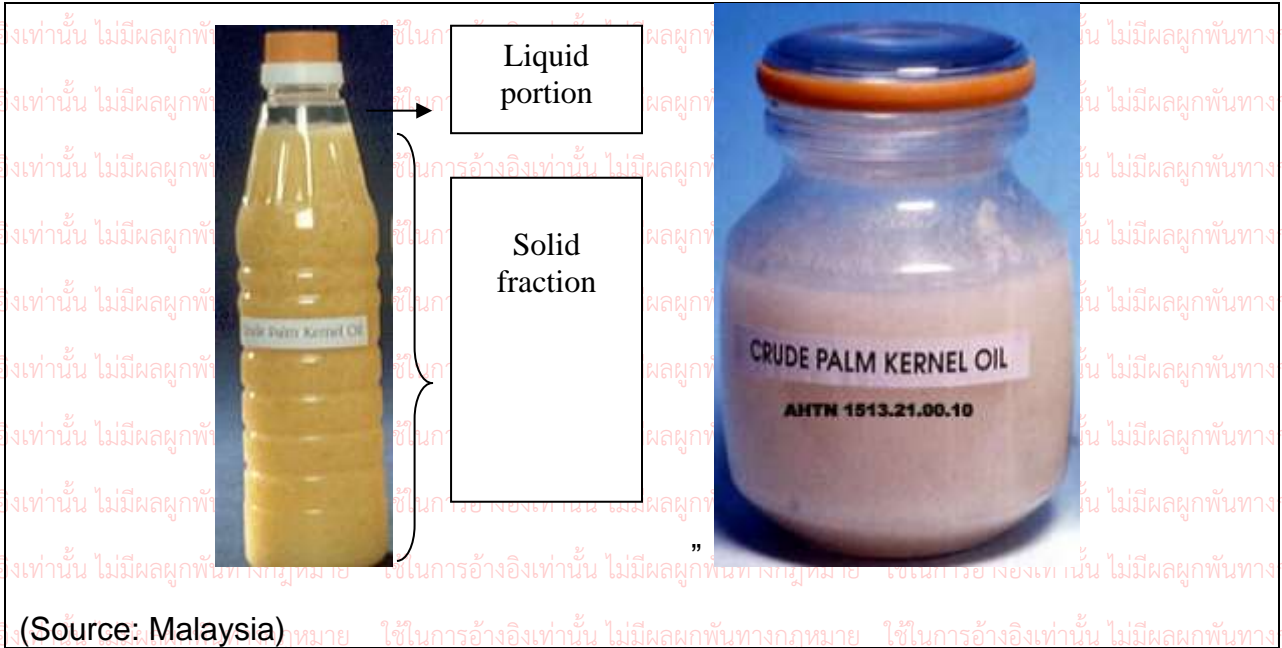
(Source: Philippines)

1513.21.10 1513.29.11 1513.29.13 1513.29.91
1513.29.95 1513.29.96

PALM KERNEL OIL AND FRACTIONS THEREOF

The oil palm produces two types of oils: crude palm oil from the fibrous mesocarp and crude palm kernel oil from the kernels. Although both oils originate from the same fruit, palm oil is chemically and nutritionally different from palm kernel oil.

Palm kernel olein is the clear liquid component of palm kernel oil obtained from fractionation. Palm kernel stearin is the more solid fraction of the palm kernel obtained from fractionation.



1515.90.11	1515.90.12	1515.90.19
ILLIPE NUT OIL		
This oil is obtained from the seeds of the Tengkwang tree of the species <i>Shorea spp.</i> It is used as a raw material in the manufacture of cosmetics, perfumery and traditional medicines.		

1516.20.34	1516.20.35	1516.20.46	1516.20.47
HYDROGENATED FATS OF OIL PALM			
Hydrogenated Fats of Fruit of the oil palm, palm kernel, and their fractions shall be classified in these headings provided they meet following condition as follow:			
	Product	Iodine Value (IV), Wijs	
	Hydrogenated Palm Oil	Max 46	
	Hydrogenated Palm Olein	Max 50	
	Hydrogenated Palm Stearin	Max 25	
	Hydrogenated Palm Kernel Oil	Max 15	
	Hydrogenated Palm Kernel Olein	Max 15	
	Hydrogenated Palm Kernel Stearin	Max 3	
(Source: Indonesia)			

CHAPTER 16

1602.31.91

MECHANICALLY DEBONED OR SEPARATED MEAT

See SEN under subheadings 0207.14.91 and 0207.27.91.

1602.90.90

PREPARATIONS OF BLOOD

Preparation predominantly of blood is obtained from slaughtering domestic animals. The collected blood hygienically processed for direct human consumption or converted into blood meal.

Blood consists predominantly of protein, water and fat and is sometimes called "liquid meat". Normally animal blood sold in the form of paste, puree that contain blood, salt and water, etc.



Picture 1. Pork Blood, in container

(Source: Malaysia)

1604.14.91

PRE-COOKED TUNAS

Pre-cooked tunas include tunas steamed at a temperature of around 90°C, cleaned of skin and bones without any additional ingredients, frozen. This product is an intermediate raw material, used for canned product.

(Source: Indonesia)

CHAPTER 17

1702.90.51

1702.90.59

PALM SUGAR

Palm sugar is a type of sugar made from 100% sap (liquid released by the stem of the cut flower) Palm family tree (family *arecaceae*) such as coconut (*Cocos nucifera*), sugar palm or palm (*Arenga pinnata*), palm or siwalan (*Borassus flabellifer*), nipah (*Nypa fruticans*), oil palm (*Elaeis guineensis*).

Sap is processed by boiling it on the stove. After the caramelization process, the boiled sap can also be solidified in the form of bricks or cakes. Sap can also be formed into crystals by slowly cooling it while stirring.

(Source: Indonesia)

1704.90.91

SUGAR CONFECTIONERY, SOFT, CONTAINING GELATIN

This subheading covers sugar confectionery, not containing cocoa, other than chewing gum, with a relatively soft texture. These products contain gelatin as the gelling agent and may be coated with sugar and other ingredients. This confectionery is sometimes referred to as “gummies” or “gummy candy”.



CHAPTER 18

1801.00.10

FERMENTED COCOA BEANS

- **Color:** reddish brown to blackish brown with a little purple.
- **Aroma:** smelling sour vinegar.
- **Taste:** bitter and non-dominant taste, after drying process, the beans will have chocolate flavour.
- **Texture:** slightly crumbly, hollow or easily broken.

General composition:

- **Water content** ≤ 7%

- **Fat:** ±51.28%

- **Protein:** ±39.04%

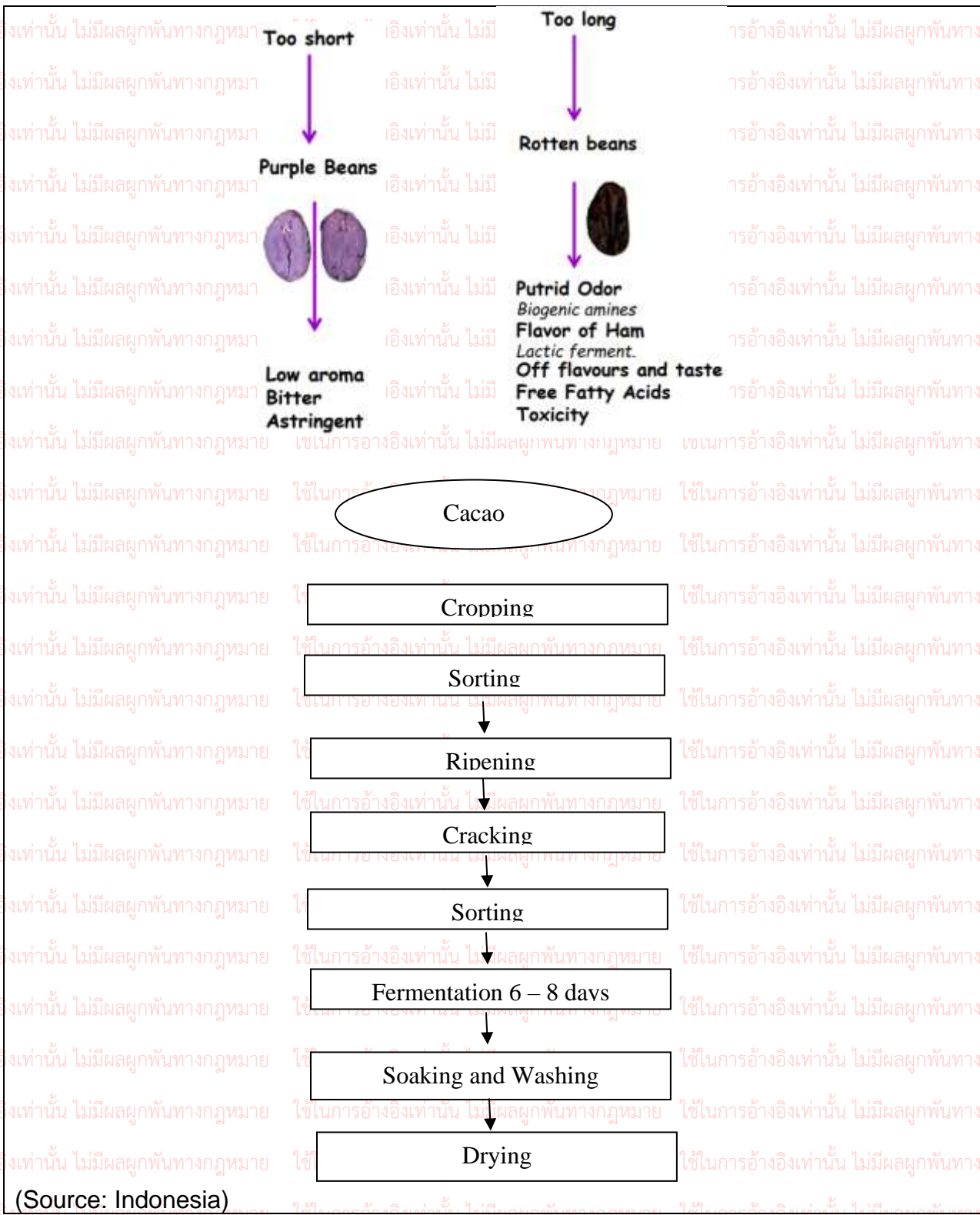
- **pH:** ±5.15

- **Total acid:** ±1.98%

- **Reduced sugar content:** ±0.84%



Picture 1. Fermented Cocoa Beans



(Source: Indonesia)

CHAPTER 19

1901.10.91

1901.90.11

1901.90.91

MEDICAL FOODS

Medical foods are foods that are specially formulated and intended for the dietary management of a disease that has distinctive nutritional needs that cannot be met by normal diet alone. Medical foods are distinct from the broader category of foods for special dietary use and from traditional foods that bear a health claim.

In order to be considered a medical food the product must, at a minimum:

- be a food for oral ingestion or tube feeding (nasogastric tube);
- be labeled for the dietary management of a specific medical disorder, disease or condition for which there are distinctive nutritional requirements; and
- be intended to be used under medical supervision.

(Source: Wikipedia)

1901.90.31

FILLED MILK

A product originating from raw milk, in any form, whether or not condensed, evaporated, concentrated, powdered, dried or desiccated which has been blended or compounded with any fat or oil other than milk fat.

(Source: Viet Nam)

1905.32.10

WAFFLES

A type of dough or cake batter pressed between two waffle patterned irons and cooked to give a distinctive shape and specific characteristics.



Picture 1. Waffles

(Source: Indonesia)

1905.32.20

WAFERS

A type of crunchy thin biscuit (not baked in an oven but heated between pattern irons) made from thin batter and may or may not be in layers.



Picture 1. Wafers

(Source: Indonesia)

รูปพื้นทางกฎหมาย
รูปพื้นทางกฎหมาย
รูปพื้นทางกฎหมาย
รูปพื้นทางกฎหมาย
รูปพื้นทางกฎหมาย

CHAPTER 20

2002.90.10

TOMATO PASTE

Tomato paste is a concentrated tomato puree containing 25% to 40%, by weight, of salt free solids. It is obtained through a hot pulping process. The pulp is concentrated in single, double or triple-effect vacuum evaporating units to the desired concentration. The concentrated product is then pasteurised at 90°C for 2-3 minutes.

Tomato paste is a thick paste that is made by cooking tomatoes for several hours to reduce moisture, straining them to remove the seeds and skin, and cooking them again to reduce them to a thick, rich concentrate.

Depending on its manufacturing conditions, tomato paste can be the basis for making ketchup or reconstituted tomato juice.



Picture 1. Tomato Paste

(Source: Viet Nam)

2005.20.11

2005.20.19

POTATO IN STICKS FORM

Potato sticks (also refers to chips in *British English*) are strips of potato which have been further prepared and intended for consumption as French-fries when cooked (as opposed to the American usage of the word chips for potato crisps).





(Source: Viet Nam)

2007.99.30

MANGO PURÉE

It is prepared by boiling sieved mango pulp with or without the addition of sugar, to a thick consistency. Mango purée differ from jams in having a higher proportion of fruit and a smoother consistency.

Mangoes are processed into mango purée for re-manufacturing into products such as nectar, juice, jam, jelly and dehydrated products. The mango purée can be preserved by chemical means, or frozen, or canned and stored in barrels.

Pictures 1 and 2. Mango purée, in container

(Source: Philippines)

2009.89.20

COCONUT WATER

Coconut water is the clear liquid inside coconuts (fruits of the coconut palm). It is a naturally free of fat and low in sugars and calories. It is rich in essential electrolytes and vitamins.



Picture 1. Coconut water

Source : <https://www.indiamart.com/proddetail/tender-coconut-water-14690219173.html>

(Source : Indonesia, Philippines and Thailand)

2009.89.30

COCONUT WATER CONCENTRATE

Coconut water concentrate is made from coconut water by reducing the water content, and has a slight brown colour. It can also be processed into frozen form, and can be pure or may contain other ingredients such as stabilizer and preservative agent.



Picture 1. Coconut water concentrate



Picture 2. Frozen coconut water concentrate

CHAPTER 21

2103.90.21

SHRIMP PASTE INCLUDING BELACHAN (BLACHAN)

Belachan (also written belacan or blachan) is a condiment prepared from fermented shrimps. It is brownish in colour and normally presented in a block form. It has a pungent smell. Belachan is used as an ingredient in many dishes.

2104.10.11

2104.10.91

SOUPS AND BROTHS AND PREPARATIONS THEREFOR SUITABLE FOR INFANTS OR YOUNG CHILDREN

Soup shall be the liquid food product composed of meat, fish, vegetable, cereal or any combination of these and may contain salt or any other food. Soup may contain permitted colouring substance, permitted flavouring substance, permitted flavour enhancers and permitted food conditioner.

Broth is a liquid food preparation (soup), typically consisting of water, in which bones, meat, fish, cereal grains, or vegetables have been simmered (Simmering is a food preparation technique in which foods are cooked in hot liquids kept just below the boiling point of water (about 94° C).

BABY BROTH

Bone Broths, Supplements

This formula was developed, in collaboration with infant nutrition specialists and the Food Innovation Center, to provide a nutrient dense and safe food option for your child that does not contain any synthetic or genetically modified ingredients. It offers a very similar collection of the nutrients found in breast milk that are necessary for your baby's healthy body, brain and immune system development. Many families have enjoyed mixing it with goat or cow's milk as well. This baby food should be gently heated just until liquid to make it bottle ready. It is sold by the quart and made fresh to order. It can be frozen for up to 3 months.

Ingredients: Beef bone broth*, liver*, whey*, lactose (essential for brain development)*, cod liver oil*, probiotics, coconut oil*, nutritional yeast*, gelatin* and vitamin C.



Picture 1. Baby Broth of Meat

BABY SOUP OF VEGETABLES

Vitagermine: **BABYBIO BABY SOUP, pumpkin soup - parsnip. - 20 cl bottle**

Detailed description

Indications: infant feeding from 4 months.

Cons-indications: infant less than four months.

Precautions: stored in a refrigerator after 48 hours.

Composition: vegetables 50% (20% pumpkin, 15% parsnip, onion, tomatoes), 5% rice, thyme, water, qs 100% excipients.

Advice: do not add salt.



Picture 2. Baby Soup of Vegetables

VEGETABLE SOUP WITH TURKEY

Ingredients: turkey 8%, vegetables 35% /carrots, peas, potatoes, tomato puree, onion / vermicelli, full cream milk powder, sunflower oil, parsley, celery, water.

Does not contain: gluten, salt, colorants, preservatives or artificial flavours.

Weight: 190 gr



Picture 3. Vegetable Soup with Turkey

(Source: Malaysia)

2106.90.73

FORTIFICANT PREMIXES

Fortificant premixes are the products used for adding one or more essential nutrients (vitamins such as B1, B2, B6, niacin (B3), folate (B9), and minerals such as iron, zinc and calcium) to food, whether or not they are normally contained in the food, for the purpose of preventing or correcting a demonstrated deficiency of one or more nutrients in the population or specific population groups (Food and Agriculture Organisation (FAO)/World Health Organisation (WHO) 1994).

(Source: Viet Nam)

2106.90.93

COCONUT MILK, WHETHER OR NOT POWDERED

Coconut milk: White liquid which is extracted from coconut flesh, and has water content approximately 60%. It may or not contain food additives, such as stabilizer, thickener, and emulsifier.
Coconut milk powder: White-powdered preparation resulting from removal of water content from coconut milk. It may or not contain food additives, such as filler, stabilizer, and emulsifier.



Pictures 1. Sample of products of coconut milk, in container



Picture 2. Coconut milk

(Source: Indonesia)

Picture 3. Coconut milk powder



2106.90.95

SERI KAYA

Seri kaya (also known as kaya or sangkaya) is a paste or spread and is caramelized or yellowish to brownish in colour. The ingredients include sugar, eggs, coconut milk, flour, starch, salt, colouring and flavouring. It should be noted that this product does not contain “seri kaya” fruit (*Annona squamosa*).

2106.90.96

MEDICAL FOODS

Please see SEN under subheadings 1901.10.91, 1901.90.11 and 1901.90.91.

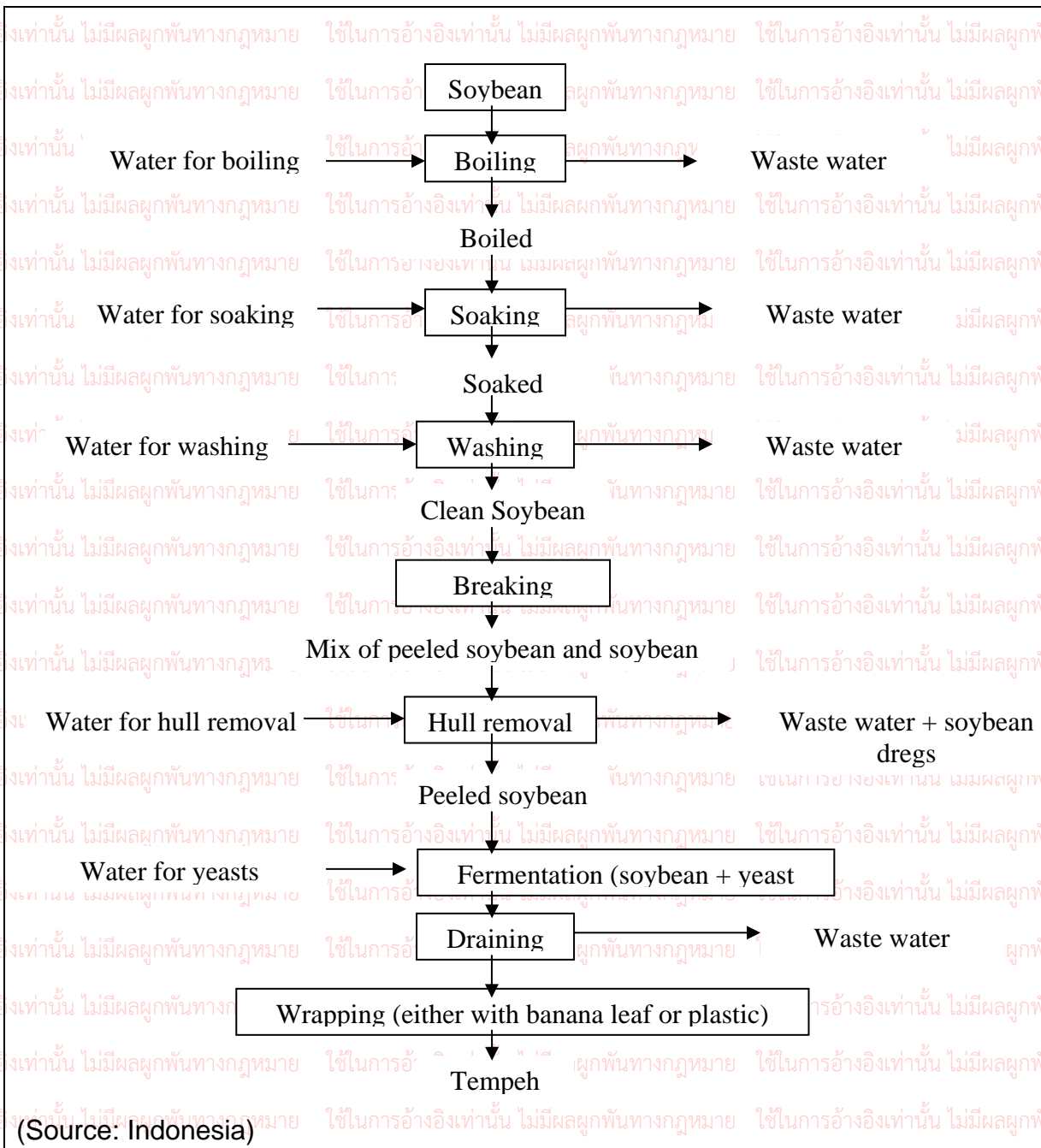
2106.90.97

TEMPEH

Tempeh is a product of cooked soybean in a cake form made by controlled natural fermentation process.



Pictures 1. Tempeh



2106.90.98

FLAVOURING PREPARATIONS

Flavouring preparations are mixtures of a single or several flavouring substances or extracts with starch, flour or other food substances acting as a carrier. They are premixed for ease of application to food or beverages and function primarily to impart a characteristic taste.

(Source: Philippines)

CHAPTER 22

2202.99.30

COCONUT WATER BASED DRINKS

Beverages with coconut water as the main raw material and which may contain added sugar and other food additives such as stabilizer, thickener, and emulsifier.



(Source: Indonesia)

2203.00.11

2203.00.19

STOUT OR PORTER

Stout is a strong dark beer brewed from roasted malt or barley. Porter is a dark brown bitter beer brewed from charred or browned malt.

2206.00.20

SAKÉ

Saké, also known as *Nihonshu*, *Seishu*, is an alcoholic beverage of Japanese origin that is made from rice, koji, yeast and water using fermentation and filtration processes. It is sometimes called "rice wine" but the brewing process is more like rice beer as fermentation process converts starch into sugars. When *Saké* is brewed, the conversion from starch to sugar and from sugar to alcohol occurs simultaneously during the fermentation process.

Koji is steamed rice that has had koji-kin (*kojimould*), *Aspergillus Oryzae*, cultivated onto it. It is used in saké brewing to break down the starch molecules into sugar molecules that can be used as food by the yeast cells, which convert sugar to alcohol and carbon dioxide. Since rice is milled, there is no husk and therefore no enzymes, so malting (as in beer brewing) is not possible. Koji provides those enzymes to create the sugars for fermentation. This cultivation of koji-kin mould onto steamed rice to create koji itself is essential in the saké brewing process.

(Source: Singapore)

2206.00.31

2206.00.39

COCONUT PALM TODDY

Toddy is a kind of alcoholic beverage made from natural fermentation of coconut palm sap. The word toddy is a general term in India subcontinent, Southeast Asia and South America which refers to wine from coconut palm. It has a sweet taste and white cloudy appearance. The sap is extracted by cutting the flower bud and collected once or twice daily using a pot attached to the tree. One tree may yield typically 100 litres of palm sap. Produced and consumed daily as refreshing drink in all tropical regions where palm tree grows.

Generally contains 7 % v/v- 10% v/v alcohol and may contains permitted preservatives.

Below are some examples of palm wine derived from sap of different varieties of palm trees:

	Name of Palm Tree	Country Origin	Name of fermented alcoholic beverages
1	Chonta palm (<i>Juania australis</i>)	Ecuador India	Chontaruru Chullo
2	Raphoa palm (<i>Raphia hookeri</i>)	Ghana Nigeria	Doka Emu
3	Date palm (<i>Phoenix dactylifera</i>)	India Libya India	Kallu Lagbi Tari, Varuni
4	Wild date palm (<i>Borassus flabellifer</i>)	Ghana	Yabra
5	Coconut palm (<i>Cocos nucifera</i>)	Philippines India N. E. Thailand Malaysia	Lambanog, toddy, Tuba Toddy, Nareli Nam-tau -mau Toddy, Nira
6	Oil Palm (<i>Elaeis guineensis</i>)	Mexico Ghana Sri Lanka	Tuba Nsafufuo Ra
7	Nipah palm (<i>Nipa fructicans</i>)	New Guinea and Pacific Island India	Saguero Sendi
8	Sugar Palm, Black Sugar Palm or Gomuti (<i>Arenga saccharifera</i>)	Philippines Malaysia Indonesia	Tuack, Tuak Tuwak

References

1. Fermented Foods of the World - A Dictionary and Guide by Geoffrey Campbell-Platt. Butterworth
(Source: Malaysia)

2206.00.41 2206.00.49
SHANDY
Shandy is a mixture of beer and lemonade or ginger beer (ginger beer is a non-alcoholic or mildly alcoholic effervescent drink made by fermenting a mixture of ginger and syrup).
(Source: Malaysia)

2206.00.60
WINES OBTAINED BY THE FERMENTATION VEGETABLES JUICES OR OF FRUIT JUICES, OTHER THAN JUICE OF FRESH GRAPES
The raw materials used for making alcoholic beverages are categorized into four types containing high concentration of natural sugar (sugary base) or containing carbohydrates that can easily be converted to sugars by enzymes (starchy base).
1) Fruits - such as pineapples, apricots, etc
2) Cereal or grain - such as barley, wheat, etc
3) Vegetable - such as potato, corn, etc
4) Others - such as sugar, honey, milk, sap of palm, etc
Heading 22.06 covers fermented alcoholic beverages other than of heading 22.03 (beer of cereal), 22.04 (wine of fresh grape) and 22.05 (flavoured wine of fresh grape).
Subheading 2206.00.60 cover wines obtained by the fermentation of vegetables juices or of other fruits, other than juice of fresh grapes (e.g fig, date or berry wines)
cover:
i. Wines from vegetables origin for examples sweet potato wines, pumpkin wines, corn wines and etc.
ii. Fruit wines other than wines of fresh grape for examples berry wines, melon wines, raisin wine etc. excluding alcoholic beverages obtained by fermenting juice of apples or pears (2206.00.10).



Pic 1 : Guava Wine and Watermelon Wine
Source of Image : <https://hiveminer.com/Tags/cebu%2Cwine>



Pic 2 : Pumpkin Wine and sweet potato wine
Source of Image : <https://hiveminer.com/Tags/cebu%2Cwine>

(Source: Malaysia)

2206.00.91

OTHER RICE WINE (INCLUDING MEDICATED RICE WINE)

Rice wine, other than sake, is the product of the alcoholic fermentation of rice or rice mixed with other grains. It may contain herbs and preservatives.



Picture 1. Medicated rice wine

(Source: Malaysia)

2208.90.10

2208.90.20

2208.90.30

2208.90.40

SAMSU

Samsu is a Chinese alcoholic beverage (whose manufacturing origin need not be China) distilled from grains such as rice or sorghum. The manufacturing process may include the addition of jaggery or molasses with yeast and water. Some examples of samsu are “ShaoJiu” or “Gao Liang Jiu”.

Medicated samsu is samsu with added herbs, lizards, insects, snakes, etc.

(Source: Singapore)

2202.10.20

ENERGY DRINK

Energy drink refers to beverage that contains a stimulant compound and other additives such as preservatives, stabilizers, etc.

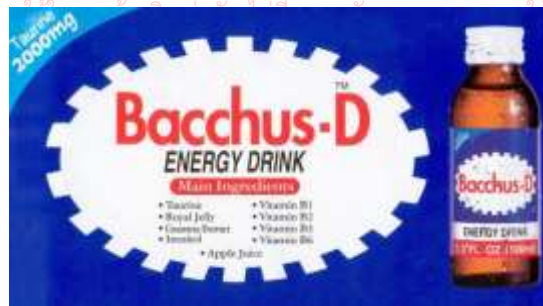
A stimulant compound consists of two or more substances such as:

- Caffeine
- Taurine
- Vitamin B complex, especially B₃, B₆, B₁₂, etc.,
- High carbohydrate

• and other stimulating substances such as Ginseng extract, Guarana, Herbal extract, Green tea extract, Ginkgo Biloba, Carnitine, etc.
 This stimulant compound purposely aims to make the consumers feel mentally awoken and energetic. It can be either carbonated or non-carbonated.



Picture 1. Example of product, carbonated energy drink



Picture 2. Example of product, non-carbonated energy drink

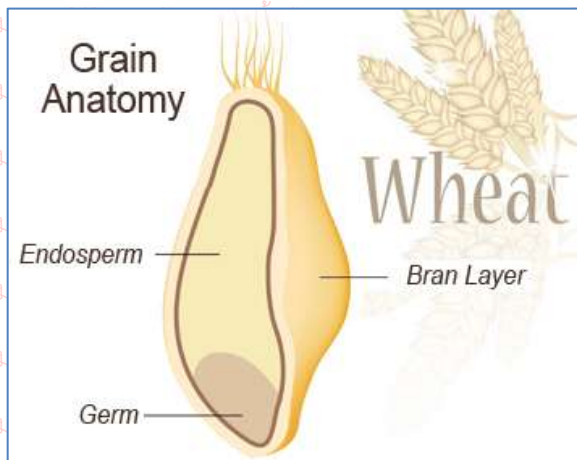
(Source: Cambodia)

CHAPTER 23

2302.30.10

WHEAT BRAN AND POLLARD

Wheat bran is the hard outer layer of a wheat grain. Wheat bran, a by-product of the dry milling of common wheat (*Triticumaestivum* L.) into flour, is one of the major agro-industrial by-products used in animal feedings. It consists of the outer layers (cuticle, pericarp and seed coat) combined with small amounts of starchy endosperm of the wheat kernel. Wheat bran is suitable for livestock feedings and very palatable to most classes of animals.



Picture 1. Anatomy of Wheat Grain



Pictures 2. Wheat brand, in container

Wheat Pollard is the powder leftover from flour millings. It is a high energy product of good viscosity, appearance and fineness. It is an excellent binding material used in manufacturing of pelletized feeds.



Pictures 3. Pollard, in container



Picture 4. Comparison between Wheat Bran and Pollard

(Source: Malaysia)

2304.00.10

DEFATTED SOYA-BEAN FLOUR, FIT FOR HUMAN CONSUMPTION

Defatted soya bean flour, fit for human consumption, is a processed product that contains moisture less than 8%, protein not less than 50%, fat less than 1%, and fiber less than 1%. Defatted soya bean flour has the dissolve index of Nitrogen not less than 70% and has the percentage passing through a sieve with the aperture size 100 mesh not less than 95%, which is regarded by the competent national authorities as being fit for human consumption.

(Source: Thailand)

2304.00.21

SOYA-BEAN MEAL, FIT FOR HUMAN CONSUMPTION

Soya-bean meal, fit for human consumption, is an oil-cake resulting from the extraction of soya-bean oil, which is regarded by the competent national authorities as being fit for human consumption and usually accompanied by a certificate of Non-GMO issued by the relevant authorities in the exporting country that they are fit for human consumption.

The product generally contains moisture not more than 12%, protein not less than 46%, fat less than 1.5%, fiber not more than 7% and ash not more than 6.5%.



Picture 1. Soya-bean and soya-bean powder

Source : Thailand

CHAPTER 24

2402.20.10

BEEDIES

Beedies consist of dried tobacco rolled into a stick, wrapped in a wild tendu leaf and held together with string. Usually sold in bundles of 20 to 25 sticks.

2402.20.20

CLOVE CIGARETTES

Clove cigarettes (commonly known as "Kretek") are cigarettes made with a blend of tobacco, cloves and flavours. The special ingredients in clove cigarettes are minced dried clove buds which are added to the tobacco blend and then processed either by machine or by hand.

(Source: Indonesia)

2403.19.11

2403.19.91

ANG HOON

Cut brown tobacco leaves with peanut oil added during manufacture. They are used to make hand-rolled cigarettes. Ang Hoon is not intended for the manufacture of cigarettes by power-operated machines.

2403.99.40

SNUFF, WHETHER OR NOT DRY

Snuff is a smokeless tobacco made from ground or pulverised tobacco leaves. It is inhaled or "snuffed" into the nasal cavity, delivering a swift hit of nicotine and a lasting flavoured scent (especially if flavouring has been blended with the tobacco). Traditionally, it is sniffed or inhaled lightly after a pinch of snuff is either placed onto the back surface of the hand, held pinched between thumb and index finger, or held by a specially made "snuffing" device.



Picture 1. Various Types of Snuff

(Source: Philippines)

2404.12.10

E-CIGARETTE LIQUID OR GEL

E-cigarette liquid or gel is the flavored liquid or gel that is used in e-cigarettes. It is usually made up of various ingredients such as nicotine, propylene glycol and water. Sometimes referred to as e-juice or vape juice, e-cigarette liquid or gel is often available in a range of nicotine strengths.

There is a great amount of variability in e-cigarette liquid or gel formulations due to fast growth and changes in the manufacturing designs of e-cigarette. The composition of the e-cigarette liquid or gel for additives such as nicotine and flavors vary across and within brands. e-cigarette liquid or gel come in many variations, including different nicotine strengths and many different flavors. The main ingredients are propylene glycol, glycerin, and flavorings; and most often, nicotine in liquid form. The liquid typically consists of a combined total of 95% propylene glycol and glycerin, and the remaining 5% being flavorings, nicotine, and other additives

E-cigarette liquid or gel can be made with or without nicotine, with more than 90% of e-cigarette liquid or gel containing some level of nicotine. The most regularly used base carrier chemical is propylene glycol with or without glycerin. E-cigarette liquid or gel containing glycerin and water made without propylene glycol are also sold.



Picture 1. Various types of e-cigarette liquid or gel

(Source: Philippines)

2404.91.10

NICOTINE CHEWING GUM

Nicotine gum is a type of chewing gum that delivers nicotine to the body. It is used as an aid in nicotine replacement therapy (NRT), a process for smoking cessation and quitting smokeless tobacco. The nicotine is delivered to the bloodstream via absorption by the tissues of the mouth.

The pieces are usually available in individual foil packages and come in various flavors. Nicotine content is usually either 2 or 4 mg of nicotine, roughly the nicotine content of one sixth to one third of a cigarette, with the appropriate content and dosage depending on the smoking habits of the user.

Alternative nicotine replacement products include the nicotine patch, nicotine pastilles/lozenges and the nicotine inhaler.



Picture 1. Sample of a nicotine chewing gum

(Source: Philippines)

2404.92.10

NICOTINE PATCH

A nicotine patch is a transdermal patch that releases nicotine into the body through the skin. It is used in nicotine replacement therapy (NRT), a process for smoking cessation.



Picture 1. Sample nicotine patch

(Source: Philippines)

CHAPTER 25

2501.00.91

WITH SODIUM CHLORIDE CONTENT MORE THAN 60 % BUT LESS THAN 97 %, CALCULATED ON A DRY BASIS, FORTIFIED WITH IODINE

Other salt with sodium chloride content more than 60 % but less than 97 %, calculated on a dry basis, fortified with iodine is salt intended for human consumption. Unlike table salt which is usually packed for retail sale and has been treated or added with other substances so that it will remain dry, this salt is usually imported in bulk.

(Source: Indonesia)

2501.00.93

WITH SODIUM CHLORIDE CONTENT 97 % OR MORE, CALCULATED ON A DRY BASIS

Other salt with sodium chloride content 97 % or more, calculated on a dry basis includes industrial grade salt which are used for industries which need salt with NaCl content of 97% or more calculated in a dry basis. Salt with sodium chloride content 97 % or more, calculated on a dry basis could be used as raw material for IV fluid, cosmetics and skincare products, food and beverages, chemicals etc.

(Source: Indonesia)

2515.12.10

2515.12.20

2516.12.10

2516.12.20

BLOCKS; SLABS

Blocks and slabs included in these subheadings are those which has not been worked beyond the stage of the normal quarry products and meet all the criteria to be classified under Chapter 25.

Blocks are roughly cut stones with one or more flat surfaces but unshaped. They are sawn into slabs for use in building construction.

Slabs are thin stones roughly cut from blocks into rectangular shapes (including squares). They generally measure not more than 3 cm in thickness.

Stones of heading 25.15 or 25.16 that do not fall within the measurements specified for slabs shall be considered to be blocks.

(Source: Philippines and Malaysia)

2529.10.10

POTASH FELDSPAR; SODA FELDSPAR

The feldspars are a family of silicate minerals which occur in igneous rocks. There are many different members of the feldspar group. Obviously, silicon and oxygen form the foundation for the group, but calcium, sodium, and potassium are also present. One of these elements is usually dominant, but most of the feldspars contain all 3 in varying amounts. It is the proportions of these 3 elements which help determines which specific feldspar is formed. The general formula, for the common feldspars, is $XAl_{(1-2)}Si_{(3-2)}O_8$. The X in the formula can be sodium, Na and/or potassium, K and/or calcium, Ca and/or barium, Ba. The following are some of the more common feldspar minerals.

Soda feldspars:

Geology Term	Chemical Name	Formula
1 Albite,	<i>Sodium aluminum silicate</i>	$NaAlSi_3O_8$
2 Oligoclase	<i>Sodium calcium aluminum silicate</i>	$(Na,Ca)(Al,Si)AlSi_2O_8$
3 Andesine	<i>Sodium calcium aluminum silicate</i>	$NaAlSi_3O_8 - CaAl_2Si_2O_8$



Albite
NaAl₃Si₃



Albite

Oligoclase

Andesine

Potash feldspars:

Geology Term	Chemical Name	Formula
1 Microcline	<i>Potassium aluminum silicate</i>	$KAlSi_3O_8$
2 Sanidine	<i>Potassium sodium aluminum silicate</i>	$(K,Na)AlSi_3O_8$
3 Orthoclase	<i>Potassium aluminum silicate</i>	$KAlSi_3O_8$

CHAPTER 26

2601.11.10

2601.12.10

HAEMATITE AND CONCENTRATES

Iron ore consists of rocks and minerals from which iron can be extracted. Iron ore is most often found in the form of haematite and magnetite, though, limonite, goethite and siderite types are also common. Basically most haematite ore has major advantage over other types like magnetite is its high iron content. That makes the iron extraction process much less costly and time consuming.

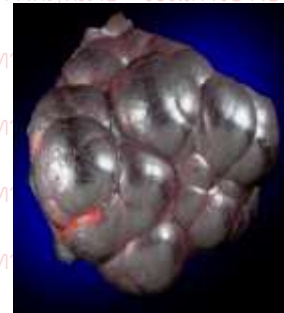
Concentration of the haematite ore is by removing impurities like soil etc. The process involves the crushing, screening and washing of ore.

Type of iron ore	Colour	Mohs hardness	Specific gravity	Formula	% of iron content
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Haematite	Black, gray to silver gray, brown to reddish brown, red	5–6	5.3	Fe_2O_3	70%
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Siderite Ore



Haematite Ore



Goethite Ore



Magnetite ore

(Source: Malaysia)

2614.00.10

ILMENITE ORES AND CONCENTRATE

Ilmenite is a very common black mineral (iron-black), heavy, metallic oxide minerals, composed of iron and titanium oxide (FeTiO_3), that is used as the major source of titanium. Ilmenite most often contain appreciable quantities of magnesium and manganese and the full chemical formula can be expressed as $(\text{Fe,Mg,Mn,Ti})\text{O}_3$. Untreated ilmenite ore has a TiO_2 content ranging generally from 10% to 40%. Concentration of the ilmenite ore is by removing impurities like soil etc. The process involves the crushing, screening and washing of ore.



(Source: Malaysia)

2620.99.10

SLAG AND HARDHEAD OF TIN

The process of extracting tin from tin ore varies according to the source of the ore deposit and the amount of impurities found in the ore. Tin ores are subject to the process of cleaning, screening and passed through a magnetic separator to remove any iron particle, resulting in tin concentrate that is about 70 – 77% by weight of tin. Smelting is a process in which tin concentrate is placed in a furnace, heated to about $1,400^\circ\text{C}$, and forms a slag along with crude tin. The residual slag containing tin and iron is known as hardhead. Tin hardhead contains about 75 – 85% by weight of tin and approximately 5 – 12% by weight of iron, together with other elements. Smelting is then carried out at temperatures of about $1,000 - 1,700^\circ\text{C}$, in which soda iron matte is separated to remove tin as metal with a low iron content.

(Source: Malaysia)

2621.90.10

CRUDE POTASSIUM SALTS OBTAINED IN THE SUGAR INDUSTRY FROM RESIDUES OF BEET MOLASSES

Molasses are the residue left after the crystallization of sucrose. Normally, molasses containing sugar such as sucrose, glucose and fructose. In addition it also contains such as vitamin (H and B) and mineral salts (calcium, potassium, oxalate, and chloride). In which it contains around 30%-50% of potassium oxide.

Crude Potassium can be obtained from molasses by process such as by removing of Potassium from Molasses by incineration, washing, ion exchange, solvent extraction and etc. In this process most of the sugar, vitamins have been left over and the remaining mostly are minerals that predominantly of potassium, calcium, magnesium, sodium. This crude potassium normally used as additive for animal feed or fertilizer.

On the other hand, potassium salt can be further refined by process of extraction and ion exchange or crystallization into high purity potassium salt normally fall under heading chapter 28.

(Source: Malaysia)

CHAPTER 27

2701.12.10

COKING COAL

This product is bituminous coal, of a kind used to produce coke. Coking coal refers to coal with a quality that allows the production of a coke suitable to support a blast furnace charge. Its gross calorific value is generally greater than 23,865 kJ/kg (5 700 kcal/kg) on an ash-free but moist basis. The property that really sets coking coals apart from other coals is caking ability, which is the specific property required in order to make coke suitable for making steel.

Coking coal generally has the following range of specifications:

Parameters	Basis	Range	
		Min	Max
Total Moisture	%(ar)	6	11
Inherent Moisture	%(adb)	0,7	2
Ash	%(adb)	6,6	10,5
Volatile Matter	%(adb)	18,5	37
Fixed Carbon	%(adb)	54,4	70,2
Sulphur	%(adb)	0,35	1,65
Calorific Value	(Kcal/kg)	7780	8300
Maximum Fluidity	ddpm	18	15000
CSN		7	9,5
Crucible Swelling Number		6	9



Picture 1. Coking Coal

(Source: Viet Nam)

2707.99.10

2710.19.30

CARBON BLACK FEEDSTOCK

Carbon black feedstock is the residue of the fractional distillation of coal tar or petroleum oil, usually having a high carbon-hydrogen ratio. It is used to produce carbon black.

(Source: Viet Nam)

27.10

LIGHT OIL, MEDIUM OIL AND HEAVY OIL

For the purposes of heading 27.10:

- a. "Lights oils" means oils of which 90% or more by volume (including losses) distills at 210° C (ASTM D 86 method);
- b. "Medium oils" means oils of which less than 90% by volume (including losses) distills at 210° C and 65 % or more by volume (including losses) distills at 250° C (ASTM D 86 method);
- c. "Heavy oils" means oils of which less than 65 % by volume (including losses) distills at 250° C by the ASTM D 86 method or of which the distillation percentage at 250° C cannot be determined by that method.

(Source: Malaysia)

2710.12.31

2710.12.39

AVIATION SPIRIT, OF A KIND USED IN AVIATION PISTON-ENGINE

Aviation spirit is used to propel aircrafts. It is a high quality motor gasoline prepared especially for aviation piston engines, and is also known as Avgas, with additives, having the RON ranges between 87-145 depends on its grade/specification which assure performance under flight conditions. Aviation spirit of aviation turbine engines is known as aviation turbine fuel or Avjet . The type of fuel is specific to the type of engines, not the aircraft. Aircrafts including the helicopter generally use two type of engines:

1. **PISTON ENGINES** - similar to automobile engines which are used in small-airplane and helicopter engines , and run on high quality gasoline which is refined and filtered to be much cleaner than automotive gasoline. This type of fuel is typically 100 octanes (Low Lead).
2. **TURBINE ENGINES** - usually called a jet engine and by design is similar to the engines of commercial airlines and medium to large helicopters.

rich mixture rating) which results in a multiple numbering system. It is common practice to designate the grade by just the lean mixture performance.

Grade	Octane no.	The octane rating of the fuel tested to "aviation lean" standards	The octane rating of the fuel tested to the "aviation rich" standard	Identification colour :	Uses
91/96 (Avgas 91)	91	91	96	brown	Fuel dyes aid both ground crew and pilots in identifying the proper fuel grade For military
100/130 (Avgas 100)	100	100	130	Green	Mostly replaced by 100LL
High lead 100LL (Avgas 100LL)	100	100	130	Blue	Most commonly used worldwide aviation gasoline
Low lead 115 /145 (Avgas 115)	115	115	145	Purple	Limited batches are produced for special events such as unlimited air races
Other grade	80/87, 82UL , 85UL , 91/96, 91/96UL , B91/115, G100UL , 100SF , 108/135	has been phase-out or limited availability or for testing purposes or for certain type of aircraft engine (vintage plane)			



(Source: Malaysia)

2710.12.50

WHITE SPIRIT

White spirit is a clear colourless solvent with very low water solubility and a characteristic odour (odour threshold generally 0.5 – 5 mg/m³). The most common variety of white spirit is a mixture of saturated aliphatic and alicyclic C7–C12 hydrocarbons with a content generally 15 to 20% (by weight) of aromatic C7-C12 hydrocarbons and a boiling range of 130 to 230° C. The C9-C12 hydrocarbons (aliphatics, alicyclics and aromatics) generally constitute more than 80% (by weight) of the hydrocarbons in the product.

2710.12.70

OTHER SOLVENT SPIRITS

Solvent spirits are obtained by fractionating crude oil. The distillation range is relatively narrow (the differential of the initial boiling point and dry point do not exceed 100° C).

The key differences between solvent spirits and automotive gasoline are:

- Automotive gasoline has a wider boiling range: 40 to 215° C;
- In most cases, automotive gasoline is a mixture of several components;
- Since solvent spirits are straight-run fractions, their aromatic content (0.01% for special boiling point spirit and 15% for low aromatic solvent spirit, by weight) is significantly lower than that of gasoline (around 22% by weight).

Solvent spirits are mainly used as industrial solvents in paint, paper, rubber and adhesive production. They may also be used for extraction in some pharmaceutical applications. Solvent spirits are not, and cannot be used, as fuel for internal combustion engines.

2710.12.80

REFORMATES

Reformates are products obtained from the reforming process, which runs at high temperatures with a catalyst to convert paraffinic and naphthenic hydrocarbons into high octane stocks, primarily aromatics suitable for blending into finished petrol (gasoline).

2710.19.41

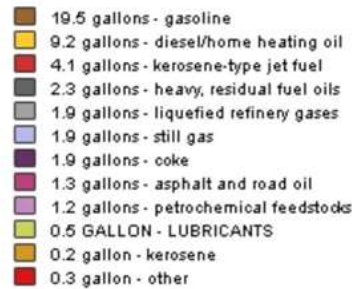
LUBRICATING OIL FEEDSTOCK

Lubricating oil feedstock, sometimes called lubricating base oil or lubricating mineral base oil, is the name given to lubrication grade oils initially produced from refining crude oil. In general, only 1% to 2% of a barrel of crude oil is suitable for refining into lubricating base oil.

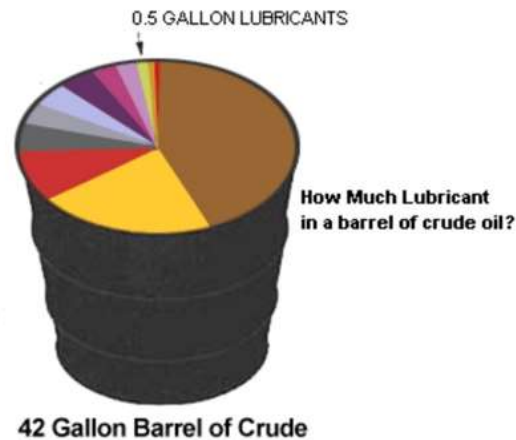
Lubricating base oil is typically defined as clear bright appearance oil with a boiling point range between 250 and 565° Celsius, consisting of hydrocarbons with 18 to 40 carbon atoms. This oil can be either paraffinic or naphthenic in nature depending on the chemical structure of the molecules.

Crude Oil Products

Thanks to "processing gains" at today's refineries, a 42 gallon barrel of crude oil can make an average of 44.2 gallons of products, but very little of it is lubricant.



- Source American Petroleum Institute



Lubricating oil is produced by "Blenders and Compounders" who combine lubricant base oil with 1% to 20% application-specific chemical additives, which enhance the performance of the lubricant base oil. The "compounded" Lubricating oil is then packaged and sold to end users.

(Source: Malaysia & Thailand)

2710.19.45

LUBRICATING OIL FOR TEXTILE

Lubricating oil for textile is usually made of mineral oil with added additives. Generally, it is a clear liquid with no smell which when dissolved in water will form milky white solution. Mineral oil content of lubricating oil for textile included here shall be more than 70%.

Example of lubricating oil for textile is Coning Oil, an emulsified mineral oil used for textile fibers in processing the finished yarn.

(Source: Indonesia)

2710.19.89

OTHER MEDIUM OILS AND PREPARATIONS

Oils and preparations of which less than 90% by volume (including losses) distills at 210° C and 65% or more by volume (including losses) distills at 250° C (ASTM D86 Method).

2711.21.10

NATURAL GAS, OF A KIND USED AS A MOTOR FUEL

Natural gas consists primarily of methane and sometimes contains significant quantities of heavier hydrocarbons, i.e., ethane, propane, butane and pentane, and other substances (carbon dioxide, nitrogen, helium and hydrogen sulphide) which have to be removed prior to use as a motor fuel.

Natural gas of a kind used as a motor fuel is used in ignition engines for motor vehicles and is widely known as compressed natural gas or CNG. It is generally regarded as a cleaner alternative to petrol (gasoline), characterized by a pressure of 200 – 250 bar, and comply with ISO standard 15403.

(Source: Singapore)

2715.00.10

POLYURETHANE TAR COATINGS

This product consists of a mixture of tar with polyurethane in black solid form. It is to be melted before application to large underground pipes for protection from corrosion.

CHAPTER 28

2803.00.41

CARBON BLACK OF A KIND USED IN RUBBER PROCESSING

Standard Classification System for Carbon Blacks Used in Rubber Products

Formula weight	: 12 (as carbon)
Physical state	: Solid, powder or pellet
Flammable limits (vapour)	: Lower Explosive Limit (LEL) : not applicable Upper Explosive Limit (UEL) : not applicable
Lower limit explosion	: 50 g/m ³ (carbon black in air)
Minimum ignition temperature	: > 932° F (> 500° C)
VDI 2263 (German), BAM Furnace Godbert-Greenwald Furnace	: > 600° F (> 315° C)
Minimum ignition energy	: > 10 J
Burn velocity	: > 45 seconds. not classifiable as "highly flammable" or "easily ignitable"
VDI 2263, EC Directive 84/449	
Flammability classification (OSHA)	: Combustible solid
Solubility	: Water : insoluble Solvents : insoluble
Colour	: Black
Reference: ASTM D1765-14	

(Source: Indonesia)

2809.20.31

2809.20.32

2809.20.39

PHOSPHORIC ACID AND POLYPHOSPHORIC ACIDS, FOOD GRADE

Food grade phosphoric acid is obtained by subjecting technical grade phosphoric acid to additional processing steps such as precipitation and filtration of arsenic and other toxic substances. It contains less than 1 mg/kg of arsenic, 20 mg/kg of iron, 10 mg/kg of fluoride and 3 mg/kg of lead. It is used in foods and carbonated beverages as an acidulant and sequestrant, in sugar refining, in gelatine manufacturing and in yeasts.

2833.22.10

ALUMINIUM SULPHATE, COMMERCIAL GRADE

Contains a maximum of 0.5% iron by weight. Commercial grade aluminium sulphate is made directly from bauxite. It is used in the paper industry, for the clarification of processed industrial water, as a mordant for dyes, etc.

2835.25.10

CALCIUM HYDROGENORTHOPHOSPHATE (“DICALCIUM PHOSPHATE”), FEED GRADE

Feed grade dicalcium phosphate is used as an additive in feeds to supplement the calcium requirements of animals. Arsenic or lead content should not exceed 30 ppm.

(Source: Philippines)

2835.31.10

SODIUM TRIPOLYPHOSPHATE, FOOD GRADE

Sodium Tripolyphosphate/Sodium Tripolyphosphate (STPP) is a white inorganic powder with a molecular formula $Na_5P_3O_{10}$. Sodium Tripolyphosphate can be produced by the reaction between Disodium phosphate (Na_2HPO_4) and Monosodium phosphate (NaH_2PO_4) as follows:



- Food grade Sodium Tripolyphosphate can be used as an additive in meat processing, marine fish processing, and shrimp freezing, etc.
- The specifications of Food Grade Sodium Tripolyphosphate, containing Arsenic maximum 3 mg/Kg and Lead maximum 2 mg/Kg.

(Reference: Chemical Food Codex and the American Water Works Association Standard B503-11)

(Source: Indonesia)

2836.50.10

CALCIUM CARBONATE, FOOD OR PHARMACEUTICAL GRADE

Contents : Min 98.0% $CaCO_3$
 Shape : White crystalline powder; odourless
 Solubility : Practically insoluble in water and ethanol

Tolerance of permitted impurities depends on the national legislations. The following details are only indicative:		
- Heavy metal	≤ 30 mg/kg	
- Alkali metal and magnesium	: ≤ 5 mg	
- Arsenic		
- Substances which are not soluble in hydrochloric acid	: 0.01 mg/kg : ≤ 0.1%	
Drying shrinkage	≤ 2%	
(Source: Indonesia)		

CHAPTER 29

2917.39.20

OTHER PHTHALIC COMPOUNDS OF A KIND USED AS PLASTICISERS AND ESTERS OF PHTHALIC ANHYDRIDE

Phthalates or phthalate esters are manufactured by reacting phthalic anhydride with alcohol(s) that range from methanol and ethanol (C1/C2) up to tridecyl alcohol (C13), either as a straight chain or with some branching. They are divided into two distinct groups, with very different applications, toxicological properties, and classification, based on the number of carbon atoms in their alcohol chain. They are mainly used as plasticizers (substances added to plastics to increase their flexibility, transparency, durability, and longevity). The most widely used phthalates are di(2-ethylhexyl) phthalate (DEHP), diisodecyl phthalate (DIDP), and diisononyl phthalate (DINP). DEHP is the dominant plasticizer used globally in PVC due to its low cost. The general chemical structure for phthalates being R and R' as general placeholders.



(Source: Philippines)

2941.10.11

2941.10.19

AMOXICILLIN AND ITS SALTS, NON-STERILE

Non-sterile amoxicillin and its salts can be distinguished from the sterile one by its **packing**.

Non-sterile: Plastic bag in drum/bucket, hard carton, double layer PE bag, or other non-sterile bulk packing.

Sterile: Sterile can, aluminium foil or other sterile packing.

CHAPTER 30

3004.90.20

CLOSED STERILE WATER FOR INHALATION, PHARMACEUTICAL GRADE

This product consists of sterile water prepared from water for injection that has been sterilized and suitably packed in glass or plastic containers and labelled to indicate that it is used for inhalation therapy and not for parenteral administration.



(Source: Philippines)

3004.90.65

3004.90.72

3004.90.98

HERBAL MEDICAMENTS

Herbal medicaments are medicaments recognized by the competent national authorities of the importing country as being effective medicaments in the treatment or prevention of specific diseases or ailments. They must, at a minimum, be:

- packaged in dosage form,
- labeled for the treatment or prevention of specific diseases or ailments, and
- consist of two or more herbal products as the active ingredients.

They cannot merely be for the maintenance of general health or well-being.

(Source: Viet Nam)

3004.90.81

3004.90.82

3004.90.89

OTHER MEDICAMENTS FOR THE TREATMENT OF CANCER, HIV/AIDS OR OTHER INTRACTABLE DISEASES

These are medicaments which are solely formulated for patients with cancer, heart ailments, Human Immune-deficiency Virus (HIV)/Acquired Immune Deficiency

Syndrome (AIDS) or HIV/AIDS, renal failure or other lingering illnesses and used by the patient as maintenance to suppress the patients' condition at its present level or prevent possible complications. These include antineoplastic medicines, dialysis solutions and preparations, chemotherapy solutions, and cardiovascular drugs.

3005.90.10

BANDAGES

There are two types of bandages :

1. **Gauze bandages:** These are narrow strips of woven fabric, about 1 m in length, (not narrow woven fabrics of 58.06) presented in retail sale packs for securing or tying down medical dressings or similar fabric pads over wounds.
2. **Crepe bandages:** These are narrow knitted fabrics, made by knitting over rubber threads to create a stretchable strip, presented in retail sale packs, for supporting or immobilising wounded or sprained limbs.



Pictures 1. Bandages

(Source: Indonesia)

3005.90.20

GAUZE

Gauze is a thin fabric with a loose, open weave, whether or not containing pharmaceutical substances. Gauze not presented as medicaments can be found in Heading 58.04, where the EN provides a detailed explanation. The same fabric when presented for retail sale, generally in sterile packs, are considered as gauze in Chapter 30.

CHAPTER 31

3103.11.10

3103.19.10

SUPERPHOSPHATES, FEED GRADE

Feed grade superphosphates are used as additives in feeds to supplement the mineral requirements of animals for example phosphorus and calcium. Arsenic or lead content should not exceed 30 ppm.

(Source: Philippines)

3103.90.10

CALCINED PHOSPHATIC FERTILISERS

Natural phosphates which have been calcined or heat-treated for the removal of impurities.

CHAPTER 32

3204.11.10

DISPERSE DYES, CRUDE

Crude disperse dyes are intermediate disperse dyes without dispersing agents.

3207.20.10

ENAMEL FRITS

These are fusible ceramic mixtures used to make glazes and enamels for dinnerware and metallic surfaces, such as for kitchen stoves and metal-based bathroom basins and tubs.



3208.10.11

3208.20.70

3208.90.11

3208.90.21

VARNISHES (INCLUDING LACQUERS), OF A KIND USED IN DENTISTRY

Varnishes for dental use, including fluoride varnish, are based on polyesters, acrylics, vinyl polymers, or other polymers. Varnishes function as a protective barrier between the dentin and the restorative dental material. They minimize the ingress of oral fluids at the restoration-tooth interface. They are applied in thin layers, and the solvent evaporates. They have no mechanical strength and provide no thermal insulation.

(Source: Indonesia)

3208.10.20

3208.20.40

3208.90.30

3209.10.50

3210.00.91

ANTI-FOULING AND/OR ANTI-CORROSSIVE PAINTS FOR SHIPS' HULLS

These paints are area specialized coatings applied - mostly to the hulls of ocean going ships and boats (and the surfaces of other structures that would be submerged) to inhibit the growth of subaquatic and aquatic organisms (such as barnacles and algae) that attach to the hull, and thereby affect the vessel's performance and durability.

They too are produced from synthetic or natural polymers dispersed or dissolved in non-aqueous media (Heading 3208) or in water (Heading 3209) but essentially contain

toxic ingredients (biocides) such as cuprous oxide, copper thiocyanate and tributyltin, and in certain cases, enzymes.

Certain anti-fouling paints that are designed for use above the waterline (such as on the deck and the super-structure), water is used as the solvent.

(Source: Viet Nam)

3209.10.40

LEATHER PAINTS

Leather paints are specialized coatings applied on leather. They are based on mixtures of mineral or organic pigments and polymer based film forming agents dissolved in solvents. Leather paints make a thin and soft film on the surface of leather so that the surface will not crack when bent. They are used to change the color and decorate the surface of the product and to protect the leather.

(Source: Viet Nam)

3215.11.10

ULTRA-VIOLET CURABLE INKS

Ultra-violet curable inks are printing inks used for the manufacture of brochures, labels and other printed matter which are used with a printing machine utilizing ultra-violet rays or light to dry or cure the ink. This type of ink does not dry by mere evaporation.

3215.11.20

3215.19.10

SOLID INK IN ENGINEERED SHAPES FOR INSERTION INTO APPARATUS OF SUBHEADING 8443.31, 8443.32 OR 8443.39

Solid ink is a technology used in computer printers and multifunction devices. Solid ink technology utilizes solid ink sticks instead of the fluid ink or toner powder usually used in printers. During printing, the stick is heated to melting point and the ink is then transferred to the paper to produce the printed image. It produces more vibrant colors than other methods, is easier to use, can print on a wide range of media, and is more environmentally friendly due to reduced waste output. The sticks are non-toxic and safe to handle.



Picture 1. Examples of Solid Ink in Engineered Shapes

(Source: Philippines)

3215.90.70

INK OF A KIND SUITABLE FOR USE WITH DUPLICATING MACHINES OF HEADING 84.72

Ink for duplicating machine of hectograph type and stencil duplicating machines.

Hectrograph ink using gelatin or spirit duplicator that have been improved using stencil duplicating inks which are in the form of either paste or semi-viscous. These inks have almost replace the conventional hectrograph ink because of ease of application, cleanliness and better water and light fastness property. This type of printing is called mimeograph also known as stencil printing or cyclostyling printing. In this process a stencil is cut by rupturing the stencil paper on a typewriter or using a stylus in order to permit the ink to pass through and copies are made on a duplicating machine either by drum type or twin cylinder type. The ink is be contained inside the drum or cylinder and pass through a porous blanket into the stencil from where it is pass on the paper, forming letters/figures as was made on the stencil.

General formulation for duplicating ink is as follows:

- pH : not more than 7
- Viscosity between 25 -30 posies
- Lamp black : 10.5%
- Violet toner: 1.10%
- Alumina hydrate: 3.8%
- Long varnish: 3.1%
- Castor oil : 65.5%
- Lanolin: 16.0%

Typical formulation of cycloctyling inks varied from one to another is as follows:

- Paraffin wax hard: 3%
- Montain wax bleach :3%
- Violet blue : 5%
- Milori blue :6%
- Montan wax crude: 15%
- Lamp black ;20%
- Mineral oil: 32%
- Castor oil: 16%

The duplicating ink should posses the following characteristics:

1. Good colour strength- the pigment and toner must be sufficient to yield a dense black print but should not exceed the amount needed, since an excess may clog both blanket and stencil

2. It should show no lateral spread of the oil- Lateral spread of the oil in the paper makes the printing indistinct and causes a deposit of oil or dye around the letters.
3. The oil should penetrate the sheet sufficient to dry but not go through the sheet which make the printing visible from the reverse side
4. The ink must be of such consistency and composition that will flow freely at any temperature at which it may be used must not too thin as this would flood the blanket and stencil and cause smudging.
5. It must not dry in the machine nor corrode the metal part of the machine
6. It must have no adverse effect on the material of which the stencil is made.

Writing ink

As a comparison to writing ink, writing ink is a fluid form consisting of suspension of solution prepared from dyes, gum, spirit alcohol and water and used for the ink meant for writing by pen. Generally all fountain pen ink which are washable made of acid or direct dyes, dry fast and pass the flow from the nib of the pen very smoothly.

The general formulation of such washable inks is as follows:

The term washable writing ink indicate that the colour of the ink on clothing can be easily remove by washing

- Distilled water: 1000 ml
- Phenol : 1.00 gm
- Blue Dye–ink blue crystal : 7 gm
- Hydrochloric acid 3.25 ml

The general formulation of permanent ink is as follows:

- Distilled water : 75%
- Ethylene glycol : 10%
- Ammonium metavanadate : 3%
- Diluted caustic soda: 5%
- Sulphonamide: 5%
- Sodium lauryl sulphate: 5%
- Phthalocyanine: 2%



Duplicating ink



Stencil ink



STENCIL INK



Forming letters on stencil using typewriter



Cyclostyle duplicating machine



Magenta colour gloss offset hectograph printing ink



CHAPTER 33

3301.29.30

ESSENTIAL OIL OF CITRONELLA

Citronella oil is an essential oil obtained from the leaves and stems of citronella plant (*Cymbopogon nardus*), containing mostly of Geraniol.

(Source: Indonesia)

3306.10.10

POWDERS AND PASTES FOR DENTAL PROPHYLAXIS

Dental prophylactic pastes or powders should be sufficiently abrasive to remove effectively all types of accumulation (e.g., stains, oral debris, etc.) from the tooth surface without imparting undue abrasion to the enamel, dentin, or cementum. They act as a cleansing agent and endow a highly polished, aesthetic appearance to the hard tissue. Certain prophylactic pastes or powders contain sodium fluoride or stannous fluoride either mixed in with the abrasive or in a more complex buffered system.

3307.90.50

ARTIFICIAL EYE SOLUTIONS

An artificial eye (ocular prosthesis) is a plastic prosthesis used when an eye is surgically removed. Removal and cleaning on a regular basis keeps the eye socket mildly irritated. Artificial eyes generally do not need to be removed due to the risk of infection and irritation. Ocularists often recommended an aqueous lubricating solution, such as an artificial eye solution, in cases where the individual cannot close the eyelids all the way or the eyelids do not close during sleep.

Artificial eye solutions soothe irritation and discomfort that occurs with dry eyes. The temporary relief helps the eye feel moist and refreshed. The solution may contain active ingredients, such as hydroxypropyl methylcellulose (HPMC), carboxyl methylcellulose or polyvinyl alcohol, preservatives, such as sodium perborate or benzalkonium fluoride, as well as other inactive ingredients such as boric acid, calcium chloride dihydrate, phosphoric acid, sodium chloride, magnesium chlorate or zinc sulphate.

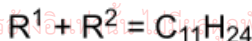
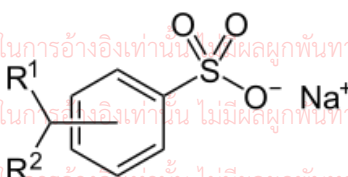
CHAPTER 34

3402.31.10

SULPHONATED ALKYL BENZENE

Sulphonated alkylbenzenes (alkylbenzene sulphonates) are a class of anionic surfactants consisting of a hydrophilic sulfonate head-group and a hydrophobic alkylbenzene tail-group. It refers to a family of branched chain organic chemical compounds that were used as detergents. They are regarded as "hard" detergents due to their resistance to biological degradation. These compounds have been widely replaced by linear alkyl sulfonate (LAS), which is environmentally friendly and easily biodegrades to simpler substances.

Below is the general structure of *Sodium dodecylbenzenesulfonates*, prominent examples of alkylbenzene sulphonates.



(Source: Philippines)

3402.39.10

SULPHATED FATTY ALCOHOLS

Sulphated fatty alcohols are derived from saturated and partly unsaturated high molecular alcohols ranging from C₁₂ to C₁₈. The saturated alcohols are manufactured by catalytic hydrogenation of the corresponding fat, e.g., coconut oil, followed by fractional distillation. Unsaturated alcohols, e.g., oleyl alcohol, are obtained from spermaceti, or by high pressure hydrogenation of tallow or suitable waxes.

Sulphated fatty alcohols have excellent emulsifying, wetting, lime soap dispersing and foaming properties. They also have high electrolyte tolerance.

(Source: Philippines)

CHAPTER 35

3503.00.41

GELATIN IN POWDER FORM WITH A BLOATING LEVEL OF A-250 OR B-230 OR HIGHER ON THE BLOOM SCALE

This gelatin powder consists of purified protein obtained either by partial acid hydrolysis (Type A) or partial alkaline hydrolysis (Type B) of collagen from animals (including pigs, cattle and fish). Typical specifications for capsule gelatin are set out in the publication "Pharmaceutical Capsules" published by the Royal Pharmaceutical Society of Great Britain.

3506.91.10

OPTICALLY CLEAR FREE-FILM ADHESIVES AND OPTICALLY CLEAR CURABLE LIQUID ADHESIVES OF A KIND USED SOLELY OR PRINCIPALLY FOR THE MANUFACTURE OF FLAT PANEL DISPLAYS OR TOUCH-SENSITIVE SCREEN PANELS

Optically clear free-film adhesives highly specialized adhesives offering superior clarity and excellent adhesion to various types of transparent substrates. These are specifically designed for use on moisture containing plastic substrates (e.g. PMMA, PC, etc.) with improved bubble resistance caused by substrate outgassing under higher temperature and humidity aging conditions.

Example of optically clear free-film adhesives specification

Products	3M™ Optically Clear Adhesives	
	8171CL	8172CL
Adhesive Type:	Acrylic	Acrylic
Adhesive Carrier:	None	None
Approximate Thickness:		
Release Liner	2.0 mil (50 micron) Clear Polyester	2.0 mil (50 micron) Clear Polyester
Adhesive	1.0 mil (25 micron)	2.0 mil (50 micron)
Release Liner	2.0 mil (50 micron) Clear Polyester	2.0 mil (50 micron) Clear Polyester

Available Lengths (subject to minimum order requirements):	
Maximum length - 3M™ Optically Clear Adhesives 8171CL / 8172CL	180 yards or 540 feet
Available Widths (subject to minimum order requirements):	
Maximum width - 3M™ Optically Clear Adhesives 8171CL / 8172CL	26 inches
Normal Slitting Tolerance	± 1/32 in. (0.8 mm)
Core Size	3.0 in. (76.2 mm)

Optically clear curable liquid adhesives are highly specialized liquid adhesives designed for use in flat panel displays and touchscreens where re-workability and non-yellowing properties are important. Their ability to cure in seconds enables faster processing, greater output and lower processing costs. When cured with focused-beam lamps, flood lamps, and spot lamps, they deliver optimum speed and performance for optical display lamination.

Example of optically clear curable liquid adhesives specification:

UNCURED PROPERTIES *		
Property	Value	Test Method
Solvent Content	No Nonreactive Solvents	N/A
Chemical Class	Acrylated Urethane	N/A
Appearance	Light Yellow Liquid	N/A
Soluble in	Organic Solvents	N/A
Density, g/ml	0.93	ASTM D1875
Viscosity, cP (20 rpm)	200 (nominal)	DSTM 502 [†]

ADHESION	
Substrate	
Glass	
PET	

These adhesives (i.e., optically clear free-film and optically clear curable liquid) are commonly made of polyurethane, silicone, or epoxy.

(Source: Philippines)

CHAPTER 36

3604.90.40

SIGNALLING FLARES

Signal flares burn with a bright red light as you hold them. They are used for signalling your exact location and are designed to be held in the hand, placed on the ground, or dropped overboard into the sea to give off huge plumes of colorful (generally orange or red) smoke.



(Source: Philippines)

3604.90.50

SIGNALLING ROCKETS

A signalling rocket, also known as a distress rocket, is a light signalling device usually fired high in the air so they can be seen from much greater distances than handheld flares (up to 40 km/25 miles or so in good visibility). The simplest ones are like fireworks, with two "stages" (separate explosive burning sections) and are entirely self-contained. You hit them on the base (or bang them on the ground or the deck of a ship) to strike an explosive percussion cap. This triggers the first stage, which propels the inner part of the flare into the air for several seconds. At that point, when the rocket has reached a height of maybe 100 m (300 ft) or so, the second stage ignites and the flare explodes with an intensely bright red or orange light. Some flares release red stars.



(Source: Philippines)

CHAPTER 37

3706.10.10 3706.90.10

NEWSREELS, TRAVELOGUES, TECHNICAL AND SCIENTIFIC FILMS

Newsreels are short documentary film containing current events and items of topical interest. After some time, they are considered historical documents, since they are often the only audiovisual record of historical and cultural events of the past.

Travelogues are documentary films that describe travel or record experiences of touring for the pleasure of travel.

Technical and scientific films are documentary films that describe or explain technological and scientific facts/aspects of various subjects.

(Source: Philippines)

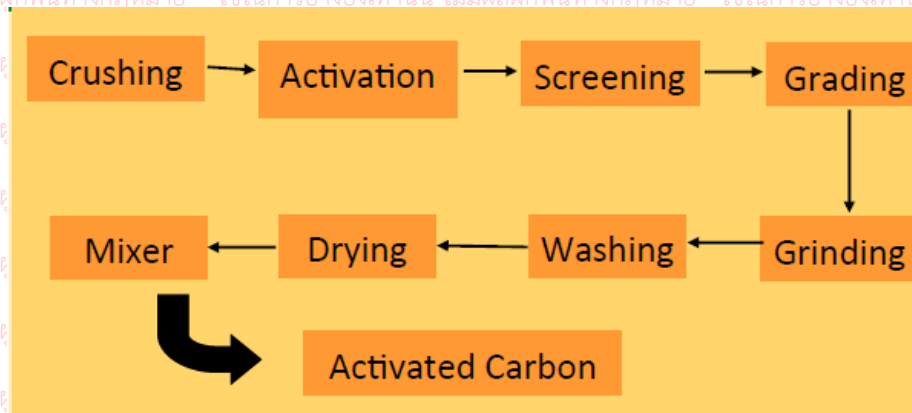
CHAPTER 38

3802.10.10

ACTIVATED CARBON BASED ON COCONUT SHELL CHARCOAL

Activated carbon based on coconut shell charcoal is the product obtained from coconut shell charcoal after activation. It is dark in color with pores that are extremely small (with higher density of micro-pores than other activated carbon), allowing higher capability for absorption. It has the highest hardness compared to other types of activated carbons, which makes it the ideal carbon for water purification.

Producing activated carbon from coconut shell charcoal generally involves the following process:



Process in producing activated carbon based on coconut shell charcoal

Activated carbon based on coconut shell charcoal may be in granular, powder, pelletized, extruded or fiber forms. Its general properties are as follows:

CHARACTERISTICS

TYPICAL VALUES

Apparent Density at room temperature, g/mL	0.52-0.56
Hardness No., % min.	92
Iodine Value, mg/g. min.	700
Moisture, % max.	3
Ash, % max.	4
CCl ₄ , % min	40
Benzene, % min.	23
Surface area, m ² /gram	1,244 – 1,768



(Source: Philippines)

3808.61.20

3808.62.30

3808.91.50

MOSQUITO REPELLENT MATS

Mosquito mats are made of cellulose fibres consisting of softwood pulp and cotton pulp blended into a wet web and dried to form a white porous baseboard. The baseboard is then impregnated with an active ingredient solution containing insecticides, such as allethrin or d-transprallethrin, colouring, a release control agent, stabiliser and organic solvent. They are to be used with electrical devices.



(Source: Malaysia)

3808.91.91

INSECTICIDES HAVING DEODORISING FUNCTION

This subheading cover insecticide preparation containing substances and deodorizing agents whether in liquid form, granules and other form.

Insecticides used to kill insects on contact. Insecticides that having deodorizing functions can either attract the insect to the substance or act as fragrant.

Example:



(Source: Malaysia)

3822.90.10

STERILISATION INDICATOR STRIPS AND TAPES

Gummed strips and tapes of paper, used with autoclave equipment, that when subjected to high temperature and pressure change in colour to indicate successful sterilisation.

3823.19.10

ACID OILS FROM REFINING

Palm Acid Oil (PAO) is a by-product from the chemical refining of palm oil. It consists mainly of Free Fatty Acid (FFA) (over 50%) and neutral oil, with 2-3% moisture and other impurities. It is very similar to palm fatty acid distillate (PFAD), but its FFA is generally lower. Except for some special uses, the relative proportion of FFA to neutral oil does not usually matter very much, as it does not affect its fitness for use. In most cases the smell and colour are more important. The main uses of PAO are in are animal feeds, in soap making and for distilled fatty acid production.

(Source: Indonesia)

3823.19.11

COCONUT ACID OIL FROM REFINING

Coconut Acid Oil (CAO) is the by-product from the chemical refining of crude coconut oil. It is in the form of amber liquid and is produced by transesterification of coconut oil with methanol in a presence of a catalyst, followed by separation (1st stage), acidulation, and separation (2nd stage). It is the cheaper alternative raw material in the manufacture of laundry soap, methyl ester, biodiesel, fatty alcohol, and anti-caking agents. It is also an ingredient for animal feeds. It generally has the following main properties:

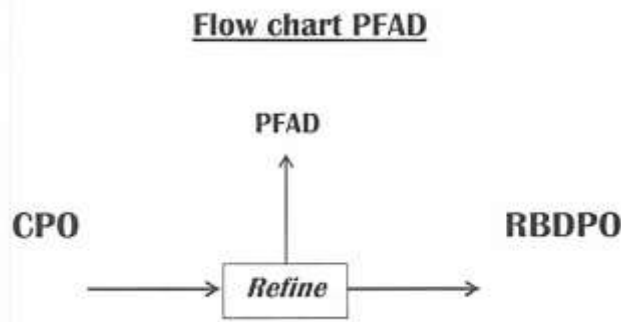
Properties	Test Method	Specification
Appearance	Ocular Inspection	Amber Liquid
Neutral Oil, %	In-house	9.8
Moisture Content, %	Karl Fischer	2.7
Free Fatty Acid, %	method AOCS Cd 3d-63	47.0

(Source: Philippines)

3823.19.20

PALM FATTY ACID DISTILLATE

Flow chart



Form and physical: semi solid at room temperature (tropical) and dark yellow colour.

The colour become orange until dark red if liquified above the melting point.

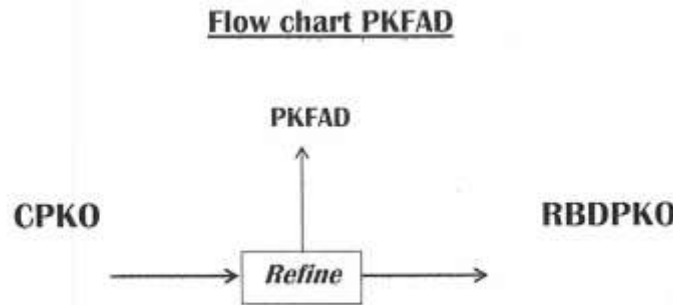
- Colour (Lovibond 5 ¼ inches Cell): min. 4 red
- Melting point : min. 16° C
- Free fatty acid (as palmitic acid) : min. 70%
- Iodine value : 30 - 60 gr I₂/100 gr

(Source: Indonesia)

3823.19.30

PALM KERNEL FATTY ACID DISTILLATE

Flow chart



Form and physical: liquid at room temperature (tropical) and dark yellow colour.

Colour (Lovibond 5 ¼ inches Cell): min. 3 red

Melting point : min. 12° C

Free fatty acid (as palmitic acid) : min. 50%

Iodine value : 7 – 27 gr I₂/100 gr

(Source: Indonesia)

3824.99.40

COMPOSITE INORGANIC SOLVENTS

Liquids that consist of two or more different inorganic compounds and are used to dissolve another substance without any change in chemical composition.

3824.99.50

ACETONE OIL

Acetone oil is the residual oil of complex composition obtained in the distillation of wood during production of acetone. It contains hydrocarbons, aldehyde, ether, etc. and a small amount of acetone (less than 5 %).

Acetone can be produced directly in the distillation of wood by conversion of acetate of lime. The distillation and decomposition is conducted in an iron retort, with constant stirring at high temperature. The distillation takes place in following stages:

- i. At first water containing a small percentage of acetone comes over;

ii. In the second stage, when the temperature of the mass has risen to 400° C, acetone oils are obtained. The dark brown, highly inflammable distillate separates into two layers on standing, the top layer consisting of the so-called "heavy acetone oils" and the lower of acetone and light acetone oils dissolved in water.

iii. In preparing pure acetone the crude distillate obtained, which contains higher ketones, aldehydes, etc., is treated with milk of lime and allowed to stand for some time. The supernatant oily layer is diluted with water and distilled in a column still, yielding as a main fraction a nearly pure acetone product (99° to 99.5°), which does not become turbid when mixed with water.

iv. Another distillation removes traces of aldehydes and various organic substances. The first and last fractions obtained in the above distillation, together with oils recovered from the clarification with milk of lime, are mixed and redistilled, yielding another portion of commercial acetone.

v. The residual oils are the so-called acetone oils of commerce, known as light oils, boiling between 75° and 130° C, and heavy oils boiling between 130° and 250° C. They may be used as denaturing agents, as a means for purifying raw anthracene, solvent and in secret manufacturing processes.

Reference:

i. **Chemical Method For Utilizing Wood** by E.F veitch

The typical example of acetone oil by Dow Chemical as material safety data sheet below.

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ใช้ในการอ้างอิง

MATERIAL SAFETY DATA SHEET

Product Name: Acetone Oil Effective Date: 06/25/2000
MSDS#: 2510 Page 1 of 14

Union Carbide gives each customer or recipient of this MSDS to study it carefully to become aware of and understand the hazards associated with the product. The reader should consult consulting references, reports or individuals who are experts in ventilation, toxicology, and fire prevention, as necessary or appropriate, to read and understand the data contained in this MSDS.

To promote safe handling, each customer or recipient should: 1) Notify its employees, agents, contractors and others whom it knows or believes will use this material of the information in this MSDS and any other information regarding hazards of safety; 2) Furnish this same information to each of its customers, to the product, and 3) Request its customers to notify their employees, customers, and other users of the product of this information.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1 IDENTIFICATION

Product Name: Acetone Oil
Chemical Name: Acetone Oil
Chemical Family: Acetone Oil
Formula: Not applicable (mixture)
Synonym: None

1.2 COMPANY IDENTIFICATION

Union Carbide Corporation
A Subsidiary of The Dow Chemical Company
35 Old Ridgebury Road
Danbury, CT 06817-0001

1.3 EMERGENCY TELEPHONE NUMBER

24 hours a day: CHEMTREC 1-800-424-9300.
Numbers for non-emergency questions concerning MSDS: (732) 533-6020.
Additional information on this product may be obtained by calling the Union Carbide Corporation Customer Service Center at 1-800-556-4000.

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MATERIAL SAFETY DATA SHEET

Product Name: Acetone Oil Effective Date: 06/25/2000
MSDS#: 2510 Page 2 of 14

2. COMPOSITION INFORMATION

Component	CAS #	Amount (%W/W)
Alkane, C5	9502-11-7	>= 31 to 39%
C6, C7 Dimerics		>= 16 to 20%
3-Methyl-1-pentene	763-26-1	>= 16 to 19%
Isopropyl ether	109-20-3	>= 5 to 8%
2,4-Dimethyl heptane and 2,6-Dimethyl heptane		>= 8 to 9%
4,4-Dimethyl-2-pentene		>= 4 to 5%
4-Methyl-1-pentene	591-27-3	>= 4 to 5%
Acetone	67-64-1	>= 1 to 2%
2-methyl-1,5-Pentadiene	1118-58-7	>= 1 to 2%
1,2,5-Tetramethyl-1,3-Cyclohexadiene		>= 1 to 2%

3. HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Appearance: Transparent yellow
Physical State: Liquid
Odor: Pungent
Hazard(s) of product: DANGER: EXTREMELY FLAMMABLE. HARMFUL IF INHALED. CAUSES EYE AND SKIN IRRITATION. ASPIRATION MAY CAUSE LUNG DAMAGE. MAY CAUSE DIZZINESS AND DROWSINESS. MAY CAUSE RESPIRATORY SYSTEM DAMAGE.

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ใช้ในการอ้างอิง

MATERIAL SAFETY DATA SHEET

Product Name: Acetone Oil Effective Date: 06/25/2000
MSDS#: 2510 Page 4 of 14

4.1 INHALATION
Remove to fresh air. Use artificial respiration if not breathing. If breathing is difficult, oxygen may be given by qualified personnel. Obtain medical attention.

4.2 EYE CONTACT
Immediately flush eyes with water and continue washing for several minutes. Remove contact lenses, if worn. Obtain medical attention.

4.3 SKIN CONTACT
Remove contaminated clothing. Wash skin with soap and water. Obtain medical attention if irritation persists. Wash clothing before reuse.

4.4 SWALLOWING
DO NOT INDUCE VOMITING. Do not give anything to drink. Obtain medical attention without delay.

4.5 NOTES TO PHYSICIAN
If a significant quantity of product is ingested, remove by means of gastric lavage using activated charcoal. A diluted solution of Magnesium Hydroxide may be used to prevent absorption. When evacuation of the stomach is complete, 30-60 ml of Flixid Phospho-Sox diluted 1:4 in water may be given. Keep the patient under observation for 24 hours and check for signs of lung injury. It may require 2-4 weeks for resolution of lung irritation involving more than 20% of the lung volume.

5. FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Flash Point - Closed Cup: -37°C -(-31°F)
Flash Point - Open Cup: -46°C -(-51°F)
Autoignition Temperature: See Section 8.2 - Engineering Controls

Flammable Limits in Air:
Lower: Not determined
Upper: Not determined

5.2 EXTINGUISHING MEDIA
Extinguish fires with water spray or easily alcohol type or oil purpose type foam by manufacturer's recommended techniques for large fires. Use carbon dioxide or dry chemical media for small fires.

MATERIAL SAFETY DATA SHEET

Product Name: Acetone Oil Effective Date: 06/25/2000
MSDS#: 2510 Page 7 of 14

Acetone:
1500 ppm STEL ACGIH
2100 ppm TWAE OSHA
500 ppm TWAE OSHA
500 ppm TWAE ACGIH
750 ppm STEL ACGIH
750 ppm TWAE OSHA/Acrolein
1000 ppm STEL OSHA
1000 ppm TWAE
5000 ppm TWAE OSHA

In the Exposure Limits Chart above, if there is no specific qualifier (i.e., Acrolein) listed in the Form Column for a particular limit, the listed limit includes all acetone forms of the substance that can be inhaled.

A "Yes" in the Skin Column indicates a potential significant absorption in ocular exposure by the cutaneous (skin) route, including mucous membranes and the eye, either by contact with water or by direct skin contact with the substance. A "Blue" in the Skin Column indicates that exposure by the cutaneous (skin) route is not a potential significant contributor to overall exposure.

6.2 PERSONAL PROTECTION

Respiratory Protection: Self-contained breathing apparatus.
Ventilation: General (mechanical) room ventilation is expected to be satisfactory where the product is stored and handled in closed equipment. Special local ventilation is needed at points where vapor can be expected to escape to the workplace air.
Eye Protection: Goggles
Protective Clothing: PVC coated
Other Protective Equipment: Eye Bath, Safety Shower

6.3 ENGINEERING CONTROLS

Standard (ASTM) test values do not predict many real life situations. Autoignition is the result of a gas phase runaway reaction which occurs when the heat generation rate inside a glass

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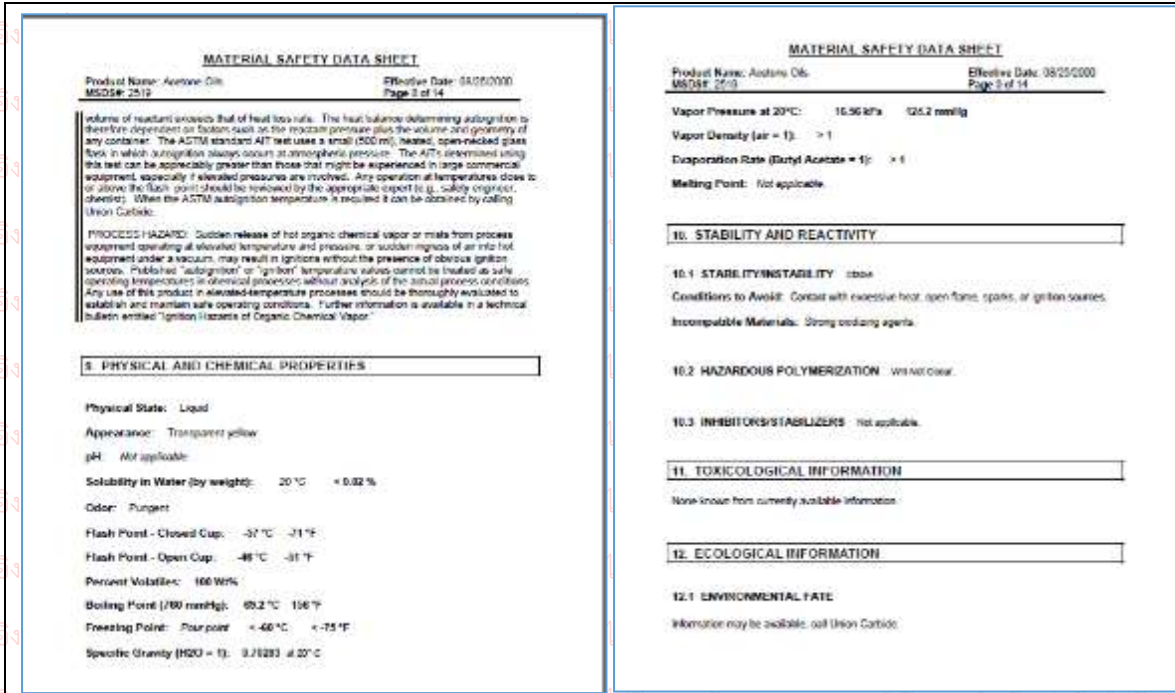
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(Source: Malaysia)

3826.00.10

COCONUT METHYL ESTER (CME)

Coconut methyl ester is derived by the esterification of coconut oil with methanol, and is used as an additive to or substitute for diesel oil. CME is the acronym for coconut methyl ester. The product is also known as coco-biodiesel. The properties of CME result in more efficient combustion that translates into increased engine power, longer mileage and fewer emissions.

(Source: Philippines)

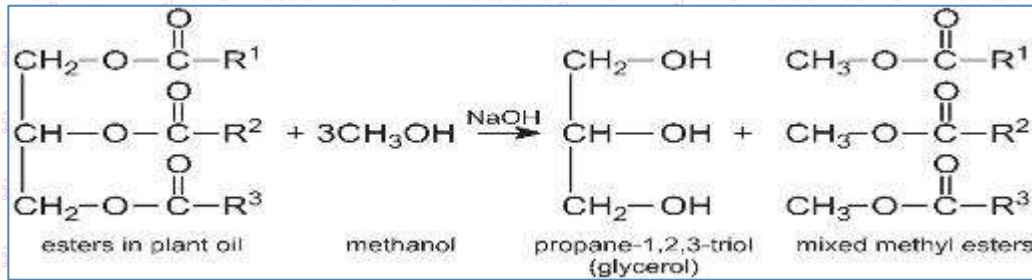
3826.00.21

3826.00.22

3826.00.29

PALM METHYL ESTER

Palm methyl ester (PME) is a biodiesel produced from esterification of crude palm oil with methanol. The chemical reaction for Palm Methyl Ester can be seen below:



The conversion of these oils to methyl esters involves the use of methanol as a raw material and a “basic” catalyst (potassium or sodium). Glycerin is a by-product of the conversion process. The methyl esters are washed to purify the product prior to sale.

Palm oil cannot be directly used as engine oil due to higher viscosity than that of petroleum products. It is first converted to smaller molecules of methyl ester before being used as a diesel fuel. Palm methyl ester is a ready substitute for diesel. It is successfully tested and used as fuel for power stations and passenger cars.

Generally about 5 % or more of palm methyl ester will be blended with ordinary diesel. It is used as an alternative fuel of vegetable origin for pollutant reduction, in blends with fossil fuel in several proportion as follows:

Blend ratio of Palm methyl ester : diesel	Equivalent to ordinary diesel
10:90	1D grade
20:80	2D grade
30:70	
40:60	
50:50	4D grade
60:40	
70:30	
80:20	
90:10	

(Source: Malaysia)

3827.11.10 3827.39.10

TRANSFORMER AND CIRCUIT BREAKER OILS, CONTAINING BY WEIGHT LESS THAN 70 % OF PETROLEUM OILS OR OF OILS OBTAINED FROM BITUMINOUS MINERALS

Transformer oil classified under these subheadings is most often based on mineral oil and contain halogenated hydrocarbon.

Transformer oil and circuit breaker oil or insulating oil is an oil that is stable at high temperatures and has excellent electrical insulating properties. As opposed to lubricating oil, the function of transformer oil and circuit breaker oil are to insulate, suppress corona discharge and arcing, and to serve as a coolant but not as lubricant.

(Source: Viet Nam)

CHAPTER 39

39.01 – 39.12

IN DISPERSION

Dispersions are cloudy or milky, and consist of particles of polymers dispersed in a liquid medium. Dispersions may be suspensions or emulsions. Dispersions differ from solutions, where all particles are dissolved completely in a solvent, which makes the appearance of the solutions clear.

(Source: Thailand)

3901.10.12 3901.10.92

POLYETHYLENE CONTAINING 5 % OR LESS ALPHA OLEFIN MONOMERS

Polyethylene Containing 5 % or Less (at least small amount) Alpha-Olefin Monomers refers to Linear low Density Polyethylene (LLDPE) with alpha olefin monomers content of 5% or less by weight.

(Source: Indonesia)

3902.90.10

CHLORINATED POLYPROPYLENE OF A KIND SUITABLE FOR USE IN PRINTING INK FORMULATION

Chlorinated polypropylene is a white to light yellow resin made by the chemical modification of polypropylene, which is soluble in xylene and toluene and the resulting solution has good fluidity at room temperature. Typically, chlorine content ranges from 25 to 35% by weight. It is in the form of pellets and used as an adhesive agent (promoter) in printing inks and paints. The variant for ink formulation has a viscosity of 200 to 800 MPa at 25° C, and a pH of 5.5 to 8.

(Source: Philippines)

39.02 39.03 39.04 39.07 39.12

GRANULES AND SIMILAR FORM

Solid products of primary form excluding powder, of which less than 10% by weight pass through a sieve with a mesh aperture of 1 mm and of which 90% or more by weight pass through a sieve with a mesh aperture of 5 mm.

(Source: Indonesia)

3907.30.20

EPOXIDE RESINS, OF A KIND USED FOR COATING, IN POWDER FORM

These coatings are based on epoxy resin which is cured by dicyandiamide or phenol hardeners. They are in powder form and are applied by spraying and heating in an oven. They have excellent adhesion, corrosion prevention and resistance to chemicals and solvents, which make them suitable for the coating of metal appliance casings.

(Source: Philippines)

3907.99.40

POLYESTERS, OF A KIND USED FOR COATING, IN POWDER FORM

These coatings are based on acid-functional saturated polyester which is cured by triglycidylisocyanurate. They are in powder form and are applied by spraying and heating in an oven. They have colour and gloss retention on external exposure, which make them suitable for the coating of metal appliance casings.

(Source: Philippines)

3903.90.91

IMPACT RESISTANT POLYMERS OF STYRENE, HAVING NOTCHED IZOD IMPACT AT 23° C LESS THAN 80J/M

Notched Izod Impact is a single point test that measures a materials resistance to impact from a swinging pendulum. Izod impact is defined as the kinetic energy needed to initiate fracture and continue the fracture until the specimen is broken.

Test Procedure may be perform in varies of condition for example reduce or incese temperature. For 3903.90.91 the numbers of izod impact grade at 23° C less 80J/m regarded as low to medium impact. Impact resistant polymers of styrene having notched izod impact at 23° C 80J/m or more will fall under 3903.90.99.

- i. Medium impact PS (notched Izod values between 40 and 80 J/m),
- ii. High impact PS (notched Izod values between 80 to 160 J/m)
- iii. Super high impact PS (notched Izod value more than 160 J/m).

(Source: Indonesia and Thailand)

3907.99.50

THERMOPLASTIC LIQUID CRYSTAL AROMATIC POLYESTER COPOLYMERS

Liquid-crystal polymers (LCPs) generally are a class of aromatic saturated polyester. The liquid-crystal polymers (LCPs) consists of partially crystalline aromatic polyesters based on p-hydroxybenzoic acid and related monomers. Liquid-crystal polymers are present in melted/liquid or solid form.

LCPs are useful for electrical and mechanical parts, food containers, and any other applications requiring chemical inertness and high strength. LCP is particularly good for

microwave frequency electronics due to low relative dielectric constants, low dissipation factors, and commercial availability of laminates.



Picture 1: Ticona Vectra® Liquid Crystal Polymer

Source: <https://fukuang.manufacturer.globalsources.com/si/6008852649592/pdt/LCP-resin/1163606226/Celanese-VECTRA-A700-LCP.htm>



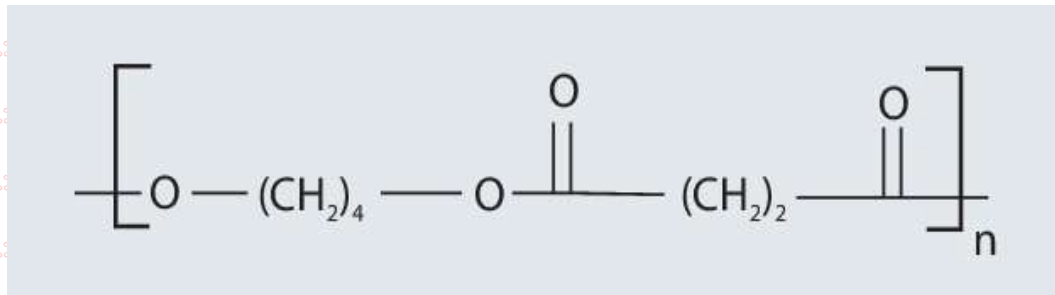
Picture 2: MSDS Vectra A700

Source: <http://www.ticona.com>

3907.99.60

POLYBUTYLENE SUCCINATE (PBS)

Polybutylene Succinate (PBS) is a type of saturated polyester which is biodegradable in a proper condition, for example into water and carbon dioxide with the microorganism under the soil. Thus, it plays an important role in the development of new bioplastics products. Application examples include food packaging, food service ware, single use coffee capsules, agricultural products (mulch films). PBS Chemical Structure can be seen below.



(Source : Thailand)

3909.39.91

GLYOXAL MONOUREIN RESIN

Glyoxal monourein resin is a polymer obtained by the condensation polymerization of glyoxal monomer (also known as oxalaldehyde (C₂H₂O₂) and monourein monomer (also known as 4,5-Dihydroxy-2-imidazolidinone (C₃H₆N₂O₃). Generally the glyoxal resin is present in the binder at a level of about 1-25% by weight of the polymer solids.

(Source: Malaysia)

3912.20.11

WATER-DAMPED NITROCELLULOSE

Water-damped nitrocellulose is a resin in fibre form damped with water at about 30% by weight for safety of transport. It is dissolved in organic solvent before it can be used in the manufacture of coatings, inks and paints.

(Source: Philippines)

3917.29.11

3917.29.19

3917.31.11

3917.31.12

3917.31.19

3917.32.91

3917.32.92

3917.33.10

3917.39.11

3917.39.12

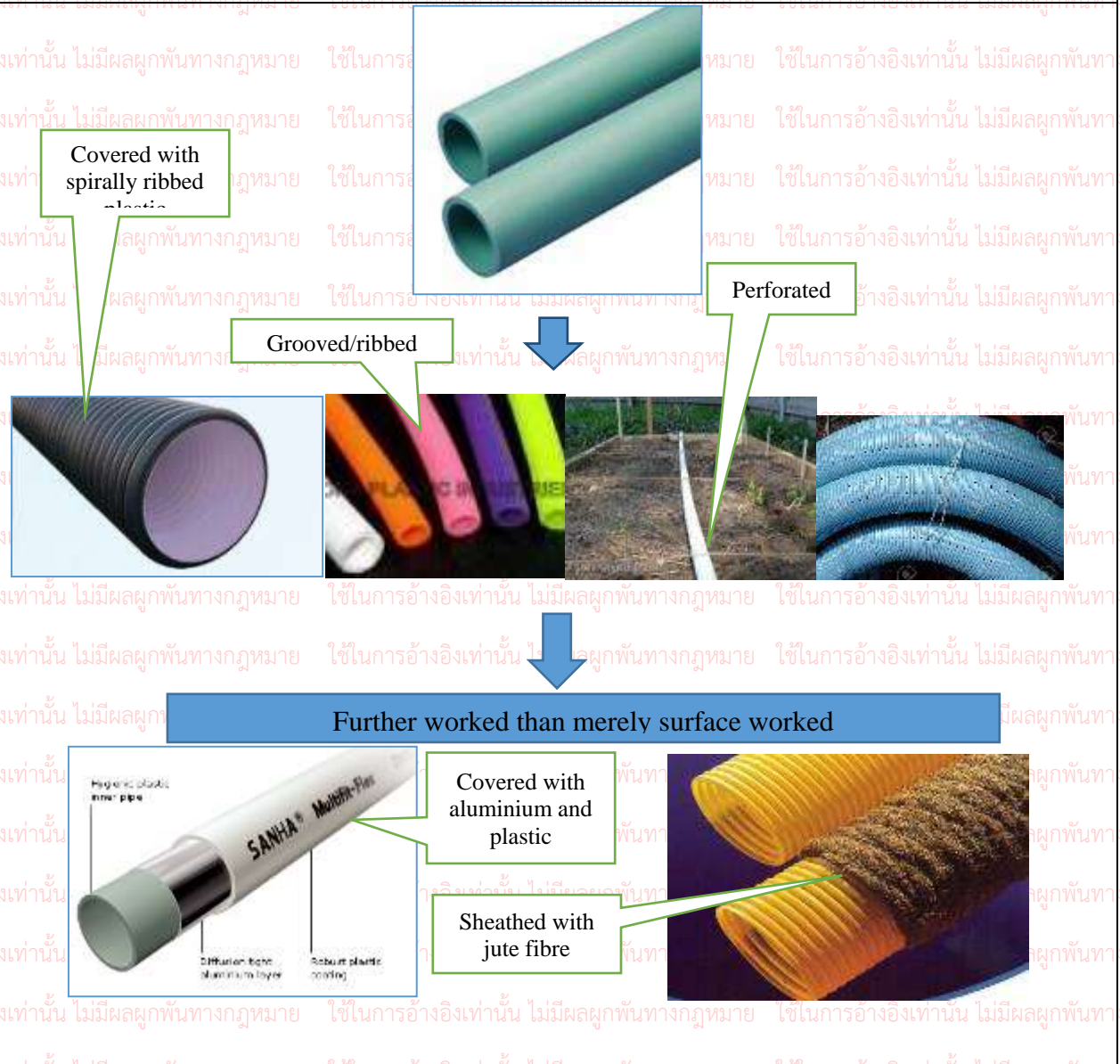
3917.39.19

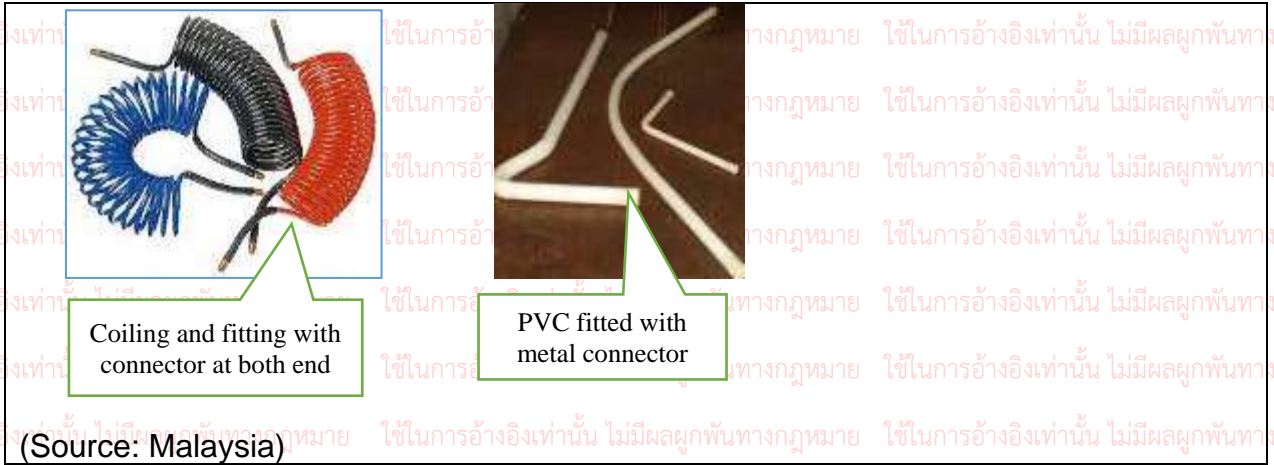
FURTHER WORKED THAN MERELY SURFACE WORKED

For the purposes of heading 39.17 the term “tube and pipe, further worked than merely surface worked” refers to tubes, pipes and hoses which have gone for secondary process, but still be classified under tube and pipes of heading 39.17. Tube and pipe are made through extrusion process in which the surface may be grooved, ribbed

continuously formed during extrusion. Those surface formation is not regarded as further worked. Further worked refers to the other further processes such as:

1. Fitting with connector, coupling, collar, screw, nut and ferrule by means of gluing or fusion (heating) or pressure, on one or both ends.
2. Bending into desired permanent shape.
3. Inserting internal lining or external sheathing of other material such as metal or textile.
4. Coating with metal.
5. Perforating, polishing and laminating.






(Source: Malaysia)

3917.32.20


THERMOPLASTIC HOSES FOR GAS STOVE

Hose specification:

No	Parameter	Unit	Thermoplastic Hose
1	Dimension - inside diameter - length	mm mm	10 ± 0.75 Minimum 1800
2	Adhesion strength between inner side and outer side	kN/m	Minimum 2.4
3	Proof hold test pressure	-	Leak proof, fracture proof at 1.5 MPa
4	Bursting pressure	MPa	Minimum 3.0
5	Burn test (2 minutes)	-	burned



Hose without fitting

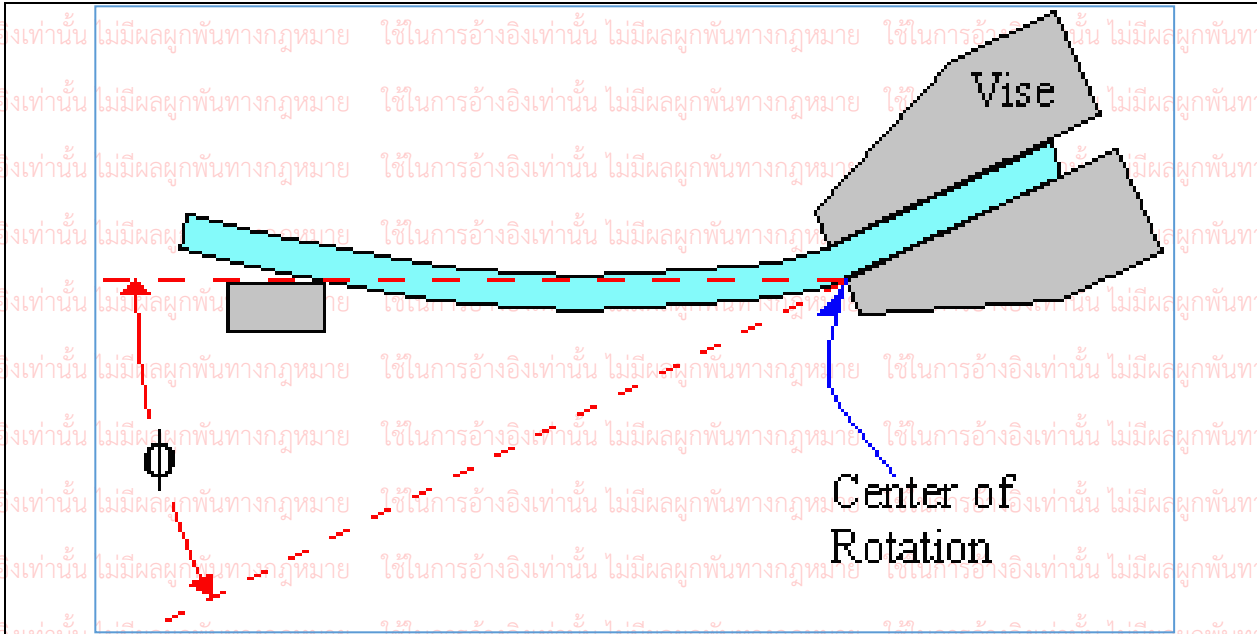


Hose with fitting

(Source: Indonesia)

39.20	39.21
“PLATES AND SHEETS”; FILM OR FOIL	
<p>For the purpose of ASEAN Subheadings within these headings, "plates and sheets" refers to products which meet the requirements of Note 10 to Chapter 39, of rectangular (including square) shape and with thickness exceeding 0.25 mm.</p> <p>Product which does not meet the above description shall be classified as Film or Foil.</p> <p>(Based on ASTM D 6988-13)</p> <p>(Source: Indonesia)</p>	

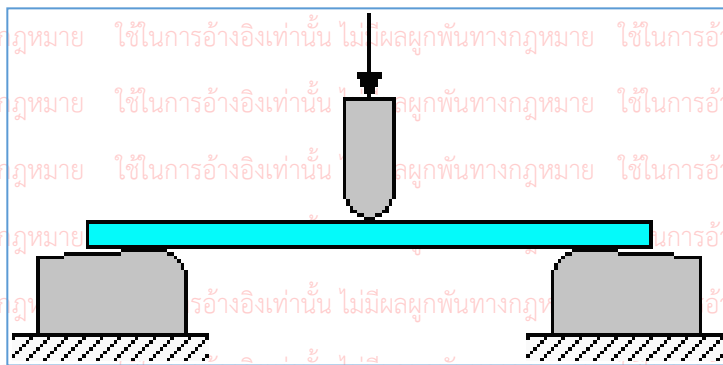
3920.10.11	3920.30.91	3920.51.11	3920.59.11	3921.11.21
3921.13.11	3921.14.21			
RIGID PLASTIC PLATE AND SHEET				
<p>Rigid plastic plate or sheet that has a modulus of elasticity either in flexure or in tension greater than 100,000 psi at 23^o C and 50 % relative humidity when tested in accordance with ASTM D747 or ASTM D790.</p> <p>Apparent Bending Modulus - ASTM D747</p> <p>Used for materials too flexible to be tested according to ASTM D790 to determine relative flexibility. Test specimens are supported as a cantilevered beam and are deflected through an angle. The apparent bending modulus is calculated using the deflection angle, moment, and test specimen geometry. The calculation of the apparent bending modulus is made assuming small deflections and purely elastic specimen behaviour.</p> <p>Due to the nature of the test, factors influencing the apparent bending modulus (including span length, width, and specimen depth) vary during testing. Data for specimens of different thickness may not be comparable as a result.</p>				



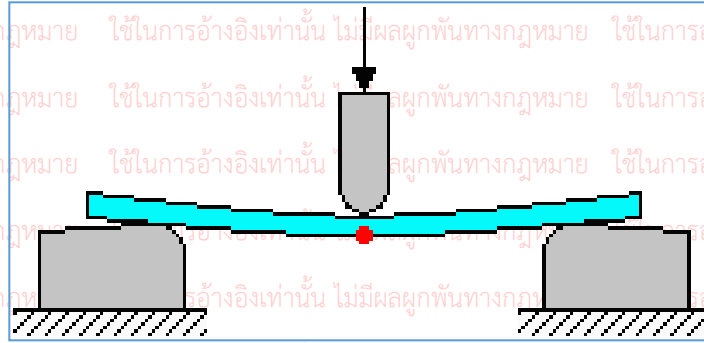
Flexural Properties - ASTM D790

A test specimen is held as a simply supported beam and is subjected to three-point bending. The preferred test specimen is 80 mm long, 10 mm wide, and 4 mm thick. Other specimens may be used if the length to thickness ratio is equal to 20. The specimen is deflected until it either breaks or the outer fibre strain reaches 5%. Two procedures are used for flexural testing.

Procedure	Description	Strain Rate
A	For materials that break at relatively small deflections.	0.01 mm/mm/min
B	For materials that undergo large deflections during testing.	0.10 mm/mm/min



Flexural Test Configuration



Location of Maximum Fibre Stress/Strain

Term	Definition
Flexural Modulus	The ratio of outer fibre stress to outer fibre strain.
Flexural Stress at Yield	The outer fibre stress corresponding to test specimen yield.
Flexural Stress at Break	The outer fibre stress corresponding to test specimen failure.
Flexural Strength	The maximum outer fibre stress sustained by a specimen during testing.

(Source: Malaysia)

3920.20.10

BIAXIALLY ORIENTED POLYPROPYLENE (BOPP) FILM

Biaxial orientation is the process of forming hot plastic films in cross machine directions, resulting in a stronger film. One of the most common biaxially oriented films is Biaxially Oriented Polypropylene (BOPP) film. "Biaxially oriented" means the polypropylene film has been stretched in both the Machine Direction (MD) and the Across Machine Direction (AMD), resulting in the film being able to stretch in X and Y directions, thus making it suitable for the wrapping of goods.



(Source: Malaysia)

3920.61.10**PLATES AND SHEETS OF POLYCARBONATES**

Plates and sheets of this subheading meet all of the requirements of Note 10 to Chapter 39, are of rectangular (including square) cross-section and have a thickness exceeding 0.25 mm.

(Source: Malaysia)

3920.62.91**SOLAR PROTECTION FILM**

Solar Protection Film is laminate UV filtering plastic film whether or not metalized, made of polyethylene terephthalate (PET) and can be installed to the interior or exterior of glass surface in homes, buildings, automobiles and boats.

Solar Protection Film is generally packed in rolls with release liner. One of its surface has adhesive properties which can be activated during installation to the glass surface by wetting it then treating it with heat, and need to be assisted by installation tools than mere finger or hand pressure for it to stick to the glass surface.

Examples of product dimensions are as follows :

- width : 1.0 m
- length : 20 – 600 m (in range)
- thickness: 0,04-0,25 mm (in range)

Solar Protection Film generally has the following properties:

- Visible Light Transmittance (VLT) : 5 – 95 %
- Ultra Violet Transmittance (UVT) : 1 – 50 %
- Infra Red Cut (IRT) : 1 – 90 %

Reference: ISO 9050 (2003); NFRC 300 (2017); ASTM E903 -12

(Source: Indonesia)

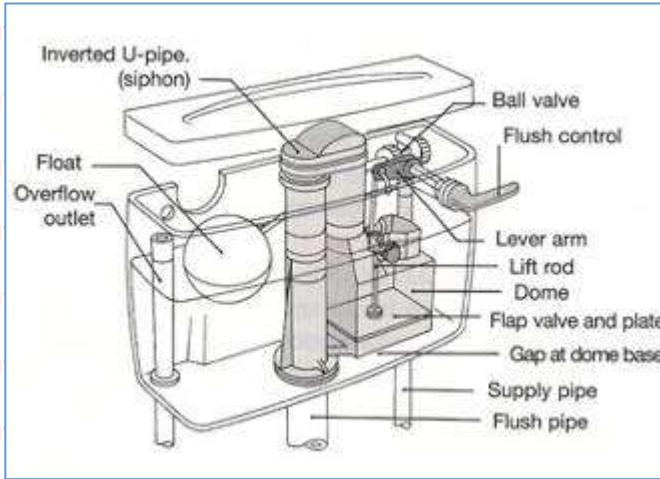
3922.90.11**PARTS OF FLUSHING CISTERNS**

There are several types of toilets, the siphon toilet fully and the flap valve system. These two were the most popular gravity flushing toilets until the development of the dual flush toilet. The siphon type used a siphon in the cistern to supply the water to the bowl. Another siphon in the actual bowl outlet was used to drag the contents from the bowl, through the S bend and into the soil pipe. The flap valve system was relatively simple; the operation of the lever caused a valve in the bottom of the cistern to open, allowing water to flow down into the bowl. Both types used a ball-cock system to maintain the

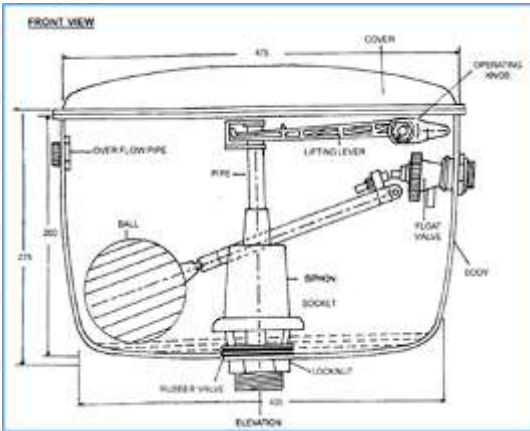
water levels in the cisterns and a lever on the side of the cistern to operate the flush mechanism.

A dual flush toilet can use as little as 3 liters in a half flush and 6 liters in a full flush compared with a conventional toilet which can use up to 20 liters a flush.

Flushing cisterns equipped with their mechanism refer to a complete flushing cistern consist of body, internal components, piping and their fitting.



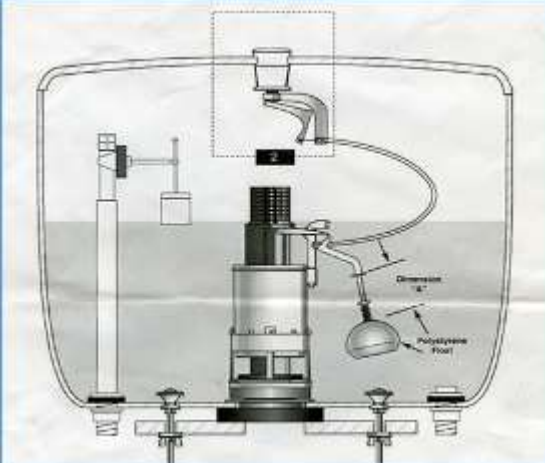
Flap valve cistern system



Turbo 88 Adjustable Syphon - Adjusts from 7.5-9.5"

ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย

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พันทางกฎหมาย
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ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย

Dual flush cistern system

ใช้ในการอ้างอิงเท่านั้น Fluidmaster PROCP001 Universal Cistern Repair Pack Toilet Flush Inlet Outlet Repair Kit Do-It-Yourself (DIY) Toilet Upgrade for Water Saving plus Quieter Operation, Fluidmaster PRO550UK dual flush replacement flush valve. ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย

Part for flushing cistern

Part of flushing cistern refer to internal components or body of the cistern being intergal part for flushing cistern system. Generally the internal parts are packed in set for replacement but certain part may also aviaviable separately such as float, fittings etc.

ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย
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ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย
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Cistern mechanism spare pack

ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย
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blended thermoplastics proving special electrostatic discharge (ESD) and outgassing properties.

Example of product:



Picture 1. 200mm BHWS Wafer Shipper

(Source: Malaysia)

3923.21.91

ASEPTIC BAGS NOT REINFORCED WITH ALUMINIUM FOIL (OTHER THAN RETORT POUCHES), OF A WIDTH OF 315 mm OR MORE AND OF A LENGTH OF 410 mm OR MORE, INCORPORATING A SEALED GLAND

Sterilized, transparent bags that are sealed on all sides and have a sealed spout that can be opened only by a special filling machine. These are made of laminated plastic films (without aluminium foil) and are packed in sealed containers in an aseptic packaging environment. They are widely used for packing and transport of fruit juices, jams, oils, additives, fruit preserves, condiments, etc. to extend the shelf life of the products.



(Source: Philippines)

3923.30.20

MULTI-LAYER FIBREGLASS REINFORCED CONTAINERS, FOR COMPRESSED OR LIQUEFIED GAS

These kinds of containers consist of three layers. The inner layer is made of high density polyethylene. The middle layer consists of a composite of fibreglass and plastics. The outer layer is also made of plastics.



(Source: Viet Nam)

3923.40.10

SPOOLS, COPS, BOBBINS AND SIMILAR SUPPORTS, SUITABLE FOR USE WITH THE MACHINES OF HEADING 84.44, 84.45 OR 84.48

The textile industry around the world is literally carried on the shoulders of bobbins, spools, and shuttles.

In common terminology, bobbins were used to wind spun yarn on a compact carrier that could be inserted in the centre of a shuttle and shot across the open weaving shed to form the filling or pick.








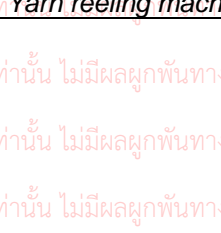
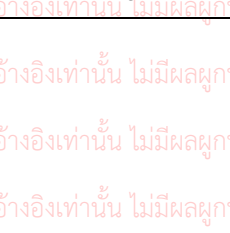

A shuttle traditionally carries the bobbin across the shed. As technology evolved, shuttles were replaced by other means of transport: rapiers, air-jet, water-jet and other means.

In the "olden days" hard wood or metal bobbins, spools and shuttles were used. They have been replaced by lightweight materials such as plastics. Some spools and bobbins are specially designed for specific types of textile making machines.

A spool is another name for a yarn carrier often used to carry thread for sewing (thread is generally finer than yarn) and it is smaller than for use in textile making machines.

(Source: Malaysia)

ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย

		
<p>ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย</p> <p>Plastic bobbin textile machinery parts, simplex bobbins, dye cones, winding cones, ring bobbins, yarn carriers, perforated cones</p>	<p>ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย</p> <p>Ring bobbins</p>	<p>ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย</p> <p>Plastic bobbins for the textile industry</p>
		
<p>ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย</p> <p>Yarn spinning machine</p>	<p>ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย</p> <p>Yarn drawing machine</p>	<p>ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย</p> <p>Yarn texturing machine</p>
		
<p>ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย</p> <p>Yarn twisting machine</p>	<p>ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย</p> <p>Yarn reeling machine</p>	<p>ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย</p> <p>Yarn winding machine</p>
	<p>ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย</p> <p>ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย</p> <p>ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย</p> <p>ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย</p> <p>ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย</p>	<p>ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย</p> <p>ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย</p> <p>ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย</p> <p>ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย</p> <p>ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย</p>
<p>ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย</p> <p>Raschel Jacquard machine</p>	<p>ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย</p>	<p>ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย</p>

3924.90.10

BED PANS, URINALS (PORTABLE TYPE) OR CHAMBER-POTS

A bed pan is an object used for the toileting of a bedridden patient in a health care facility, usually made of a metal or plastic receptacle. A bed pan can be used for both urinary and fecal discharge.

A urinal is a bottle shaped receptacle for urination. It is most frequently used for male patients in health care who find it impossible or difficult to get out of bed. Females require a wider opening and must be placed between the legs, hence they are more difficult to use, and the common practice for females is to use a bedpan.

A chamber-pot (also a moppot, a Jordan, a jerry, a guzunder, a po (possibly from French: pot de chambre), a piss pot, a potty, or a thunder pot, honey pot) is a bowl-

ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย

shaped container with a handle, and often a lid, kept in the bedroom under a bed or in the cabinet of a nightstand and generally used as a toilet at night.



Plastic bed pan



Plastic urinal



Plastic chamber pot



(Source: Malaysia)

3924.90.20

NIPPLE FORMER, BREASTSHELLS, NIPPLE SHIELDS, HAND EXPRESSION FUNNEL



3926.90.42

PROTECTIVE MASKS FOR USE IN WELDING AND SIMILAR WORK

Protective masks are a protective screen of lightweight material used to cover the face and protect it from sparks and brightness of light during ironwork welding or milling and similar work. Protective masks are normally made of transparent plastic sheeting or of plastics with a transparent window made of plastics. The transparent plastic is often laminated with special material to protect the eyes. The masks are commonly fitted with head band holders or handles.

(Source: Malaysia)

3926.90.55

PLASTIC J-HOOKS OR BUNCH BLOCKS FOR DETONATORS

J-hooks are moulded plastic articles used on signal tubes as a means of connecting the detonating cord to the signal tube for the initiation of the explosive. They are also used

to identify the time delay of the detonator used in the explosive assembly by means of a stamped number on the J-hook.



Bunch blocks are coloured plastic blocks, normally with two lids. They are fixed to the detonator when used with trunk-line delay (TLD) as a means of initiating several outgoing lines at once. They are also called TLD blocks, blocks, or hinged blocks.



3926.90.82

PRAYER BEADS

Prayer beads, also known as traditional counting beads, are used by various religions. The prayer beads are used to count repeated prayers (e.g. *zikir*, *rosary* or *mantra*). The beads are made of plastics and strung with a yarn or monofilament to form a loop or chain.



(Source: Malaysia)

3926.90.91

OTHER ARTICLES OF PLASTICS, OF A KIND USED FOR GRAIN STORAGE

This product consists of a flexible poly(vinyl chloride) (PVC) envelope (in cube form), having lower and upper sections with airtight zippers for the storage of grains in bags under hermetically sealed conditions, thus maintaining the stored product's quality without the use of pesticides. Inlet and outlet valves are also provided for fumigation and modified atmospheric treatment (using carbon dioxide or nitrogen).

The cubes are designed to be set up in the open and on the ground, with repeated usage over a long period of time, and under far from optimal conditions. Such usage is achieved by the use of a heavy-duty liner made up of two sections that are UV protected, food-grade and with a proven life of the material of many years under extreme climate conditions. The cubes can be used when and where no suitable storage structure is available, although they can also be placed inside existing storage structures, if preferred.

To load the grain, the lower-section is laid on the ground and the bags of grain are placed directly on the liner. The underliner dimensions determine the size of the stack to be built. After the stack has been built to the required height, the overliner is then placed over the top of the stack and meets the underliner half way up the side. The underliner and overliner are provided with a gas-tight multiple tongue and groove zipper, which is then used to zip them together to form a continuous envelope.

The cubes are fabricated in 5, 10, 20 and 50t capacity sizes, with dimensions chosen to make normal stacking and sealing easy. The special tension straps situated around the cube are designed to take up slack in the walls and pull the liner tight around the curve of the sacks at floor level.



(Source: Philippines)

3926.90.92

EMPTY CAPSULES OF A KIND SUITABLE FOR PHARMACEUTICAL USE

Products made from natural or synthetic polymers, not elsewhere specified or included, including hardened gelatin and hypromellose, a polymer formulated from cellulose.

(N.B.: If made of unhardened gelatin, falls in Heading 96.02).

(Source: Viet Nam)

3926.90.93

BUCKLES, ADJUSTERS, HOOKS AND CORD STOPPERS

Plastic buckles are designed for fastening two loose ends that are secured in the frame and release of the buckle. These are usually used in seat belts and bags. Adjusters are used for tightening and loosening straps, which are threaded through the double bars, and are commonly used in backpacks, belts, shoulder straps and the like. Hooks are materials bent or curved at an angle designed as such for catching or hanging things on. Cord stoppers typically consist of a barrel, a toggle, and a spring, which are used to fasten cords in place at certain tightness. These work by squeezing the stopper and moving it up and down to adjust the tightness of drawstrings, and releasing the stopper to fasten the cord in place. These are typically used in hooded jackets, drawstring pouches, and neck straps.



(Source: Philippines)

CHAPTER 40

4001.10.11

4001.10.21

CENTRIFUGED CONCENTRATE RUBBER LATEX

Centrifuging is a process to concentrate field latex by using a centrifuge machine with blades inside that spin at high speed to separate the rubber from water and serum. According to the industry standard, the centrifugation method yields not less than 60% of dry rubber and the rest is water, serum and other particles (by weight). Centrifuging is the mostly used method of processing field latex worldwide.

Besides centrifuging, there are other methods used for concentrating latex, such as evaporation, creaming and electro-decantation.

"Evaporation" is the oldest method used, and it involves removal of water only, or concentration of liquids in the form of solutions, suspensions, and emulsions.

"Creaming" is the process in which latex is converted into a creamed concentrate by mixing properly preserved field latex with a creaming agent (such as ammonium alginate or cooked tamarind seed powder) and allowing the mixture to separate into two layers; an upper layer of concentrated latex and lower layer of serum containing very little rubber. The lower layer is removed, leaving the latex concentrate of 50% - 55% DRC (dry rubber content) which is tested, packed and marketed. Electro-decantation is an electrophoretic process utilizing two vertical membranes for concentrating and separating colloidal dispersions by stratification, the layers so formed being separable by decantation into the dispersed particles and the liquid dispersion medium.

Latex concentrated using centrifuging cannot be visually or scientifically separated from those made using other methods; usually concentrated latex is accompanied by a certificate indicating the method used in the processing.

(Source: Malaysia, Viet-Nam and Singapore)

4001.21

RIBBED SMOKED SHEET

RSS Rubber sheets:

In the international market, there are two types of sheet rubber, namely: (I) ribbed smoked sheets (RSS) and (II) air dried sheets, of which, RSS are the most popular.

Based on the quality, and permitted blemishes, RSS is categorized into Grades 1 to 5, as follows:

Quality criteria	RSS Grade 1:	RSS Grade 2:	RSS GRADE 3:	RSS GRADE 4:	RSS GRADE 5:

Sticky/Dry	Dry	Dry	Dry	Slightly sticky	Slightly sticky
Smoking	Evenly smoked	Evenly smoked	Evenly smoked	Slightly over smoking acceptable	Over smoked
Blemishes in colour	Not permitted	Not permitted	Slight blemishes acceptable	Only medium sized translucent stains are permitted	acceptable
Specks of bark	Not permitted	Slight specks acceptable	Small specks acceptable	Only medium sized particles are permitted	Large
Oxidized spots or streaks	Not permitted	Not permitted	Not permitted	Not permitted	Large
Pinhole bubbles	Acceptable, only if small and scattered.	Only small bubbles are permitted	Only small bubbles are permitted	Only medium sized bubbles are permitted	Large bubbles and small blisters
Resinous matter and mould	Resinous matter or mould; but negligible traces of mould is permitted <u>on the wrappers of the bales</u> or on the surface of the sheets immediately under the wrapper, <u>provided there is no penetration of mould</u>	Slight resinous matter (rust) and slight amounts of dry mould on wrappers, bale surfaces and interior sheets, will not be objected to. Should "Rust" or "Dry Mould" in an appreciable extent appear on	Slight resinous matter (rust) and slight amounts of dry mould on wrappers, bale surfaces and interior sheets, will not be objected to. Should "Rust" or "Dry Mould" in an appreciable extent appear on	Slight resinous matter (rust) and slight amounts of dry mould on wrappers, bale surfaces and interior sheets will not be objected to. Should "Rust" or "Dry Mould" in an appreciable extent appear on	Slight resinous matter (rust) and slight amounts of dry mould on wrappers, bale surfaces and interior sheets, will not be objected to. Should "Rust" or "Dry Mould" in an appreciable extent appear on more than

	inside the bale.	more than 5% of the bales sampled, it shall constitute grounds for objection.	more than 10% of the bales sampled, it shall constitute grounds for objection.	more than 20% of the bales sampled, it shall constitute grounds for rejection.	30% of the bales sampled, it shall constitute grounds for objection.
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(Source: Consultant)

4001.22.10	4001.22.20	4001.22. 30	4001.22.40	4001.22.50
4001.22.60				

TECHNICALLY SPECIFIED NATURAL RUBBER (TSNR)

Most natural rubber produced today conforms to the TSR (Technically Specified Rubber) scheme developed over the last 20 years or so. This scheme requires standardized tests to be performed on each grade of rubber as well as a standardized packing of either 33 1/3 Kilo or 35 kilo bales wrapped in thin, dispersible polyethylene or thick, strippable polyethylene. TSR rubber is usually packed with 36 bales on a crated or shrink-wrapped standard size pallet. Crate size is 1200 or 1260 Kilos.

TSNR 10								
Natural Rubber Comparison Chart								
<i>*Not specification status, but are controlled at the producer end.</i>								
		Indonesia (SIR)		Malaysia (SMR)		Thailand (STR)		Vietnam (SVR)
		SIR 10	SIR 10VK	SMR 10	SMR 10CV	STR 10	STR 10CV	SVR 10
Parameter	Unit							
Dirt (max)	% wt	0.10	0.10	0.08	0.08	0.08	0.08	0.08
Ash (max)	% wt	0.75	0.75	0.75	0.75	0.60	0.60	0.6
Nitrogen (max)	% wt	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Volatile Matter (max)	% wt	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Po (min)		30	30	30	NA	30	NA	30
PRI index (min)		60	60	50	50	50	50	50
Mooney Viscosity (ML,1,100°C)		NA	60 +/- 5*	NA	60 +7, -5*	NA	60 +7, -5*	NA

TSNR 20 Natural Rubber Comparison Chart <small>*Not specification status, but are controlled at the producer end.</small>								
		Indonesia (SIR)		Malaysia (SMR)		Thailand (STR)		Vietnam (SVR)
		SIR 20	SIR 20VK	SMR 20	SMR 20CV	STR 20	STR 20CV	SVR 20
Parameter	Unit							
Dirt (max)	% wt	0.20	0.20	0.16	0.16	0.16	0.16	0.16
Ash (max)	% wt	1.00	1.00	1.00	1.00	0.80	0.80	0.8
Nitrogen (max)	% wt	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Volatile Matter (max)	% wt	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Po (min)		30	30	30	NA	30	NA	30
PRI index (min)		50	50	40	40	40	40	40
Mooney Viscosity (ML,1,100°C)		NA	60 +/- 5*	NA	65 +/- 5*	NA	65 +/- 5*	NA

TSNR CV Natural Rubber Comparison Chart								
		Indonesia (SIR)		Malaysia (SMR)		Thailand (STR)	Vietnam (SVR)	
Parameter	Unit	SIR 3CV50	SIR 3CV60	SMR CV50	SMR CV60	STR 5CV	SVR CV50	SVR CV60
Dirt (max)	% wt	0.03	0.03	0.02	0.02	0.04	0.2	0.2
Ash (max)	% wt	0.50	0.50	0.50	0.50	0.60	0.4	0.4
Nitrogen (max)	% wt	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Volatile Matter (max)	% wt	0.60	0.60	0.80	0.80	0.80	0.80	0.80
Po (min)		30	30	NA	NA	NA	NA	NA
PRI index (min)		60	60	60	60	60	60	60
Mooney Viscosity (ML, 1, 100°C)		50 +/- 5	60 +/- 5	50 +/- 5	60 +/- 5	60 +/- 5	50 +/- 5	60 +/- 5

TSNR 10

Natural Rubber Comparison Chart

*Not specification status, but are controlled at the producer end

		Indonesia (SIR)		Malaysia (SMR)		Thailand (STR)		Vietnam (SVR)	
Parameter	Unit	SSIR 10	SIR 10VK	SMR 10	SMR 10CV	STR 10	STR 10CV	SVR 10	SVR 10CV
Dirt (max)	% wt	0.10	0.10	0.08	0.08	0.08	0.08	0.08	0.08
Ash (max)	% wt	0.75	0.75	0.75	0.75	0.60	0.60	0.60	0.60
Nitrogen (max)	% wt	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Volatile Matter (max)	% wt	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Po (min)		30	30	30	NA	30	NA	30	NA
PRI index (min)		60	60	50	50	50	50	50	50
Mooney Viscosity (ML, 1+ 4-, 100°C)		NA	60 +/- 5*	NA	60 +/- 5*	NA	60 +/- 5*	NA	60 +/- 5



(Source: Malaysia)

4001.29.10

AIR-DRIED SHEETS

Air-dried sheets look like ribbed smoked sheets (RSS), but are more transparent than RSS because they are processed in smokeless rooms. This is arguably the cleanest (and undoubtedly the most beautiful) form of solid natural rubber. Latex is used to make sheets which are then "baked" in smoke houses. The colour of the sheets is a clear, transparent, rich golden brown. This is a premium product used in the highest (purest) applications, such as for nursing nipples and teats.

(Source: Malaysia)

4001.29.20

LATEX CREPES

Latex crepes are produced from fresh coagula of natural liquid latex under conditions where all processes are carefully and uniformly controlled. The rubber is milled to produce thin and thick crepes.



(Source: Malaysia)

4001.29.30

SOLE CREPES

Sole crepes are made from fresh latex coagula, be completely free of extraneous matter and dirt and conform to applications of length, width, thickness and weight. The standard thicknesses are 1/20", 3/16", 1/3" and 1/4".

Manufactured from deliberately coagulated latex. Flexible but solid unvulcanized sheets. White and honey are the main colours. Other colours can be produced to match the requirements of the buyer. Different surface textures are available and these are smooth, pebbly and grooved. Sole crepes are tailor-made for the manufacture of fashion and winter footwear because this is the form of rubber which gives a better grip on icy and slippery surfaces.



(Source: Malaysia)

4001.29.80

SCRAP (TREE, EARTH OR SMOKED) AND CUP LUMP

The usual procedure in tapping rubber trees is to first tap as much as can be managed. The still-liquid latex is then collected from the cups. A residual flow of latex which coagulates on the cut and in the cup then remains; this is secured at the next tapping as 'scrap' and 'cup lump'.



(Source: Malaysia)

4001.29.94

DEPROTEINISED NATURAL RUBBER (DPNR)

Deproteinised natural rubber (DPNR) is a purified form of natural rubber (NR) with very low nitrogen and ash contents. It is a speciality rubber intended for use in special engineering applications. It is normally prepared by treating NR latex with a proteinase to hydrolyse the proteins in the latex to more water soluble forms which can then be washed away during processing. The removal of most of the proteins and ash-containing substances makes DPNR a much purer rubber.

The DPNR contains about 96% rubber hydrocarbons compared about 93% in commercial Standard Malaysian Rubber (SMR) grades. The removal of these non-rubber (protein and ash content) components confers special attributes to the rubber which enhances its suitability for specialized rubber product applications. This action confers certain special attributes (to DPNR) especially when compounded in conjunction with the soluble efficient vulcanisation systems.

As a result, DPNR has a very low water absorption compared to normal natural rubber. This therefore, makes it relatively less sensitive to adventitious and absorbed water, thus, giving greater consistency in cure behavior and vulcanised modulus under conditions of variable humidity.

Furthermore, DPNR has a lower creep and stress relaxation than those of normal natural rubber and some interesting dynamic properties and easy processing characteristics. All

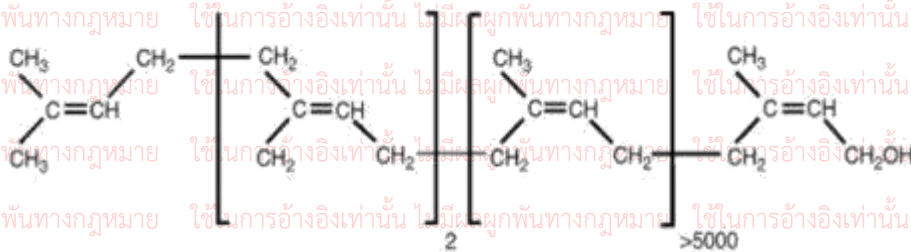
these special features give DPNR a special status and it is used in applications where the requirements for such properties are very stringent eg. Anti-vibration mountings, shock absorbers, building mounts, hydro mounts etc.



The yellowish colour represent the starting raw material from Natural Rubber source. This is differ from the synthetic counterparts which the rubber is white in colour. This is due to the none present of the non rubber in the material.



Synthetic polyisoprene rubber bale



Chemical structure of DPNR

Parameter	Specification
-----------	---------------


Dirt content (% wt, max)	0.003
Ash content (% wt, max)	0.09
Nitrogen content (% wt, max)	0.08
Volatile matter content (% wt, max)	0.17
Mooney viscosity [ML (1+4@100°C)]	60-70*

(Source: Malaysia)

4008.21.30

RUBBER WATER STOP

A rubber water stop is simply a sheet or plate of thick rubber that is placed below the mortar and tile of a shower floor to prevent water from leaking into the subfloor below the shower. It can only be done before the tile and mortar have been laid. It can be in the form of a strip of profile cross sections for sealing concrete edge joinings to preventing water leakage.





(Source: Malaysia)

4009.12.10 4009.21.10 4009.22.10 4009.31.10 4009.32.10

4009.42.10

MINING SLURRY SUCTION AND DISCHARGE HOSES

Mining slurry suction and discharge hoses are flexible non-collapsible rubber tubing with a round cross-section. They generally have a minimum diameter of the hose of 15.24 cm, a minimum wall thickness of 1.27 cm and a minimum burst pressure of 517 kPa. They come with flanges vulcanized at their ends.



(Source: Philippines)

4009.41.10 4009.42.20 RUBBER HOSE OF A KIND USED FOR GAS STOVE

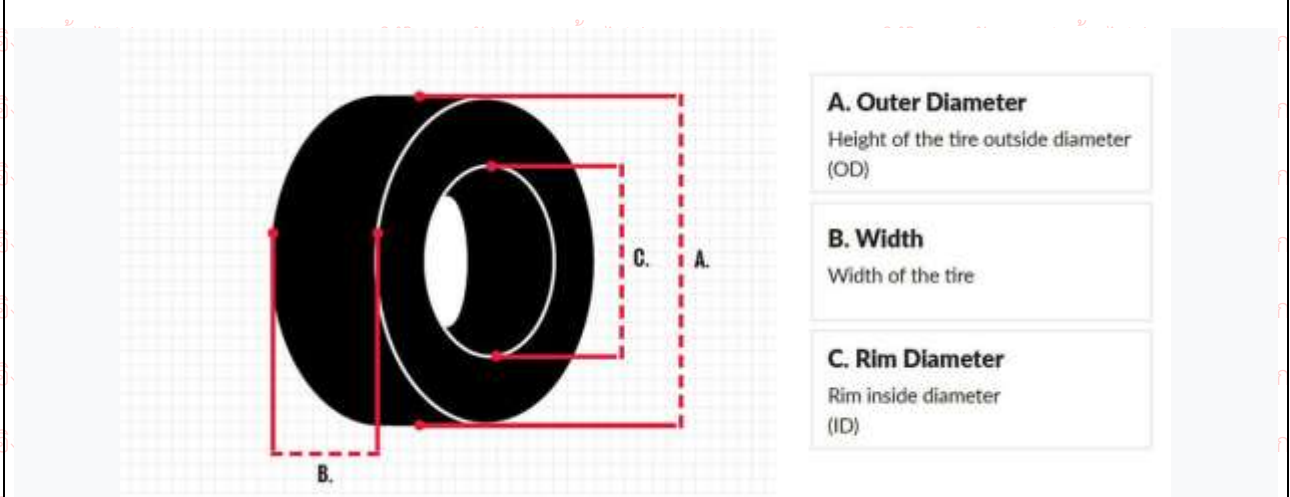
No	Parameter	Unit	Thermoplastic Hose
1	Dimension - inside diameter - length	mm mm	10 ± 0.75 Minimum 1800
2	Adhesion strength between inner side and	kN/m	Minimum 2.4

	outer side		
3	Proof hold test pressure	-	Leak proof, fracture proof at 1.5 MPa
4	Bursting pressure	MPa	Minimum 3.0
5	Burn test (2 minutes)	-	Not burned



4011.20.11 4011.20.12 4011.20.13 TYRE WITH RIM DIAMETER

For the purpose of the ASEAN subheadings under heading 4011.20, the term “width” and “rim diameter” of a tires as shown below:



Picture 1. Tread width and rim diameter measurement

(Source: Indonesia)

4012.90.71 4012.90.72 REPLACEABLE TYRE TREADS

180

Tyre tread is designed to keep the tyre in contact with the road. Replaceable tyre tread is a semi-finished products used for the process of making retreaded tyre. Replaceable tyre treads also commonly known as precured rubber tread that will be layered together with camel back strip on the surface of buffed tyre to become retreaded tyres. Replaceable tyre treads does not include interchangeable tyre tread which is normally used for covering the existing tyre to meet driving conditions during summer or winter.



Picture 1: Replaceable tyre treads



Picture 2: Interchangeable tyre tread

(Source: Malaysia)

4012.20.91

BUFFED TYRES

The worn tread is removed from the tyre casing by buffing. The proper performance of the buffing operation is crucial to the retreaded tyres' future performance. The casing is mounted on the buffer, a lathe type machine, and inflated. It is then rotated while a buffing rasp removes the worn tread material, buffing the casing surface to the correct shape, size and texture to receive a new tread.

Every tyre model has a pre-determined crown, width, profile and radius. The casing must be buffed to the particular shape which will give the best "tread to road" contact.



(Source: Malaysia)

4016.93.10

GASKETS, WASHERS AND OTHER SEALS, OF A KIND USED TO INSULATE THE TERMINAL LEADS OF ELECTROLYTIC CAPACITORS

These are small ring-like rubber articles used to insulate the terminal leads of electrolytic capacitors when installed on printed circuit boards.

4016.99.16 4016.99.17 4016.99.18 BICYCLE PARTS AND ACCESSORIES OF RUBBER

Bicycle parts and accessories of rubber can be distinguished from each other by virtue of the fact that parts are bicycle components that are essential and integral to the operation of the bicycle, while accessories merely enhance the operation of the bicycle.

(Source: Malaysia)

Examples of bicycle parts



Pedal Rubber



Brake Pads

Examples of bicycle accessories



Hand Grips



Bicycle Mudguard



Handlebar and crossbar pad



Soft cushions seat cover



Chainstay protector



Rubber bar end plugs

4016.99.52

TYRE MOULD BLADDERS

Tyre mould bladders are ring-shaped and made of non-cellular, highly heat resistant, unhardened, vulcanized rubber. They are fitted inside the tyre mould and inflated with hot water or steam under high pressure until they take the shape of the tyre's inside profile.



(Source: Philippines)

CHAPTER 42

4202.12.11

4202.12.19

SCHOOL SACHELS

School satchels are shoulder bags (including backpacks) of a kind specially designed for use by primary school children to carry textbooks to and from school.

Example of school satchel:



(Source: Cambodia)

CHAPTER 44

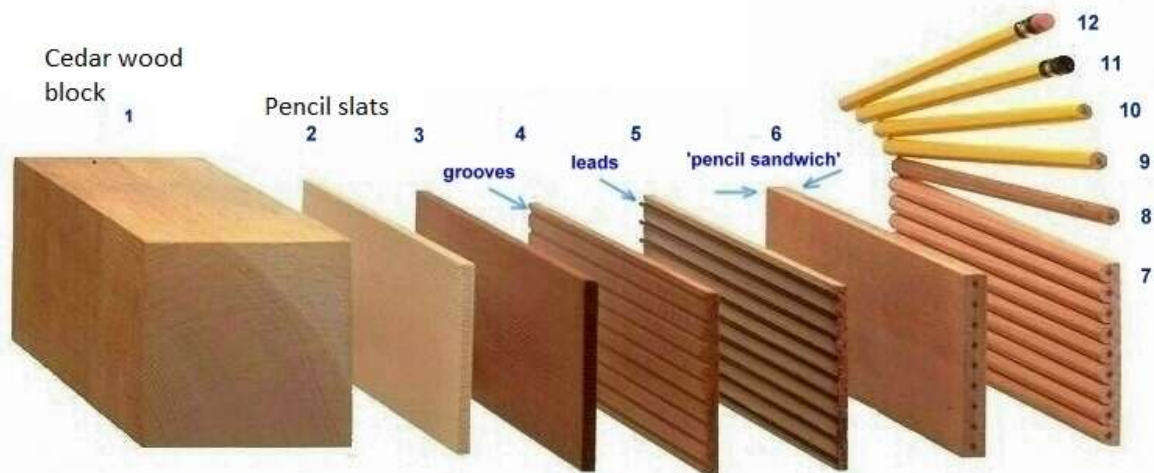
4408.10.10

4408.39.10

CEDAR/JELUTONG WOOD PENCIL SLATS

Pencil slats are cut to size, rectangular, thin sheets of wood (generally 20 cm X 10 cm X 5 mm thickness approximately half the thickness of the pencil to be made) derived from blocks of wood, and used by pencil manufacturers to produce wood-cased pencils. Cedar and Jelutong are the two main kinds of wood commonly used.

The following diagram shows the main steps in the production process.

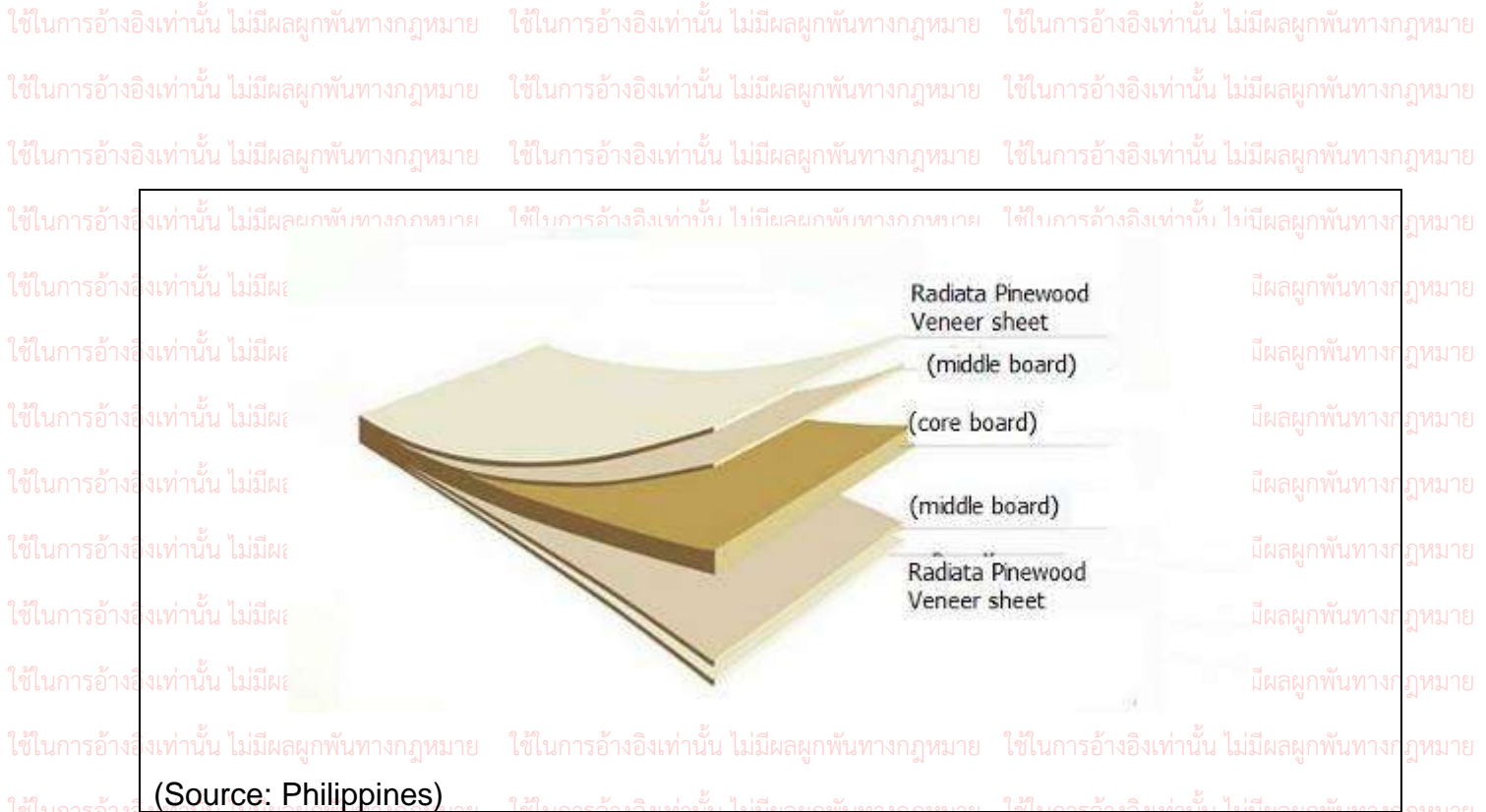


(Source: Philippines)

4408.10.10

RADIATA PINEWOOD OF A KIND USED FOR BLOCKBOARD MANUFACTURE

Radiata pinewood sheets are used for blockboard veneering because of its ability to hold screws and nails well, and takes paint and stain without difficulty.



(Source: Philippines)

4418.81.10

GLUE-LAMINATED TIMBER (GLULAM) IN BLOCK SHAPE

These are large timber products generally used as beams and made by gluing lengthwise two or more timbers, the facing surfaces of which have been planed and sanded for a better fit. The products so finished are linear in shape, and have a uniform cross section that is rectangular or square.



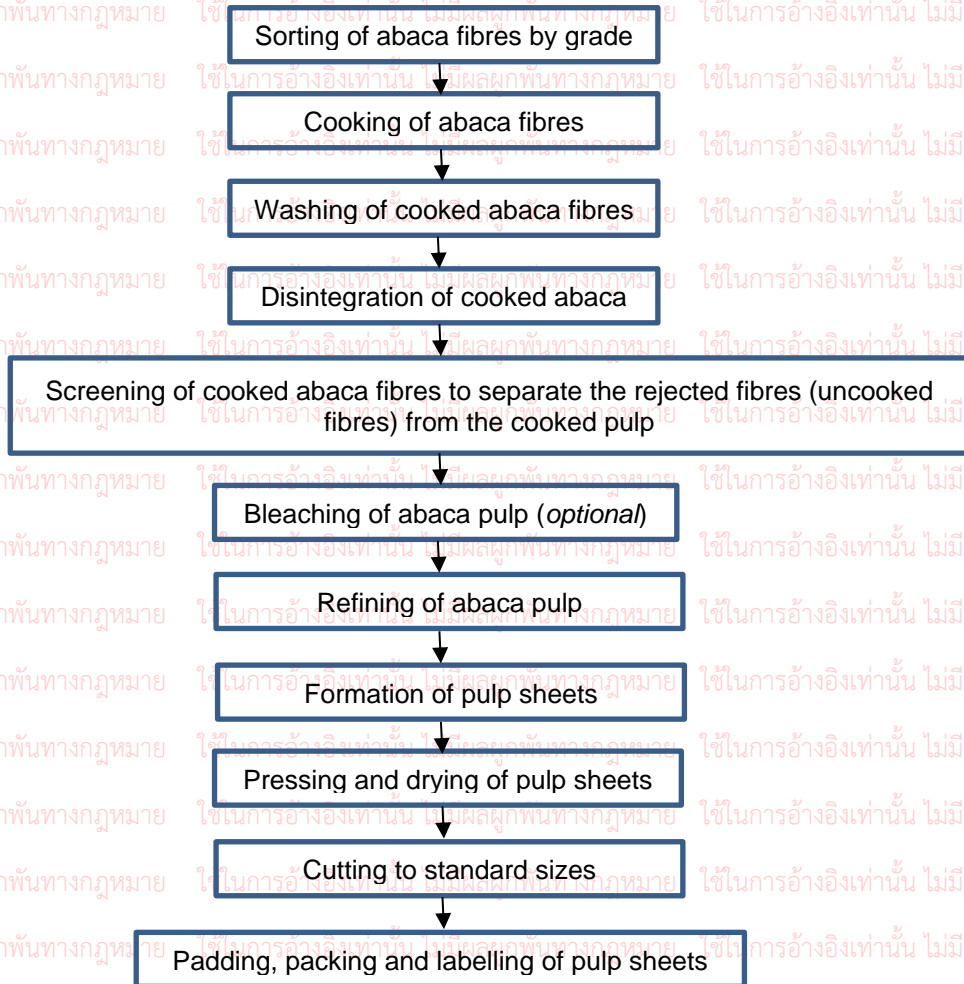
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 189

CHAPTER 47

4706.93.10

ABACA PULP

Abaca (*musa textilis*) fibres processed into abaca pulp through chemi-mechanical pulping process (i.e., combination of mechanical and chemical processes) usually undergo the following procedure:



Abaca pulp is generally prepared in standard size sheets and shipped in bales. It is rehydrated and used in making specialty papers (e.g., tea and coffee bags, sausage casing paper, currency notes, cigarette filter papers, medical/food preparation/disposal papers, high-quality writing paper, vacuum bags and more, where the principally desired characteristics are good strength and porosity, and in general, substantial wet strength.

A scanning electron micrograph of a web of alpha-cellulose abaca fibres shows the relative smooth, straight nature of fibres. The pulp cellulose fibre has a mean length of 4 mm to 6 mm; and mean diameter of 17 to 21 microns. It has a narrow-pointed end. By comparison, typical wood pulp has a fibre length of from 2 mm to 3mm and a diameter of

CHAPTER 48

4802.54.11

4802.54.19

4802.54.21

4802.54.29

CARBONISING BASE PAPER

Carbonising Base Paper is a grade of lightweight base stock manufactured specifically to be converted into one-time carbon paper, made from bleached or unbleached chemical pulps or mixtures of unbleached chemical and mechanical pulps. It is the raw stock to be surface coated on one or both sides with a carbon dope (solvent or wax based).

Significant properties include uniformity of surface and thickness, freedom from pinholes, close formation, high density strength, non-porosity and ability to take carbon inks without penetration and to release them subsequently under pressure or impact.

One Time Carbon is the carbon paper that is inserted between sheets of paper and can only be used once, thereafter it is discarded. OTC has declined in popularity with Sensitised Paper (Self Carbonised paper) becoming the preferred copy material. One time carbonising base papers are different form carbon base paper in term of specification (grade, nominal weight, tensile index, porosity, ash content, etc).

Requirements for one time carbonising base paper are as follows:

Nominal weight: 21 gsm (17 - 26 gsm +/-1.5 gsm)

Tensile Index MD: min. 40 N. m/g

Burst Index: min. 2kPa. m²/g

Porosity: min. 100 sec/100 ml

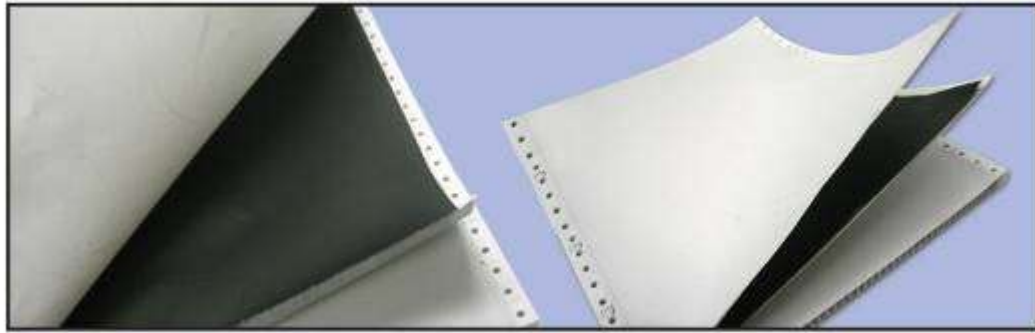
Opacity: min. 40%

Packaging: in rolls



Carbonising base paper





OTC White Form (Carbon)

(Source: Malaysia)

4802.54.30 4802.55.40 4802.61.41 4802.61.49

BASE PAPER OF A KIND USED TO MANUFACTURE ALUMINIUM COATED PAPER

Satisfying note 5, glossy one-sided, apparent density not less than 750 kg/m^3 , smoothness not exceeding 125 ml/min, Cobb water absorption less than 25 g/m^2 , whiteness under 82% ISO, opacity not less than 60%, tear strength $\text{mN.m}^2/\text{g}$ not less than $5.6 \text{ mN.m}^2/\text{g}$ machine direction and $5 \text{ mN.m}^2/\text{g}$ cross direction, bursting strength not less than $2.3 \text{ KPa.m}^2/\text{g}$, breaking length not less than 4000 m machine direction and 3500 m cross direction.

(Source: Viet Nam)

4802.55.21 4802.55.29 4802.56.21 4802.56.29 4802.58.21
4802.58.29 4802.61.31 4802.61.39 4802.62.11 4802.62.19
4802.62.21 4802.62.29

FANCY PAPER AND PAPERBOARD

Fancy paper and paperboard are specialty papers or paperboard with decorative finishes, for example:

- Watermarked paper and paperboard
- Granitized felt finish – a finish with a granite pattern applied to paper at the wet press by the use of woven wool or synthetic felts with distinctive patterns to create a similar texture in the finish,
- Fibre finish – pertaining to designs showing fibres;
- Vellum antique finish – characterized by the design of felt marks on the surface, which exhibits a toothy surface similar to eggshell or antique surfaces;
- Blend of specks – pertaining to designs showing specks.

(Source: Philippines)

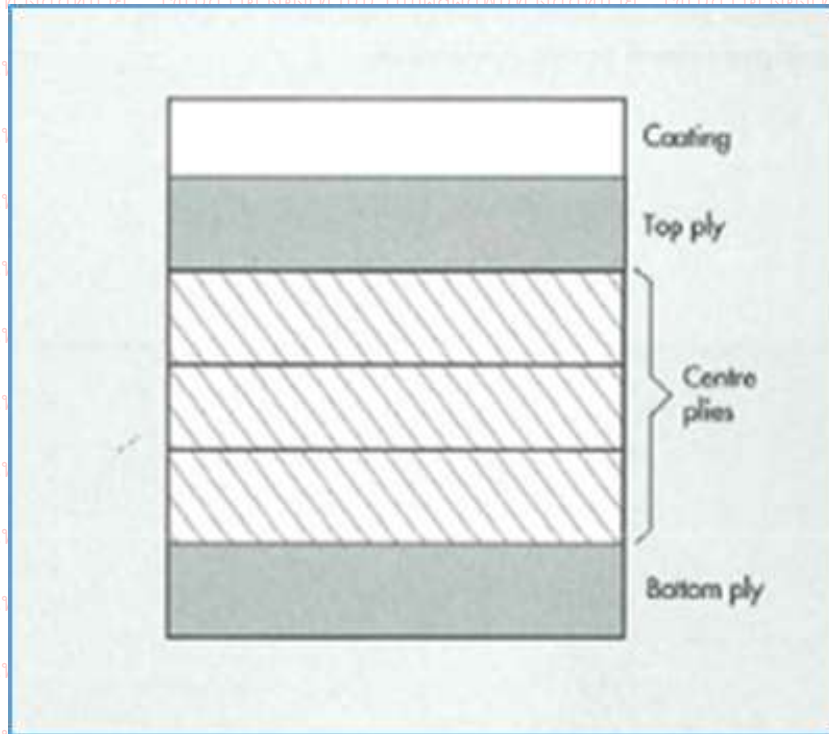
48.02

48.05

48.10

MULTI-PLY PAPER

Multi-ply paper or paperboard also known as multiplex or multi-layer consisting of up to more than two plies furnish layers combined or deposited one over together to form the sheet during manufacture, while still moist, without the use of adhesive. Two, three or more furnish layers similarly combined known as Duplex (Biplex), Triplex or Multiplex (respectively) according to the number of layers. The external furnish layer of the three-layers paper may be of the same composition, while the multi-layer papers may have two or more furnish layers of the same composition.



Multi-ply paper	
The different between the two layers by	
1	The nature of the pulps used. (e.g. Recycle waste pulps and kraft paper}
2	The method of production. (e.g. mechanical and chemicals)
3	Degree of processing. (e.g. unbleached and bleached) or (e.g. bleached and coloured)

Headings 48.04 and 48.05 cover multiply paper

1. Not for writing, printing or graphic purposes
2. The size that follow as stipulated in Chapter note 8 to chapter 48

3. Shape in rectangular, square or in roll

Heading 4802 can also cover multiply paper

1. For writing , printing or graphic purposes

2. The size unlimited

3. Shape in rectangular, square or in roll

Heading 4823 can also cover multiply paper

1. Whether or not for writing, printing or graphic purposes

2. Shape other than rectangular, square or in roll (e.g. in triangular, round etc.)

Multiplex Copy Paper, 98 Bright,

Multiplex Copy paper easy to use for all printing jobs, with a 98 bright that leads the competition. Multiplex Copy Paper with its 98 brightness will make your printed business presentation, resume or school project stand out from all others, look professionally done and get the notice it deserves.

Features and benefits:

Multi Copy Paper

Letter size: 8.5 in x 11 in.

Minimum order of 10 cases

5000 sheets per case

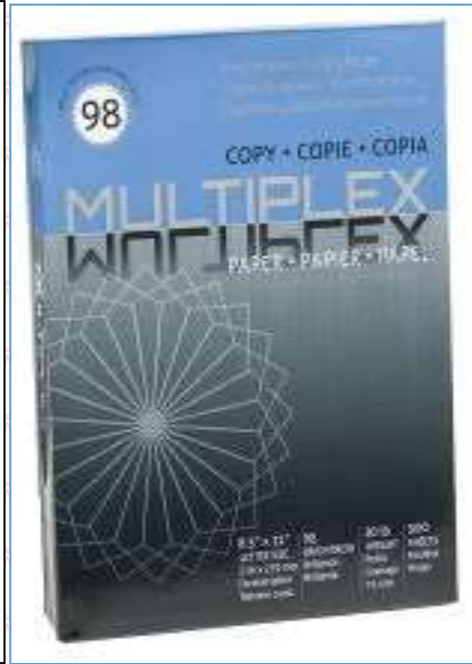
98 brightness rating

Acid-free

Derives from Eucalyptus fiber

20 LB

For all business copying/printing jobs



450g Triplex Paper Board

Product Description

1. Product Description

170-450 GSM paper board printing

GSM: 180-300 g

Reel and sheets

Gloss /Matte

2. Size:

1). Reel: 787mm /889mm /880mm /890mm

2). Sheet: 787mmx1092mm (31"*43")

889mmx1194mm (35"*47")

Packing: 125/250 sheets/ream, packed with kraft paper.

Then packed on wooden pallet.

15-24MT per 20container.

(Source: Malaysia)

ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย

ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย

4802.55.50

BASE PAPER OF A KIND USED TO MANUFACTURE RELEASE PAPER

Made from bleached chemical pulp, were coloured throughout the mass, weighing 75 ± 5 g / m², thickness 0.1 ± 0.05 mm, Cobb water absorption less than 18 g / m², surface strength not less than 12 candles indicator, Bekk smoothness not less than 25 seconds, bursting strength less than 150 kPa, tensile strength not less than 5000 mN machine direction and 2500 mN cross direction, tear strength not less than 470 mN machine direction and 530 mN cross direction, ash not less than 8%.

(Source: Viet Nam)

4804.21.10

4804.29.10

SACK KRAFT PAPER OF A KIND USED FOR MAKING CEMENT BAGS

Kraft paper, of a kind used to make bags has the air permeability not more than 30 seconds/100 ml (determined by the Bendtsen method) and water absorption not more than 35 g/m² (determined by the Cobb method).

(Source: Viet Nam)

4804.31.10

4804.41.10

4804.51.10

ELECTRICAL GRADE INSULATING KRAFT PAPER

Electrical grade insulating kraft paper is a water-finished kraft paper, satisfying with IEC554-3-1, and of a kind used as coil insulation in oil-immersed transformers.

The expression "water-finished" refers to paper produced by moistening the sheet with water (pH value ranging from 7 to 9) or steam during calendering process.

(Source: Philippines and Viet Nam)

4804.31.30

4804.39.10

4804.51.30

KRAFT PAPER, OF A KIND USED IN THE MANUFACTURE OF PLYWOOD

ADHESIVE TAPE

This kraft paper is used as backing of plywood kraft tape. It has high tensile strength This is a strong, thin kraft paper which prevents formation of shadows/ impressions when used on pale and thin veneers. It is manufactured to meet rigid laboratory specifications:

- It has a wet strength of 40g to 60g.
- The special thin paper avoids fibre deformation and pressure marks.
- The high strength kraft paper ensure building core panels

(Source: Viet Nam)

4804.31.40

SANDPAPER BASE PAPER

Kraft paper made from unbleached pulp, weighing 100 and 110 g/m² respectively; water absorption not greater than 18 g/m² (determined by the Cobb method); apparent density not less than 0.7 g/cm³; wet/dry state tensile strength (soaked for 1 hour) in both directions not less than 40%; dry tensile strength not less than 9300 m machine direction and 4000 m cross direction.

(Source: Viet Nam)

4804.31.50

OTHER KRAFT PAPER OF A KIND USED FOR MAKING CEMENT BAGS

Kraft paper made from unbleached pulp, weighing 70-90% ± 4 g / m²; air permeability of Bendtsen method not greater than 30 seconds / 100 ml; Cobb water absorption method not greater than 35 g / m²; tensile strength not less than 3.0 kN / m machine direction and 1.7 kN / m cross direction; tear strength not less than 540 mN machine direction and 640 mN cross direction; stretch factor not less than 1.5% machine direction and 3.0% cross direction; and unsatisfying with notes of subheading 2 of chapter 48.

(Source: Viet Nam)

4804.39.20

4804.42.10

4804.49.10

4804.52.10

4804.59.10

PAPER AND PAPERBOARD OF A KIND USED FOR MAKING FOOD PACKAGING

Foodpaper and foodboard are primarily designed for packing moist or oily food. The products are typically made from bleached chemical pulps and hard-sized for water resistance. Foodpaper and foodboards for frozen food packaging are made of highly sized water resistant paper or paperboard. They resist cracking at low temperature for use in the quick-freezing and storage of food.

Paper bags made of light weight uncoated kraft paper

Cake boxes made of medium weight uncoated kraft paperboard



(Source: Malaysia)

4805.30.10

COLOURED PAPER OF A KIND USED FOR WRAPPING WOODEN MATCH BOXES

This paper is coloured sulphite wrapping paper of a kind used to cover wooden boxes for matches. A sample of the wrapping paper in question is shown in the left-hand picture below. It is incorporated in the match boxes shown in the picture below.



(Source: Philippines)

4805.91.20

OF A KIND USED TO MANUFACTURE JOSS PAPER

Paper, of a kind used to manufacture burning votive paper in the religious rituals; weighing equal or less than 150 g/m².

(Source: Viet Nam)

4805.93.20

BLOTTING PAPER



Rectangular recording papers

(Source: Malaysia)

4811.90.42 **4811.90.92**

MARBLED PAPER

Paper create surface of imitation leather product with uneven marbling, smoothing or polishing marbling including:

Base layer: the high thermal paper from 150°C – 220°C,
Surface layer: plastic or silicon web.

Meet the following specifications :

- High Heat : from 150°C - 220°C
- Rotation handling to 20 times
- Thickness : 0.15 mm - 0.25 mm
- Rolls , size 150 cm - 155 cm
- Weight of 115-220 g / m²
- Tolerance in solvents: methyl ethyl ketone, toluene.

(Source: Viet Nam)

4813.20.10 **4813.20.21** **4813.20.22** **4813.20.23** **4813.20.31**
4813.20.32 **4813.90.11** **4813.90.12** **4813.90.91**

TOBACCO WRAPPING PAPER, PLUG WRAP PAPER AND TIPPING PAPER

- Tobacco wrapping paper is a special kind of paper used to wrap tobacco in cigarettes
- Plug wrap paper is a special kind of paper used to wrap the filter tip/plug
- Cigarettes tipping paper is a special kind of paper used to join the filter-tip and the tobacco column in cigarettes

4814.20.91

PHOTO MURAL

Photo murals are wall coverings presented in several panels, presented together. The assembly of panels after mounting will combine into one total picture, photo or a design. The packaging itself generally show the final picture, photo or design to be assembled. These are different from other wall coverings because they do not have repetitive prints; each panel represent only a part of the total picture to be created.



Photo 1: Wallpaper photo mural

(Source: Malaysia)

4821.10.10

4821.90.10

LABELS OF A KIND USED FOR JEWELLERY, INCLUDING OBJECTS OF PERSONAL ADORNMENT OR ARTICLES OF PERSONAL USE NORMALLY CARRIED IN THE POCKET, IN THE HANDBAG OR ON THE PERSON

These are labels affixed to the jewellery or similar objects or articles, intended for retail sale, whether in the piece or as set.

(Source: Philippines)

4823.90.40

PAPER TUBE SETS OF A KIND USED FOR THE MANUFACTURE OF FIREWORKS

Are sets of paper tubes, made of kraft paper and paperboard, of various sizes and diameters. These are bound together and attached with a secondary fuse surrounding each tube. The clay end plug at the bottom end acts as a base. Also included in the set are chipboard discs for covering each tube. These are used in the manufacture of fireworks or pyrotechnics.

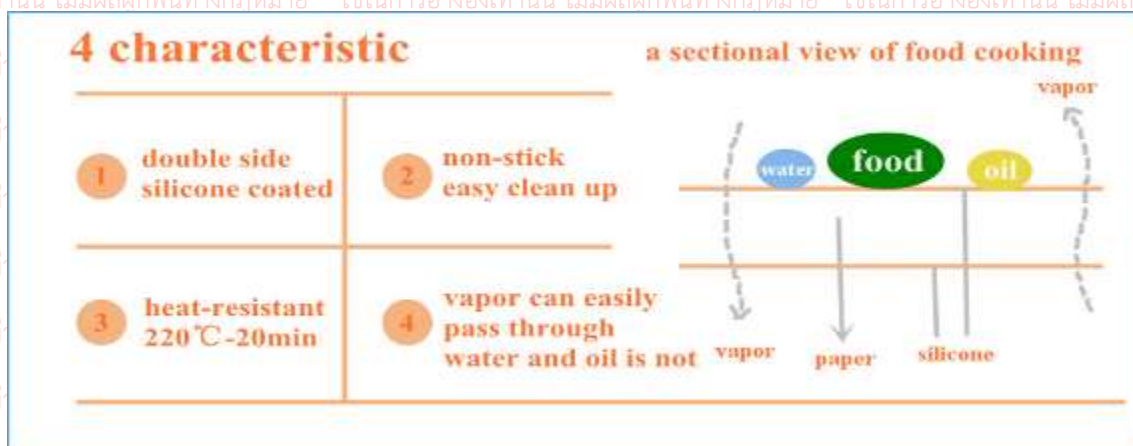
(Source: Philippines)

4823.90.91

SILICONE PAPER

Silicone paper is a kind of paper coated with silicone polymer in which forming a layer of silicone so as to achieve non-stick, anti-oil effect or anti sticking material. In present days this silicone paper is extensively used for making labels stock, single side or double released tape.

Silicone (organic substances) paper in the roll or rectangular (including square) of any size is classified under heading 4811.70. In case silicone paper in shaped other than rectangular (including square) such as round, triangular or other shape is classified under heading 4823.





Silicone paper in sheet or roll : AHTN 4811



Silicone paper in the shape of rectangular, square and round

Example 1

Steaming silicone paper cut to round shape: AHTN 4823

Product details	Silicone Steaming paper or steaming paper
Use:	For food steaming
Coating:	Coated, Double sides silicone coated
Pulp Material:	100% virgin wood pulp
Pulping Type:	Mechanical Pulp
OEM size:	2"-18" circles
Characteristic:	Greaseproof, heat-resistant, non-stick
GSM:	38/40gsm standard
Temperature:	20 min-230°C
Packaging Detail:	Sheet:500 sheets/ream

CHAPTER 49

4902.90.10

EDUCATIONAL, TECHNICAL, SCIENTIFIC, HISTORICAL OR CULTURAL JOURNALS AND PERIODICALS

These are journals and periodicals dealing with educational, technical, scientific, historical or cultural subjects. These periodicals are published works that appear in a new edition on a regular schedule (appearing less than four times a week). Examples are newsletters and journals. An example of a journal is an academic journal which is a peer-reviewed periodical in which scholarship relating to a particular academic discipline is published.

(Source: Philippines)

4911.99.10

PRINTED CARDS FOR JEWELLERY OR FOR SMALL OBJECTS OF PERSONAL ADORNMENT OR ARTICLES OF PERSONAL USE NORMALLY CARRIED IN THE POCKET, HANDBAG OR ON THE PERSON

These are cards to hold or secure jewellery or similar objects or articles, intended for retail sale, whether in the piece or as set. The printing provides information about the jewellery or similar objects or articles.

(Source: Philippines)

4911.99.20

PRINTED LABELS FOR EXPLOSIVES, OTHER THAN THOSE OF HEADING 48.21

These labels indicate important coded information such as detonating speed and type of explosives, etc. They come in various shapes and sizes and are attached to specific points of the explosive assemblies, along the detonating fuses, signal tubes and elsewhere. These labels are required to withstand any weather to ensure safety in storage or during application.



(Source: Philippines)

4911.99.30

**EDUCATIONAL, TECHNICAL, SCIENTIFIC, HISTORICAL OR CULTURAL
MATERIAL PRINTED ON A SET OF CARDS**

Sets of printed cards such as flash cards and the like dealing with educational, technical, scientific or cultural subjects.

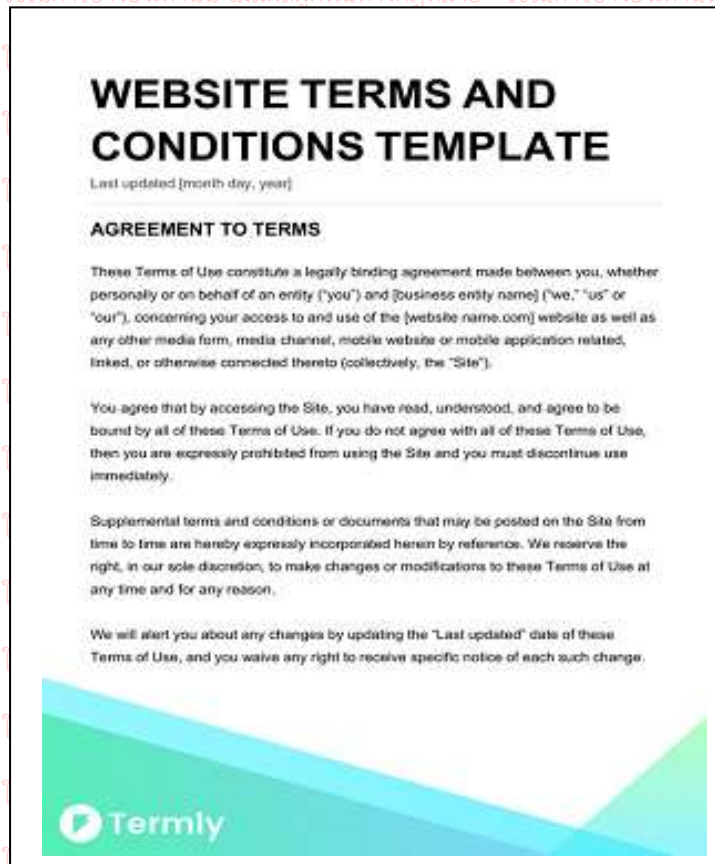
Flashcards are a set of cards bearing information on either or both sides, used in classroom drills or in private study. These cards can contain vocabulary, historical dates, formulas or any subject matter that can be learned via a question and answer format. They are widely used as a learning drill to aid memorization by way of spaced repetition.

(Source: Philippines)

4911.99.40

PRINTED MATTER WHICH GRANTS THE RIGHT TO ACCESS, INSTALL, REPRODUCE OR OTHERWISE USE SOFTWARE (INCLUDING GAMES), DATA, INTERNET CONTENT (INCLUDING IN-GAME OR IN-APPLICATION CONTENT) OR SERVICES, OR TELECOMMUNICATIONS SERVICES (INCLUDING MOBILE SERVICES)

Printed matter under this subheading is imported separately from the software, etc. It generally contains a detailed printed contract/certificate that describe or explain the terms, conditions and limitations between an end-user and the service provider/s upon purchasing, accessing, installing, reproducing or using their software, data, internet content or services, or telecommunications services.



(Source: Philippines)

SECTION XI

PRINTED BY THE TRADITIONAL BATIK PROCESS

For the purposes of Section XI, "printed by the traditional batik process" means fabrics printed with pictures, artistic expressions, pattern and motif symbolism, and local identity, where the printing is made by hand, using special hand tools, by applying

dots and lines in hot wax to resist the dye acting upon the fabrics (the wax resist dyeing method).

There are three methods of the traditional batik process as follows:

1. Hand drawn using special hand tools called "Canting Tulis", which is recognized as "Batik Tulis":

Fig. 1 : Canting tulis



Fig. 2 : Batik Tulis



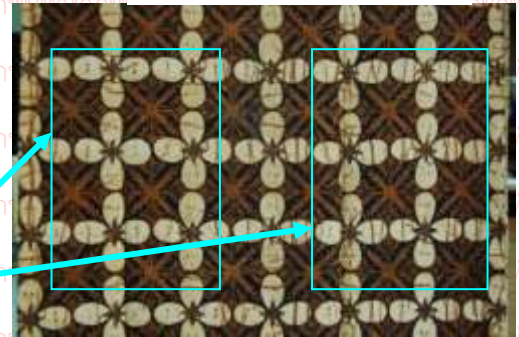
Repetitive shape, but the size and pattern is not exactly the same

2. Hand stamped using special hand tools called "Canting Cap", which is recognized as "Batik Cap":

Fig. 3 : Canting cap



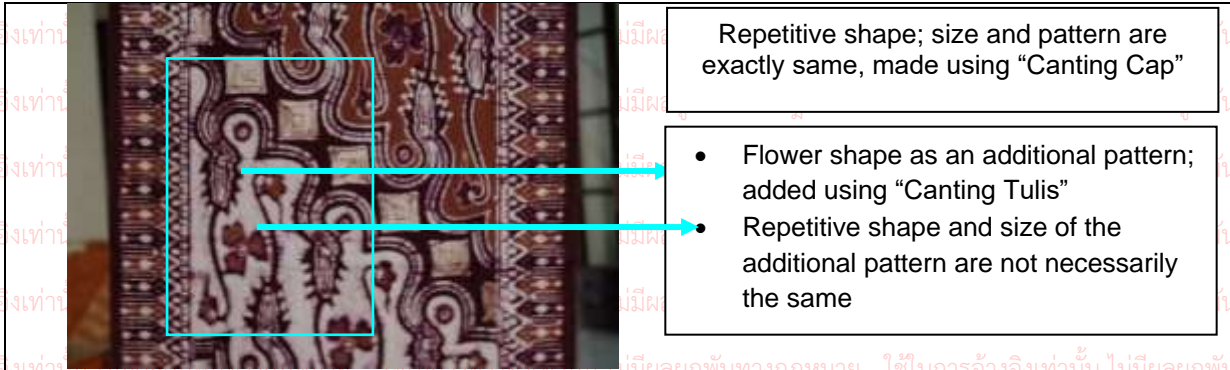
Fig. 4 : Batik Cap



Repetitive shape, with the same size and pattern

3. Combination of hand drawn and hand stamped, which is recognized as "Batik Kombinas":

Fig. 5 : Batik Kombinas



Repetitive shape; size and pattern are exactly same, made using "Canting Cap"

- Flower shape as an additional pattern; added using "Canting Tulis"
- Repetitive shape and size of the additional pattern are not necessarily the same

Other examples of traditional batik patterns:



(Source: Indonesia)

SECTION XI

PRINTED BY THE TRADITIONAL BATIK PROCESS

For the purposes of Section XI, "printed by the traditional batik process" means fabrics printed with pictures, artistic expressions, pattern and motif symbolism, and local identity, where the printing is made by hand, using special hand tools, by applying dots and lines in hot wax to resist the dye acting upon the fabrics (the wax resist dyeing method). Traditional batik printing process can be applied on fabrics made of textile materials such as silk, wool and fine animal hair, cotton, other vegetable fibres, or man-made fibres.

There are three methods of the traditional batik process as follows:

1. Hand drawn using special hand tools called "Canting Tulis", which is recognized as "Batik Tulis":

Fig. 1 : Canting tulis



Fig. 2 : Batik Tulis



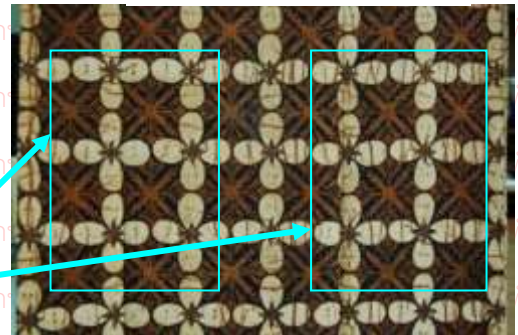
Repetitive shape, but the size and pattern is not exactly the same

2. Hand stamped using special hand tools called "Canting Cap", which is recognized as "Batik Cap":

Fig. 3 : Canting cap



Fig. 4 : Batik Cap



Repetitive shape, with the same size and pattern

3. Combination of hand drawn and hand stamped, which is recognized as “Batik Kombinas”:

Fig. 5 : Batik Kombinas



Repetitive shape; size and pattern are exactly same, made using “Canting Cap”

- Flower shape as an additional pattern; added using “Canting Tulis”
- Repetitive shape and size of the additional pattern are not necessarily the same

Other examples of traditional batik patterns:



(Source: Indonesia)

CHAPTER 52

5208.31.10

VOILE

Voile is a lightweight plain weave fabric which has a smooth, soft and semi-transparent character, obtained from fine yarn. Voile cotton yarn made from a single yarn 50S max number of threads (equivalent to 12 Tex) or made of ply yarn the number of threads max 100S twisted into a yarn (double 12 tex).

(Source: Indonesia)

5208.41.10

5208.42.10

5210.41.10

5211.41.10

IKAT FABRIC

Ikat fabric which is also known as 'Ikat', is a traditional fabric, woven on traditional hand operated loom machines out of yarns that are specially prepared by dyeing after binding (ikat) at required intervals to give the desired patterns. Because of that process, each yarn may have several colours at intervals. When these yarns are woven, those give a unique design to the finished fabric.

The term 'ikat' refers to that binding process, from which the fabric derives its name. However this subheading does not cover fabric where tied-dyeing has taken place after weaving.

Manufacturing Process of Ikat Fabric :



A water resistant material is tied around thread with desired pattern to prevent dye from adhering to the threads



The thread with tied pattern is dyed to obtain the desired pattern



The dyed thread then weaves to make into a finished fabric



Examples of finished Ikat Fabrics

(Source: Indonesia)

5209.11.10

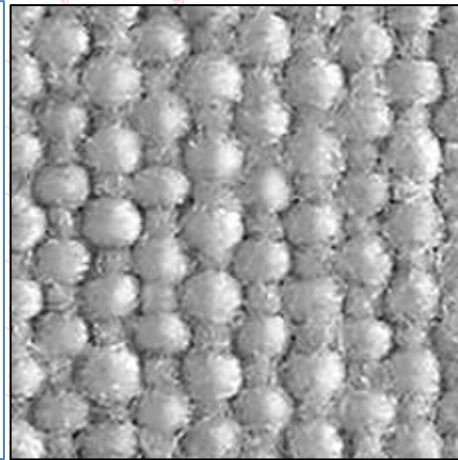
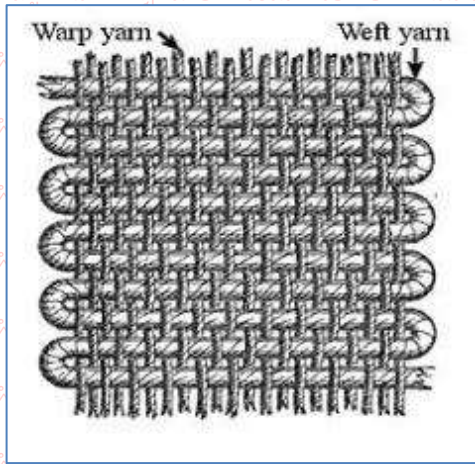
DUCK AND CANVAS

"Duck" & "Canvas" fabrics are one and the same. Duck is an industry term and canvas is more of a consumer term. The fabric usually is made from cotton, flax, hemp, or jute in weights traditionally ranging from 200 to 2000 g/m². The weave is plain or double-end plain. Single fill ducks differ from numbered ducks in that there is only 1 yarn in the weft. Numbered ducks will have 2 yarns making it stiffer & stronger.

In the United States, canvas is classified in two ways: by weight (ounces per square yard) and by a graded number system. The numbers run in reverse of the weight so a number 10 canvas is lighter than number 4. The grade of numbered duck refers to the number of ounces subtracted from 19 for a 36"x22"-inch piece of fabric. For example, a piece of #8 numbered duck with dimensions of 36"x22" weighs 11 ounces ($19 - 8 = 11$).

Single Fill Ducks

Single fill ducks are extremely popular for slip covers, crafts, bags, liners, table cloths, fleece lined jackets, & much more.



Double fill Ducks

"Double fill duck or "plied yarn duck" is a heavy weave structure known as Numbered Ducks. Numbered ducks are identified by the "#" sign in front of a number from 1 to 12.

Numbered ducks will have 2 yarns making it stiffer & stronger weave construction over single fill ducks and are used for more rugged outdoor or industrial applications.

Midwest Wide Number Duck

- Selected widths from 26 to 144 inches.
- 100% cotton number duck.
- No. 8 or No. 10 used for heavy bags, roofing, floor covering, director's chairs and murals.
- No. 12 used for irrigation canvas, conveyors, filter cloths and unprimed artists' canvas.
- Put up in approximately 100 yard rolls.



No. 2/0
Weight: 31.9 oz. per sq. yd.
Width: 26 in.



No. 4
Weight: 24.54 oz. per sq. yd.
Width: 36 in., 48 in., 60 in.



No. 6
Weight: 21.27 oz. per sq. yd.
Width: 36 in., 48 in., 60 in., 72 in.



No. 8
Weight: 18 oz. per sq. yd.
Width: 36 in., 48 in., 54 in., 60 in., 72 in., 84 in.



No. 10
Weight: 14.73 oz. per sq. yd.
Width: 36 in., 48 in., 54 in., 60 in., 72 in., 84 in., 92 in., 120 in., 144 in.



No. 12
Weight: 11.45 oz. per sq. yd.
Width: 36 in., 48 in., 54 in., 60 in., 72 in., 84 in., 92 in., 96 in., 120 in., 144 in.

(Source: Malaysia)

CHAPTER 53

5311.00.20

BURLAP OF ABACA

Burlap of abaca is a strong, rough, plain woven fabric made from abaca fibres. It is used for making bags, to reinforce linoleum, and for decoration purposes such as wrapping flower bouquets.



(Source: Philippines)

CHAPTER 54

5402.33.10

5402.46.10

5402.47.10

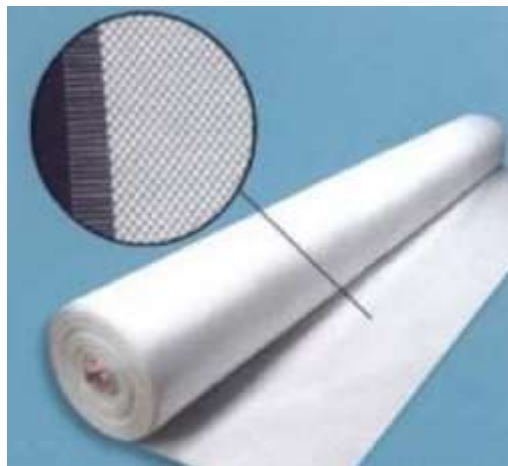
OF A COLOUR OTHER THAN WHITE

Coloured yarns in this subheadings refer to yarns which conform to Subheading notes 1(c) to Section XI (Textiles and textile articles). It also includes yarns produced from coloured resins.

5407.10.20

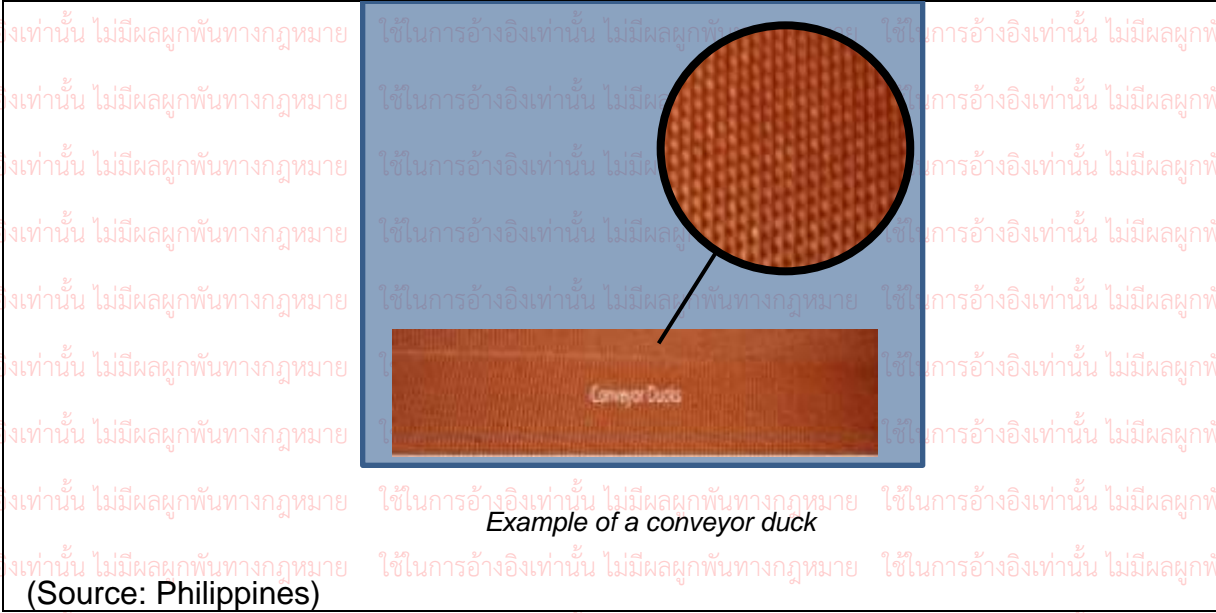
TYRE FABRICS; CONVEYOR DUCK

Tyre fabrics have a warp and weft in mesh form like ordinary woven fabrics. They are used in the manufacture of rubber tyres.



Example of a tyre fabric

Conveyor duck is woven fabric, in rolls, made from nylon-6 yarn and is used as a tensile member of conveyor belts.



Example of a conveyor duck

(Source: Philippines)

CHAPTER 56

5601.22.10

CIGARETTE TOW

Cigarette tow consists of a small roll of wadding of acetate tow, generally presented with a diameter of 7 mm and a length of 5.08 cm, used to make cigarette filter tips.

(Source: Indonesia)

CHAPTER 57

57.01 57.02 57.03 57.05

PRAYER RUGS

Prayer rugs, also known as prayer mats (sajjada in Arabic) are made of textile materials such as cotton, man-made fibres, wool or other vegetable fibres. The rectangular dimensions are approximately 70 cm in width x 120 cm in length. They are decorated with religious images of Islamic symbols or architectural designs.



(Source: Malaysia)

5703.10.10 5703.90.21 5703.90.91

FLOOR MATS

Floor mats, are protective, removable, floor coverings, of textile materials, specially shaped or fitted, of a kind used for motor vehicles. It is to be placed on top of the carpet's surface to prevent dirt and debris.



(Source: Philippines)

5703.10.30 5703.90.22 5703.90.93

FLOORING CARPETS

Flooring carpets are protective floor coverings, of a kind used in motor vehicles, usually pre-cut and sewn, pre-formed, specially shaped or fitted to be affixed on the motor vehicles' floor to prevent dirt and debris from making contact with the floor.



(Source: Philippines)

CHAPTER 59

5902.10.11

5902.10.19

5902.20.20

CHAFFER FABRIC, RUBBERISED

Rubberised chafer fabric is a fabric coated with unvulcanized rubber.

It is used for wrapping around the bead section of a tyre before vulcanization of the complete tyre, and whose purpose is to maintain an abrasion-resistant layer of rubber in contact with the rim on which the tyre is mounted.

Chafer fabric originally were cross woven cotton. For tubeless tyre they are usually resin impregnated multifilament mesh fabric of nylon or polyester or rayon or alternatively nylon monofilament mesh.

These fabrics conform to the requirements of Note 6 to Section XI.

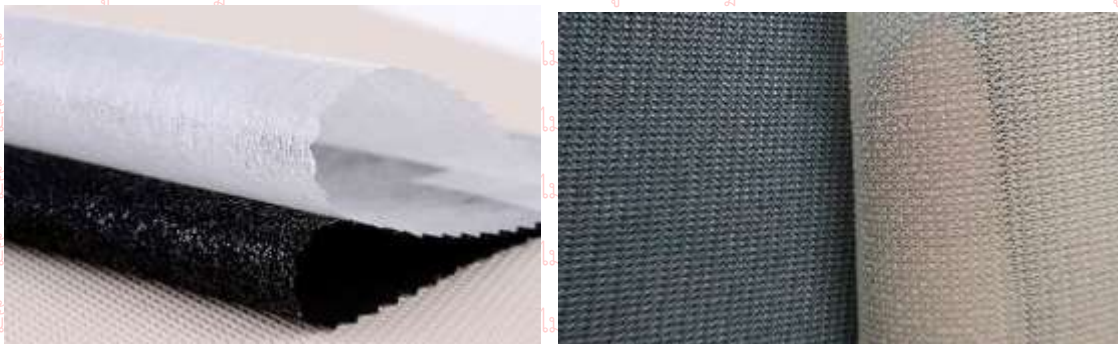
(Source: Indonesia)

5903.10.10

INTERLINING

Interlining is a kind of fabric used between two layers of fabric generally to provide reinforcement, durability and stability to the fabric panel or garment. It is a type of textile fabrics which is impregnated, coated, covered or laminated with plastics, other than those of heading 59.02.

Fusible interlining, which is the most widely used type of interlining, is coated with plastics (e.g., poly(vinyl chloride)) and requires the application of heat and pressure to achieve the desired result.



Examples of interlining

(Source: Philippines)

CHAPTER 61

6113.00.10

DIVERS' SUITS (WETSUITS)

Divers' suits are waterproof jumpsuits used in scuba diving. They have pre-formed arms and legs. They are made up of knitted nylon fabric impregnated with neoprene rubber.



(Source: Philippines)

6113.00.30

6114.30.20

6210.10.11

6210.20.20

6210.30.20

6210.40.10

6210.50.10

6211.33.20

6211.39.20

6211.43.50

6211.49.20

GARMENTS USED FOR PROTECTION FROM FIRE

Garments used for protection from fire are usually made of specific textile fabrics such as Polybenzimidazole fiber (PBI), Aramid, Nomex (a DuPont trademark), Arselon (Khimvolokno trademark), M5 fiber, Kevlar, Cotton, or Modacrylic, or textile fabrics coated with minerals such as structured silica. But these fabrics do not contain asbestos.

(Source: Indonesia)

CHAPTER 62

6205.20.20

6205.30.10

6205.90.92

BARONG TAGALOG

Barong Tagalog is an upper garment with short or long sleeves usually made of silk, cotton, polyester or a mixture of textile fibers. It is lightweight, sometimes embroidered along in the front and worn untucked (similar to a coat/dress shirt), over an undershirt. It is used in formal functions but less formal versions also exist. Properly referred to as Barong Tagalog (in English: "Tagalog dress"), which is known for being the Philippine national attire for men.

The word Barong is a coined word that comes from the Filipino word "baro" meaning outfit. Similar to the Malaysian Baju which translates to Dress. The term "Barong Tagalog" literally means "Tagalog dress" in Filipino.

Variations:

- Polo barong refers to a short-sleeved version of the barong, often made with linen, ramie or cotton. This is the least formal version of the barong and is frequently used as men's office wear (akin to the Western suit and tie).
- Gusót-Mayaman (Tagalog, "wrinkle-wealthy") and Linen barong are any barong not made of piña, jusi, or similarly delicate fabrics. These are generally considered less formal than the barong Tagalog, and is also are reserved for everyday office wear.
- Shirt-jack barong are cut in shirt-jack style usually made of polyester-cotton, linen-cotton and the typical gusót-mayaman fabrics. Popularised by politicians wearing it during campaigns or field assignments, this style gives the wearer a look between casual and dressed-up. This type is however considered inappropriate for very formal occasions such as weddings.





(Source: Philippines)

6211.32.20

6211.33.40

6211.39.40

PILGRIMAGE ROBES (IHRAM)

Pilgrimage robes (in Arabic: ihram) consist of two lengths of seamless plain white fabric, without any stitching or sewing, sufficient in length to cover the body. Of the two, one is worn about the hips and the other over the shoulders, by Muslim men and boys, while performing their pilgrimage to Mecca and Medina.

Pilgrimage robes are made of woven cotton fabric, man-made fibres, or a mixture of both in which the cotton generally comprised of 30% of it. The minimum weight of ihram is 275 g/m².



ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย

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ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย

(Source: Malaysia)

ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย 6211.42.30 6211.43.70 ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย 6211.49.50 ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย

SARONG OF A TUBULAR TYPE

Sarong (also known as *Malong* or *Longyi*) is a garment made of a woven fabric whose edges are sewn together to form a pipe or tube. The not-stitched edges are formed of self-edges. Generally, Sarong is worn wrapped around the waist to cover lower body (waist downwards). Sarong can be worn by both men and women, and therefore it is included here in accordance with Note 8 to Chapter 62.p

ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย ใช้ในการอ้างอิงเท่านั้น ไม่มีผลผูกพันทางกฎหมาย
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(Source: Indonesia)


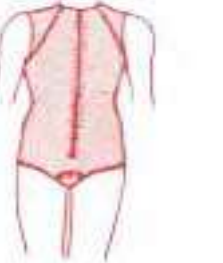




6211.42.20	6211.43.20	6211.49.31	6211.49.39
PRAYER CLOAKS			
<p>Traditionally, prayer cloaks were two-piece garments worn by Muslim women only during prayer. The cloaks were normally plain white in colour, of woven fabric, and made of cotton or other textile materials other than silk. The lower piece was used for covering the body from the hips to the feet. The upper piece covered the body from the head to the knees, with an opening for the face. Today, prayer cloaks also consist of one piece of clothing that covers a woman form the head to the feet with an opening for the face. In addition to white, they may also be made of other coloured plain fabric with embroidery at the edges of the cloaks.</p>			

(Source: Malaysia)

6212.90.11 6212.90.91

COMPRESSION GARMENTS OF A KIND USED FOR THE TREATMENT OF SCAR TISSUE AND SKIN GRAFTS

Compression garments (known also as pressure garments) use the latest technology and high quality textile materials for the management and rehabilitation of burn scars and other scar management. These garments must be worn continuously for at least six to twelve months or until the scar fades and shows evidence of maturation.

Burn scar body and skin grafting	Required compression garment	Sample view
		
		

(Source: Malaysia)

CHAPTER 63

6307.90.80

LACES FOR SHOES, BOOTS, CORSETS AND THE LIKE

Shoe laces, sometimes called shoe strings or boot laces, are a system commonly used to secure shoes, boots and other footwear. They typically consist of a pair of strings or cords, one for each shoe, finished off at both ends with aiglet usually of plastic or metal, which makes it easier to hold the lace and feed it through the eyelets. The materials used for shoelaces today includes cotton, textured polyester, spun polyester, nylon, polypropylene or leather.

The more common method of shoelace manufacture is using a braiding machine. Braiding process of shoes laces involves the interlacing three or more thread in such a way that they cross one another and laid together in diagonal formation. Flat, tubular or solid construction may be formed in this way. Other type of shoes laces are make from rope or cord yarns construction.

Braided shoe laces is classified under heading 6307.90. In case of shoelaces made of rope or cord yarns is classified under heading 5609.00 as describe in **Explanatory note**.

Braided construction



Rope or cord construction



Flat braided yarn for shoes laces: AHTN 6307.90.



CHAPTER 64

6401.92.10 6402.91.92 6402.99.20 6403.91.30 6403.99.30

FOOTWEAR, INCORPORATING A PROTECTIVE NON-METAL TOE-CAP

Footwear incorporating a protective non-metal toe-cap, such as thermoplastic polyurethane (TPU), Kevlar or carbon fibre.

The picture below shows the placement of protective non-metal toe-caps. It is not intended to describe a waterproof footwear.

Footwear

Protective Non-Metal Toe-Cap



Carbon Fibre:



TPU:



(Source: Indonesia)

6406.90.32

COMPLETE SOLES

Footwear consists of four major parts: the outer sole, the insole, the midsole and the upper. The complete sole means the part consisting of the three soles (i.e., outer sole, insole and midsole) without the upper.



(Source: Malaysia)

Upper

Complete Sole

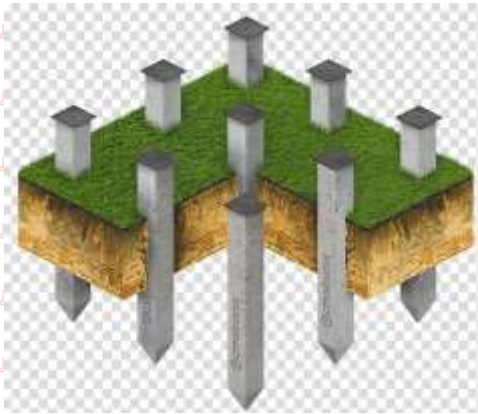
CHAPTER 68

6810.91.10

BUILDING PILES OF CONCRETE

These are concrete poles made by moulding concrete. They are used as load bearing poles to channel the load to the ground.

These piles are used not only for putting up of a building but also for many civil engineering purposes where a load bearing foundation is needed.



(Source: Indonesia)

CHAPTER 69


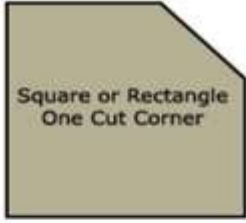



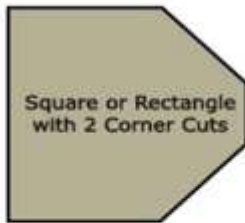

6907.21.10

LINING TILES OF A KIND USED FOR UNGLAZED GRINDING MILLS

These are high alumina ceramic tiles or bricks used as internal lining materials of grinding mills used by the cement, ceramic, paint and other industries instead of metallic lining materials to prevent iron contamination in the grinding of cement, ceramic powders and pigments. These tiles or bricks have the characteristics of a smooth surface, high density, hardness and impact resistance.



(Source: Philippines)

70.03	70.04	70.05
OTHER, IN SQUARES OR RECTANGULAR SHAPE INCLUDING 1 OR MORE CORNERS CUT		
 <p data-bbox="487 430 730 493">Square or Rectangle 4 Cut Corners</p>	 <p data-bbox="982 430 1226 493">Square or Rectangle One Cut Corner</p>	 <p data-bbox="487 714 730 756">Square or Rectangle</p>  <p data-bbox="982 714 1226 777">Octogon All Sides Equal</p>  <p data-bbox="982 924 1226 987">The Fold is the Length of the Center Seam</p> <p data-bbox="982 997 1226 1018" style="text-align: center;">FOLD</p> <p data-bbox="982 1029 1226 1113">The Fold measurement is going to be either the length or width measurement</p>
 <p data-bbox="487 997 730 1060">Square or Rectangle with 2 Corner Cuts</p>	 <p data-bbox="755 1239 958 1291">Square or Rectangle with Round Corners</p>	
<i>Photo 1: Example Shape</i>		
(Source: Malaysia)		

7018.90.10
<p>GLASS EYES</p> <p>Glass in form of spherical, oval or round without external frame or mechanism, diameter about 4-36 mm. They can be many different colors, whether or not be decorated painted. They use to make doll eyes, toy's eyes or eyes for articles of Chapter 95.</p>



(Source: Viet Nam)

7019.90.20

BLINDS

The term window blinds can also be used to describe window coverings generically—in this context window blinds include almost every type of window covering, i.e. shutters, roller blinds, cellular shades, wood blinds, roman blinds.

Glass blinds generally, consist of acrylic or wooded blinds sandwich with glass panel, framed with aluminium profile to be fitted on to a window or door that can be protected from dust, damage and little hands. In the case of acrylic or wooded blinds without glass panel are classified according to the materials of chapter 39 or 44.

(Source: Malaysia)

7019.90.40

ASPHALT OR COAL-TAR IMPREGNATED GLASS-FIBRE OUTERWRAP OF A KIND USED FOR PIPELINES

This product is a non-woven product made of randomly oriented glass fibres reinforced longitudinally with glass yarn and then impregnated with bitumen (asphalt) or coal tar enamel. It serves as an outer wrap to reinforce pipelines and to counter corrosion. It is available in rolls.

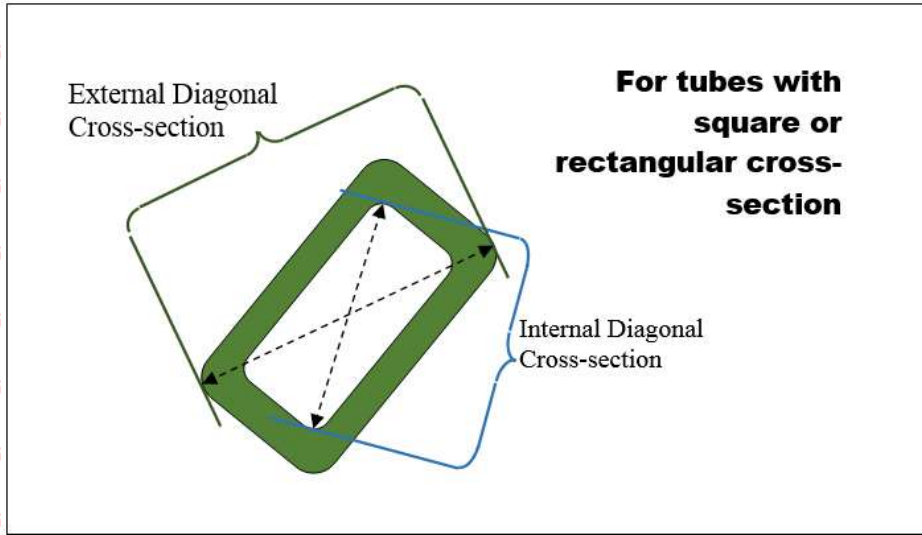
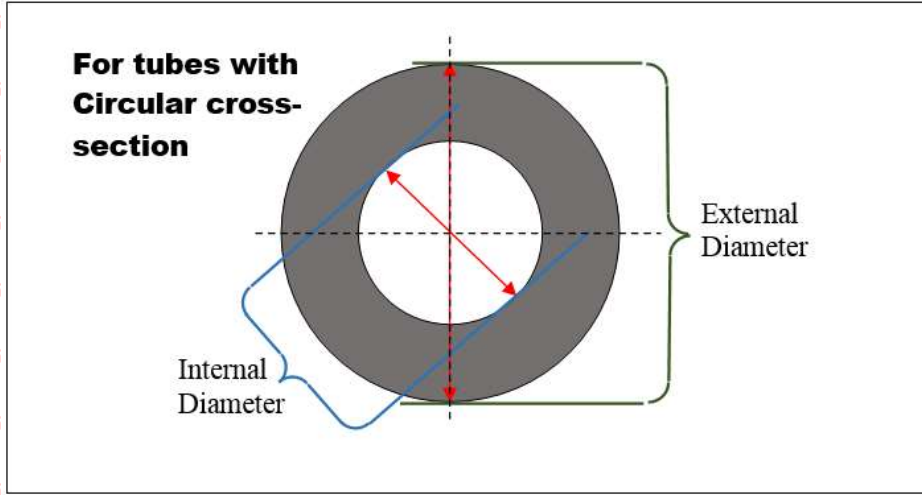


7020.00.11
GLASS MOULDS OF A KIND USED FOR THE MANUFACTURE OF ACRYLIC GOODS
 The mould is typically made of large tempered glasses used for moulding acrylic goods. Acrylic liquid is poured into the mould to produce the desired thickness and shape of the acrylic good (e.g. sheets).
 (Source: Philippines)

Section XV

MEASUREMENT OF TUBES

With regards to the measurements of tubes (circular, square or rectangular, etc.) the following definitions apply:



Diagonal cross-section is the longest possible line between the two opposing corners.

(Source: Vietnam and Consultant)

CHAPTER 72

7207.12.10 7207.20.10 7207.20.91

SLABS

Slabs consist of flat-shaped, semi-finished, rolled steel with a typical width of not less than 250 mm and a cross-sectional area of not less than 100 cm². Their minimum thickness is 40 mm. Slabs are rectangular (other than square) in cross-section, but have widths considerably greater than their thicknesses.

Slabs are converted into plates, sheet and strip products at the rolling mill.

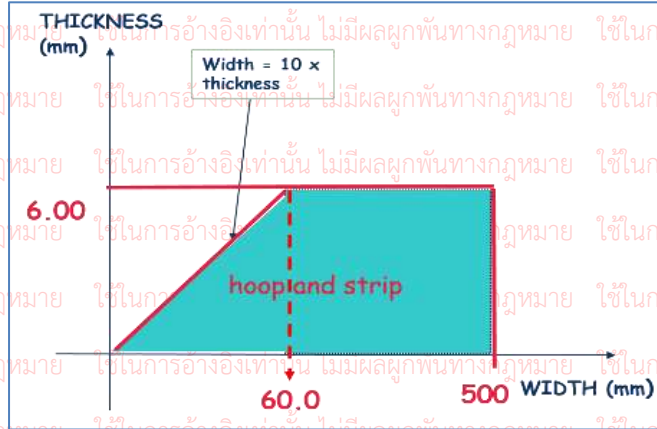


(Source: Philippines)

72.11

COILS FOR RE-ROLLING

For the purposes of headings 72.11 coils for re-rolling are coiled, semi-finished hot-rolled products, of rectangular section, not less than 1.5 mm thick, of a width exceeding 500 mm and of a weight of not less than 500 kg per piece.



Condition:

1. In coil or straight;
2. Rectangular section;
3. The thickness not exceeding 6 mm;
4. The width not exceeding 500 mm and
5. The thickness does not exceed one tenth of the width

Example:

1. 3 mm T x 350 mm W, in coil = hoop and strip
2. 3 mm T x 25 mm W, in coil = Not hoop and strip
3. 7 mm T x 75 mm W, in coil = Not hoop and strip
4. 5 mm T x 480 mm in straight = Hoop and strip

(Source: Malaysia)

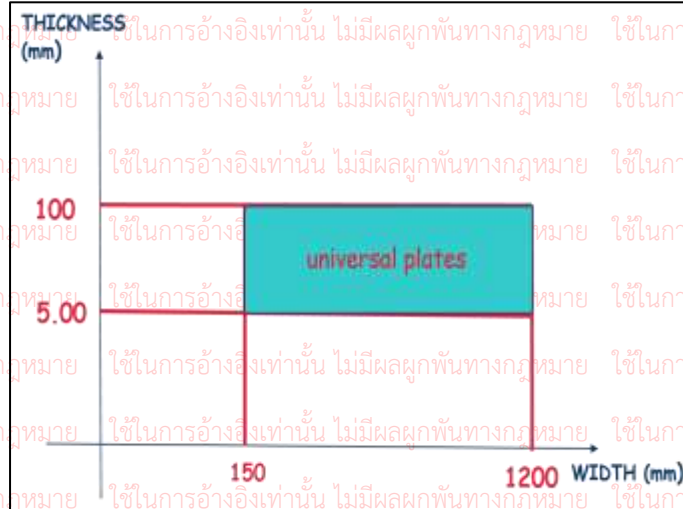
72.11

72.12

UNIVERSAL PLATES

Universal plates are products of rectangular section, hot rolled lengthwise in a closed box or universal mill, of a thickness exceeding 5 mm but not exceeding 100 mm, and a width exceeding 150 mm but less than 600 mm.

Reference: Universal Mill Steel Plates A.S.T.M. A-36



Conditions

1. In straight;
2. Hot rolled plate;
3. Rectangular section;
4. The thickness exceeding 5mm but not exceeding 100mm and;
5. The width exceeding 150 but not exceeding 1200 mm.

Example:

ILLINOIS STEEL SERVICE, INC. 800.733.1666
STEEL BEAM SPECIALISTS - ONE OF THE LARGEST STOCKS OF STRUCTURALS IN THE USA!

Universal Mill Plate

Hot Rolled ASTM-A36
Stock lengths: 20', 25', 30', & 40'

Size In Inches	Wt. Per Ft., Lb.	Size In Inches	Wt. Per Ft., Lb.
1/4 x (10.20 Lb. Per Sq. Ft.)		3/4 x (30.60 Lb. Per Sq. Ft.)	
9	7.65	9	22.95
10	8.50	10	25.50
11 1/2	9.78	12	30.60
12	10.20	14	35.70
14	11.89	16	40.80
24	20.40	24	61.20
5/16 x (12.75 Lb. Per Sq. Ft.)		7/8 x (35.70 Lb. Per Sq. Ft.)	
9	9.56	9	26.78
10	10.62	10	29.75
11 1/2	12.22	12	35.70
12	12.75	14	41.65
16	17.00	16	45.60
24	25.50	24	71.40
3/8 x (15.30 Lb. Per Sq. Ft.)		1 x (40.80 Lb. Per Sq. Ft.)	
9	11.48	9	30.60
10	12.75	10	34.00
11 1/2	14.66	12	40.80
12	15.30	14	47.60
14	17.85	16	54.40
16	20.40	18	61.20
24	30.60	24	81.60
7/16 x (17.85 Lb. Per Sq. Ft.)		1 1/4 x (51.00 Lb. Per Sq. Ft.)	
9	13.39	10	42.50
10	14.87	12	51.00
12	17.85	18	76.50
24	35.70	24	102.00

1 in = 2.54cm
 1lb = 0.45kg

(Source: Malaysia)

7213.91.10 7213.99.10

RODS, OF A KIND USED FOR PRODUCING SOLDERING STICKS

These are metal rods having the undernoted general composition, and used for manufacturing welding rods (soldering sticks) by coating with flux materials.

Carbon $\leq 0.1\%$;

Manganese: 0.35 – 0.45%;

Silicon: 0.3 – 0.35%;

Phosphorous: max 0.03%;

Sulphur: max 0.03%



(Source: Viet Nam)

7217.20.91

STEEL CORE WIRE OF A KIND USED FOR STEEL REINFORCED ALUMINIUM CONDUCTORS (ACSR)

Galvanized steel core wire generally having a carbon content of 0.50 to 0.85% by weight, used for mechanical reinforcement in the manufacture of aluminium conductors.

(Source: Philippines)

CHAPTER 73

7303.00.11

HUBLESS TUBES AND PIPES

Unlike conventional cast iron pipes, which have one end expanded to receive the end of a second pipe (bell and spigot), hub-less (no-hub) pipes have plain ends on both ends and are connected by means of flexible joint stainless steel couplings. They are used for sewage and storm drains, waste and vent piping, sewer and non-pressure applications. They are manufactured from gray cast iron.

ASTM A888-09 – Standard Specification for Hub-less Cast Iron Soil Pipe and Fittings for Sewage and Storm Drain, Waste and Vent Piping Applications – is the internationally accepted standard for hub-less pipes and fittings.



Hub-less pipes

(Source: Philippines)

73.04 73.05

HIGH PRESSURE HYDROELECTRIC POWER TURBINE PIPES

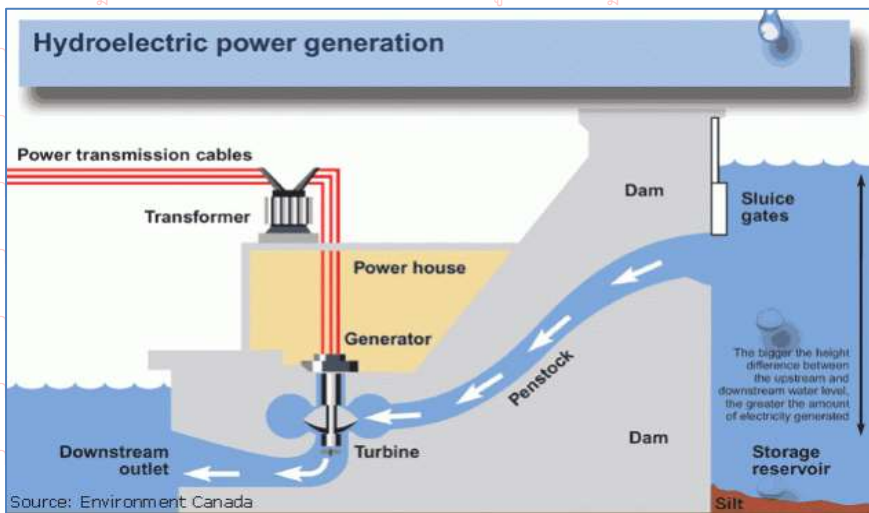
Hydroelectricity is the term referring to electricity generated by hydropower. Hydropower or water power is power derived from the energy of falling water or running water.

Hydropower pipeline also known as penstock, used high pressure welded or seamless pipes to carrying pressurized water and transmit mechanical power from the source to end users. The penstock pipe transports water under pressure from the reservoir to the turbine, where the potential energy of water is converted into kinetic energy in order to rotate the turbine.

Hydroelectric pipe line use high strength of steel pipe that can resist internal pressure, and can also resist external pressure when the pipe is not pressurized. Minimum yield

strength of most pipe-grade steel is generally 42,000 psi (290 MPa). The maximum yield strength is generally from 690 - 800 MPa or higher depending on the type of hydropower output power system. The pipe thickness is ranging from 100 mm to 200 mm.

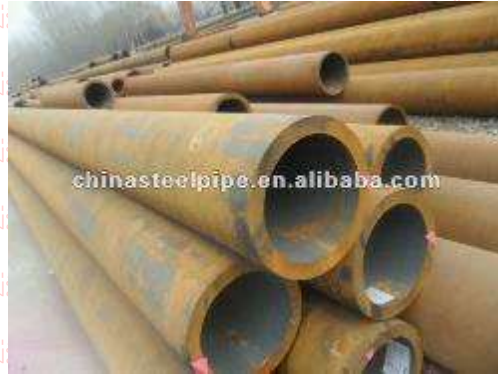
Traditionally, steel penstocks have been considered as very high pressure conduits, usually of large diameter, and operating with frequent surges during the normal condition. Penstocks may also be subject to pulsations of varying frequency and amplitudes transmitted from the turbine or pump. When penstocks are installed above ground, this can sometimes cause excessive vibration. These are the perceived differences between a penstock and an ordinary pipeline. Based on these conditions, penstocks as high pressure pipes of a kind used in hydroelectric power plant have been designed to standards ASTM, AWWA or API.



Example:

Specifications: steel penstock pipe
Outer diameter: 6-2500mm

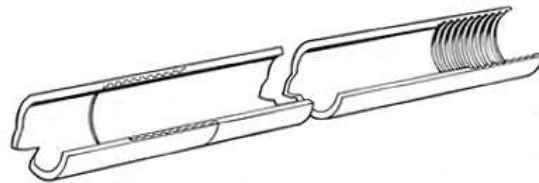
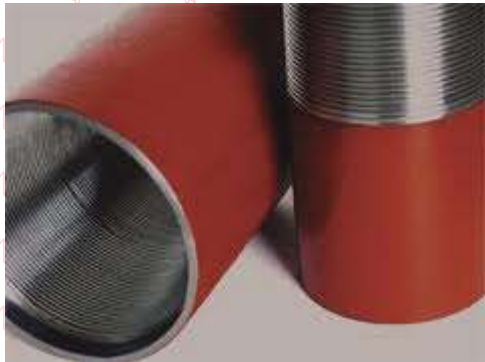
Thickness: 100-200mm,
Length: 1-12m required
ASTM



(Source: Malaysia)

7304.31.10 7304.51.10
DRILLROD CASING AND TUBING WITH PIN AND BOX THREADS

These are seamless, heat-treated casing and tubing threaded at the ends for more strength in tension and torsion. They are used in mining exploration.



Pin End

Pin and Box End

(Source: Philippines)

7307.11.10

HUBLESS TUBE OR PIPE FITTINGS

Unlike conventional tube or pipe fittings, hubless tube or pipe fittings do not have hubs at either end, and therefore special fitting have to be used for joining. Those fittings have shielded couplings consisting of a neoprene rubber sleeve and stainless steel shields that are slipped over the end of the tube or pipe and the fitting, and tightened with a torque wrench.



(Source: Philippines)

7308.10.10 7308.20.11 7308.20.21 7308.40.10 7308.90.20

PREFABRICATED MODULAR TYPE JOINED BY SHEAR CONNECTORS

Various types of shear connectors are used in prefabricated modular type structures of subheadings 7308.10, 7308.20, 7308.40 and 7308.90, as shown below.



Double Sided Shear Connection

Double Web Angles Shop and Field Bolted Shear Connection



Shear Connectors for Composite Beam



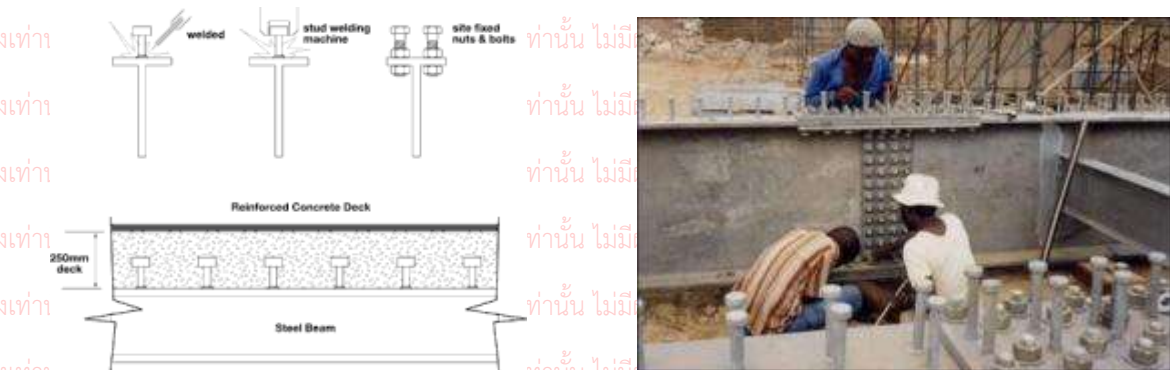
Single Angle Shear Connection

(Source: Philippines)

7308.10.10

BRIDGES AND BRIDGE SECTIONS, PREFABRICATED MODULAR TYPE JOINED BY SHEAR CONNECTORS

This construction method is based on a rolled steel beam cut longitudinally, with a special shape, into two T-sections to which a concrete top chord is concreted. The shape of the cut allows for the shear transmission in the shear joint. By these means, pre-fabricated bridge elements are produced, which are finalized on site.



(Source: Philippines)

7308.20.11

TOWERS, PREFABRICATED MODULAR TYPE JOINED BY SHEAR CONNECTORS



Shear connectors on the inside of a tower segment

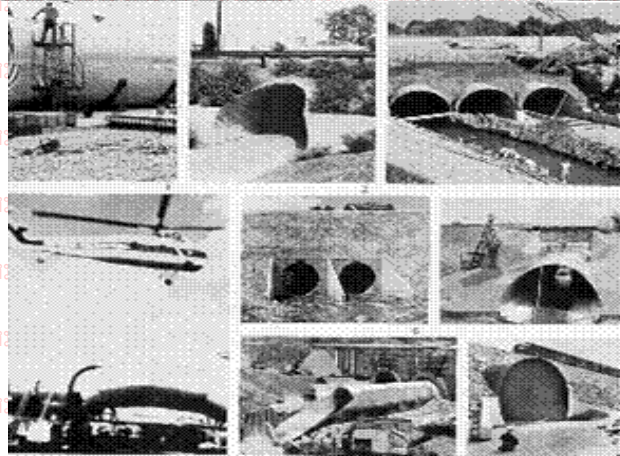
(Source: Philippines)

7308.90.20

OTHER STRUCTURES AND PARTS OF STRUCTURES, PREFABRICATED MODULAR TYPE JOINED BY SHEAR CONNECTORS

The products covered here are modular prefabricated steel structures or parts of structures not covered by the previous subheadings of this heading. They may consist

of various built-up steel modules, sections and parts. The modules, sections and parts are to be assembled on site to form the structure by using bolted-shear tab connections and tension connections.

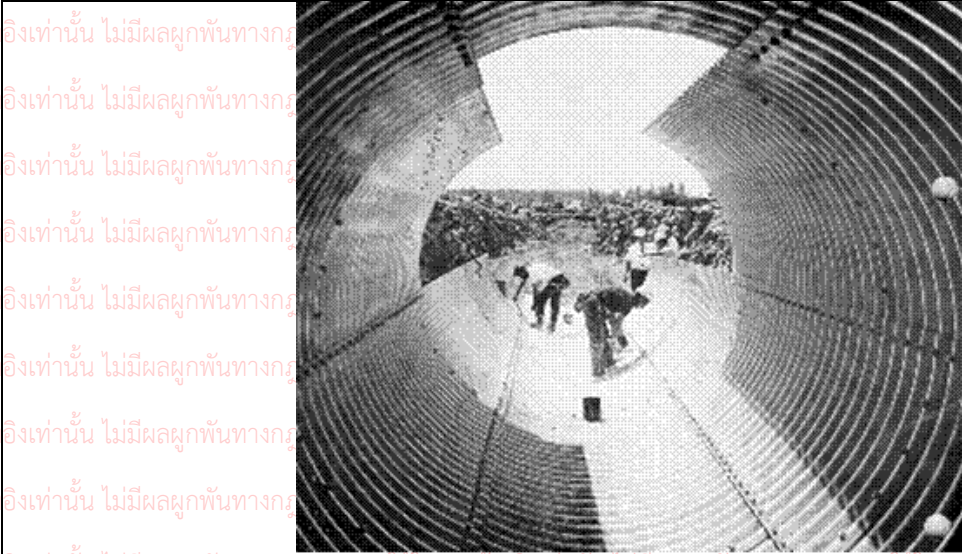


(Source: Philippines)

7308.90.40

CORRUGATED AND CURVED GALVANISED PLATES OR SHEETS PREPARED FOR USE IN CONDUITS, CULVERTS OR TUNNELS

These are range of corrugated galvanised steel plates or sheets that are pre-punched along the edges and ends. They are to be joined or assembled by bolting to form culverts, storm water drainage, reclaim tunnels, sheet water drainage, and many other special adaptations. These structures minimize differential settlement of the formation adjacent to conduits, culverts or tunnels, a common problem associated with rigid structures.



(Source: Philippines)

7308.90.50

RAILS FOR SHIPS

These are steel frameworks used to convey containers from one end of containerized cargo ships to the other end.

(Source: Philippines)

7308.90.60

PERFORATED CABLE TRAYS

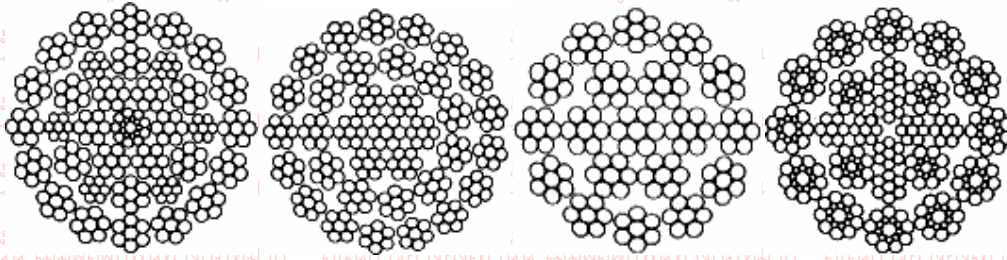
Perforated cable trays are used to support insulated electric cables used for power distribution and communication in the electrical wiring of buildings. Cable trays are used as an alternative to open wiring or electrical conduit systems. Cable trays are especially useful where changes to a wiring system are anticipated, since new cables can be installed by laying them in the tray, instead of pulling them through a pipe.

Perforated cable trays have a wide U profile cross-section, are usually made of steel, are painted or galvanised, and have many slotted holes (perforations) over the entire surface. Normally the tray thickness is 1.5 mm to 2.0 mm and the length is 3.3 to 4 m.

Perforated cable trays are used to support the laying of electrical wiring cables and hang 1 - 2 m from the ceiling. Horizontal elbows, vertical elbows, bends, tee or cross-shaped trays are used for connections at the junctions during installation.

Flattened strand rope comprises wedge-shaped strands, each made up of wires wound on a core. At least a portion of the strand wires are fashioned as twisted wire groups in which the wires are sector-shaped and in contact with each other over helical surfaces. With such a structural embodiment of the flattened strand wire, use can be made of thin and, consequently, stronger and more flexible wires, thereby increasing the strength and flexibility of the rope and making for the use of the rope in the various branches of industry, including lifting mechanisms with large or small drum diameters.

NON-ROTATING WIRE ROPES



The characteristic of a non-rotating wire rope is that the outer layer is twisted in the opposite direction of their inner layers.

(Source: Philippines)

7321.90.10

PARTS OF KEROSENE STOVES

Representative examples of parts of kerosene stoves:



(Source: Malaysia)

7321.90.20
PARTS OF COOKING APPLIANCES AND PLATE WARMERS USING GAS FUEL

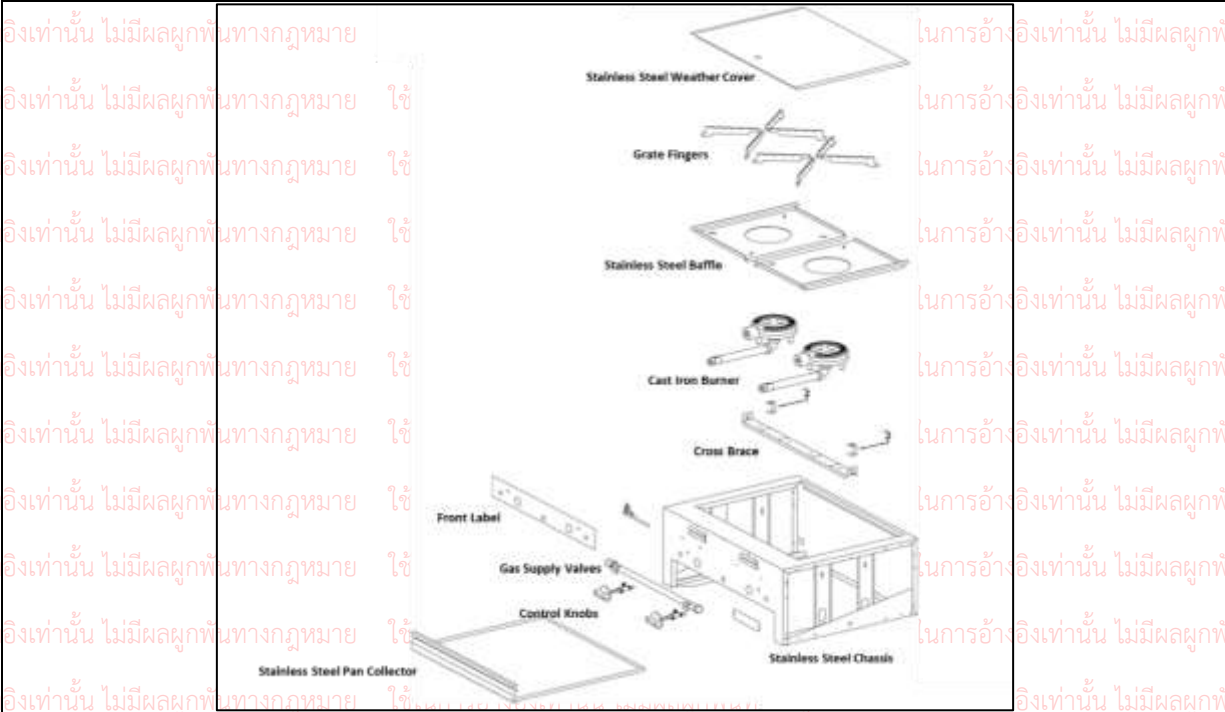


(Source: Malaysia)

7321.90.21
BURNER; COMPONENT MADE BY STAMPING OR PRESSING PROCESSES

For this subheading cover cold rolled iron sheet is cut according to the desired length and width on the guillotine-shearing machine. Then it has to be fed in the double action deep draw press for giving shape of the body and other components of LPG stove. The holes may be cut on power press in the body and burr must be removed. After that, the small holes may be done on drilling machine. Then it may be sent for nickel chrome plating or enamelled coating from outside. Components like burners, burner tops, pan supporting casting, Gas pipe assembly, gas cook assembly knobs, rubber rolls and name plates etc. are to be fitted on the body.

Parts made by stamping or pressing processes such as stainless steel cover, stainless steel baffle, stainless steel chassis and stainless steel pan collector.



Picture 1: Examples of some of the components made by stamping and pressing.
 Note: some of the parts in the diagram are not made using the stamping or pressing process

(Source: Malaysia)

7326.90.30

STAINLESS STEEL CLAMP ASSEMBLIES WITH RUBBER SLEEVES OF A KIND USED FOR HUBLESS CAST IRON PIPES AND PIPE FITTINGS

These assemblies consist of a grooved stainless steel strip, a pair of slotted steel rings, a moulded tubular rubber sleeve with grooves and a separator on the inside. They are designed to connect two hubless tubes or pipes in gravity pipeline connections. The grooved steel strip secures the connection while the tubular rubber prevents the leakage of water.



Steel coupling connectors being tightened using a torque wrench

(Source: Philippines)

CHAPTER 74

7408.19.10

COPPER WIRE PLATED OR COATED WITH GOLD OR SILVER

Copper wires in a cable may be bare or they may be plated to reduce oxidation with a thin layer of another metal, most often tin, but sometimes gold or silver. Gold-plated copper wire is a malleable and ductile material with excellent conductivity.

To be classified under this subheading, the copper wire must be refined (i.e., conforms to Note 1(a) of Chapter 74), with maximum cross-sectional dimension not exceeding 6mm, and with plating/ coating of silver or gold done by electrolysis, vapour deposition, spraying or immersion in a solution of salts of precious metals, etc.



Example of product: Copper wire plated with gold and silver

(Source: Philippines)

7408.29.10

COPPER WIRE OF COPPER-TIN BASE ALLOYS (BRONZE)

The mixture of tin and copper results in bronze, an alloy that is less brittle than tin and iron, but harder and more durable than pure copper. The exact amount of copper in bronze is extremely variable and ranges from 60% to nearly 90% in some commercial grades. The second most prevalent element in bronze is tin, which is also variable, commonly composing between 12% and 40% of the alloy. Bronze is used for many different industrial applications, and it's an important material for industries like marine technology, electrical assembly, automotive and more.



(Source: Philippines)

7410.11.10

COPPER CLAD LAMINATE FOR MANUFACTURING PRINTED CIRCUIT BOARDS

Copper Clad Laminate (CCL) is generally made of fiber glass base substrate laminated on both sides with copper foil with the thickness together does not exceed 0.15 mm.

Indicative diagram of layers

Source: Indonesia

7412.20.20

HOSE FITTINGS

Hose fittings of a kind used for hose or similar flexible tubing are fittings made of copper alloys of which the main feature is they are not threaded to accommodate the flexible characteristic of a hose or other similar flexible tubing.



7419.99.20

ARTICLES SPECIALLY DESIGNED FOR USE DURING RELIGIOUS RITES

Articles made of copper that are used during religious rituals (e.g., Buddhist, Hindu or Christian), having a special design and shape, such as cups, bowls or statuettes representing human or non-human creatures. To be classified under this subheading the goods must be identifiable as being used during religious rites.

(Source: Malaysia)

CHAPTER 76

7604.21.10

HOLLOW PROFILES, OF A KIND SUITABLE FOR MAKING COOLING COILS OF MOTOR VEHICLES AIR CONDITIONING MACHINES

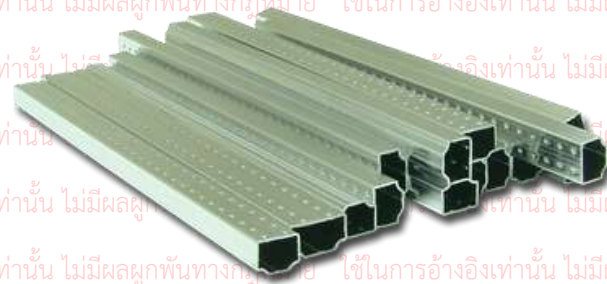
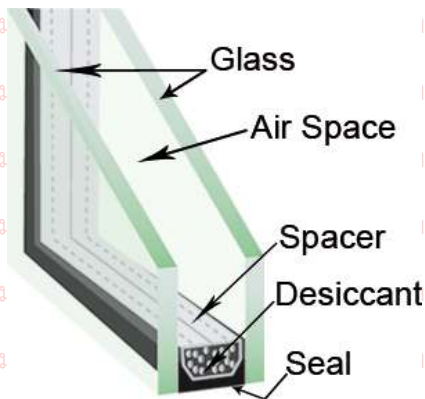
These are tube-like profiles made of aluminium. These are to be bent at intervals used in making the evaporator coil of an automotive air conditioning system.

(Source: Philippines)

7604.21.20

ALUMINIUM SPACERS FOR DOORS AND WINDOWS

Aluminium spacers are hollow, aluminium profiles generally used in the construction of frames for glass doors and windows. These provide rigidity, space and insulation between the glass panes in doors and windows.



(Source: Philippines)

7606.12.32

ALUMINIUM SHEETS FOR MAKING CAN STOCK (INCLUDING END STOCK AND TAB STOCK), IN COILS

The term "aluminium can stock" refers to the can body stock, end stock (lids) and the tab stock. All those are made from a specific kind of aluminium alloy in which the predominant alloying element is either manganese or magnesium. Those may be in sheets having a thickness of 0.175 mm but not exceeding 0.432 mm, and a width of 254 mm but not exceeding 1000 mm., presented in sheet or strip, in coils.

The can body (body stock) is made out by drawing aluminium sheets having manganese as the predominant alloying element, with a tensile strength of 262 MPa.; end stock and tab stock are made by pressing and forming, of aluminium sheets having magnesium as the predominant alloying element, with a tensile strength of 345 MPa.

(Source: Philippines)

7606.12.33

SHEETS, OF ALUMINIUM ALLOY 5082 OR 5182, EXCEEDING 1 M IN WIDTH, IN COILS

The products classified here generally have the following compositions:

Composition, % wt.	Alloy 5182	Alloy 5082
Aluminium, Al	93.5 - 96.0	93.5-96.0
Chromium, Cr	<= 0.15	<= 0.10
Copper, Cu	<= 0.15	<= 0.15
Iron, Fe	<= 0.35	<= 0.35
Magnesium, Mg	4.0 - 5.0	4.0 - 5.0
Manganese, Mn	<= 0.15	0.20 -0.50
Other, each	<= 0.05	<= 0.05
Other, total	<= 0.15	<= 0.15
Silicon, Si	<= 0.20	<= 0.20
Titanium, Ti	<= 0.10	<= 0.10
Zinc, Zn	<= 0.25	<= 0.25



(Source: Philippines)

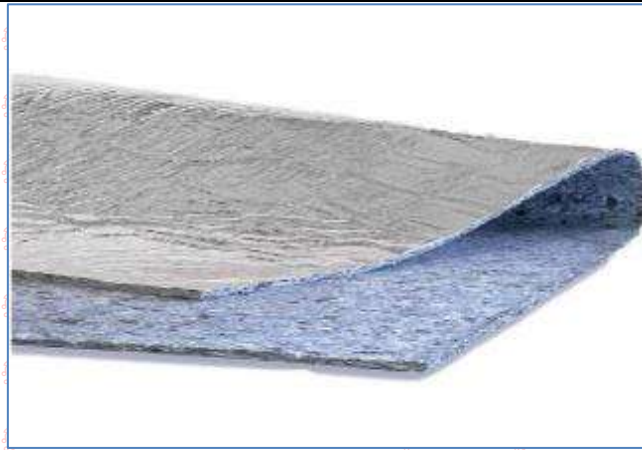
7607.20.10

THERMAL INSULATION FOIL

Thermal insulating foil or thermal Insulating barrier or radiant barriers (also known as reflective insulation) are a type of thermal (heat) insulations that inhibits heat transfer by thermal radiation.

When radiant solar energy strikes a roof, heating the shingles, felt paper and roof sheathing by conduction, it causes the underside of the sheathing and the roof framing to radiate heat downward through the attic toward the attic floor. When a radiant barrier is placed between the roofing material and the insulation on the attic floor, much of the heat radiated from the hot roof is reflected back toward the roof. This makes the top surface of the insulation cooler and thus reduces the amount of heat that moves through the insulation into the rooms below. Thermal insulating foil generally made of highly reflective material usually aluminium foil, which is applied to one or both sides of a number of substrate materials such as kraft paper, plastic films, cardboard, oriented strand board, textile mesh, wadding fibers and air infiltration barrier material.





The UltraTouch 48 in. x 24 ft. Radiant Barrier is easy to use and install and is made from recycled natural fibers



Two-sided reflective aluminized polyester film with reinforced scrim inside, designed to reflect radiant heat. Weight 16.35 lbs per 1000 sq ft roll. Thermal Properties : Emissivity: 0.05, Reflectivity: 95%, Standard: ASTM C1371-04a

(Source: Malaysia)

7610.90.30

INTERNAL OR EXTERNAL FLOATING ROOFS FOR PETROLEUM STORAGE TANKS

Floating roof of Tanks for Oil Storage, to avoid causing loss by vaporizing, including two types: internal floating roof (used for tank for petroleum or petroleum product storage), external floating roof (used for tank for crude oil storage). They are made of corrosion-proof ultra-durable material (aluminium or aluminium alloy).

bacteria, odour and cause milk to spoil easily. Containers have proper hardness and proper body thickness to withstand dents from handling. The body is made from one-piece monoblock design with various standard sizes provided: 5 L, 10 L, 20 L, 25 L, 30 L, 40 L, 50 L, etc. Containers are mostly sold with lid (cover) which appropriate designed for its body. Cover should be well locked to ensure the cleanliness and hygiene of fresh milk.



(Source: Thailand)

7616.99.20

FERRULES OF A KIND SUITABLE FOR USE IN THE MANUFACTURE OF PENCILS

An aluminium metal ring that holds the eraser of a pencil.

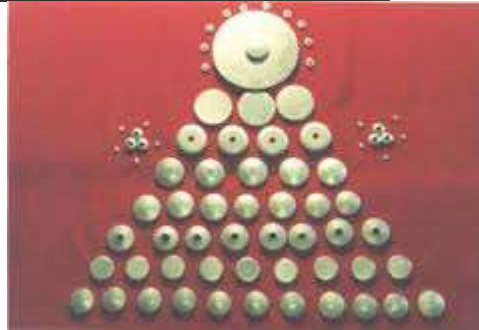


(Source: Philippines)

7616.99.30

SLUGS, ROUND, OF SUCH DIMENSION THAT THE THICKNESS EXCEEDS ONE-TENTH OF THE DIAMETER

These slugs are round aluminium products, whether or not with centre-holes, obtained by stamping-out from non-alloy aluminium strip, for the production by an impact-extrusion process of tubular containers, including collapsible tubes. The slugs are typically made from Aluminium Alloy 1070 or Aluminium Alloy 1055.



(Source: Philippines)

7616.99.51

VENETIAN BLINDS

Venetian blinds are a type of window covering, consisting of long horizontal slats of aluminium, one above another. The slats are usually connected with string such that they may be turned to either allow light to pass through them by becoming parallel with the window-sill, or else turned flat to block light from the outside.

CHAPTER 79

7907.00.93

ZINC CALOTS FOR THE MANUFACTURE OF BATTERY

Zinc calot is a strip or plate of zinc alloy which is punched into certain shapes, suitable for the manufacturing of negative electrode in batteries.



General flow of making batteries:

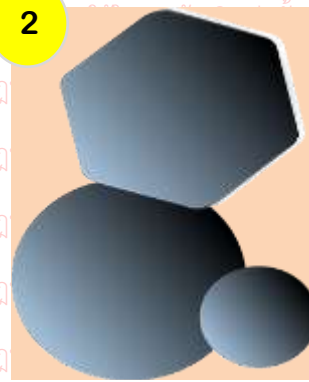


1

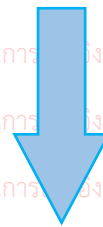
Mix of alloys



2



Cast into strips or plate, rolled before being punched into a coin-like shape, which is called a calot.



4



Carbon-zinc batteries

3



Calot extruded into a can according to the required length and used for carbon zinc battery construction

(Source: Malaysia)

CHAPTER 83

8302.30.10

8302.41.31

8302.42.20

8302.49.91

HASPS

Metal hasps is a metal fastener with a hinged slotted part that fits over a staple and is secured by a pin, bolt, or padlock to secure a doors, windows (for buildings or vehicles), boxes, furnitures, bags, gates, cages etc. Hasps suitable for motor vehicles have different shape and design from ordinary hasps for furniture or house door.

In the case of hasp packed together with the lock known as hasps lock is classified as lock.



Hasps for vehicle



Hasps for building (door or window)



Hasps for furniture



Hasps for bags



Other hasps

(Source: Malaysia)

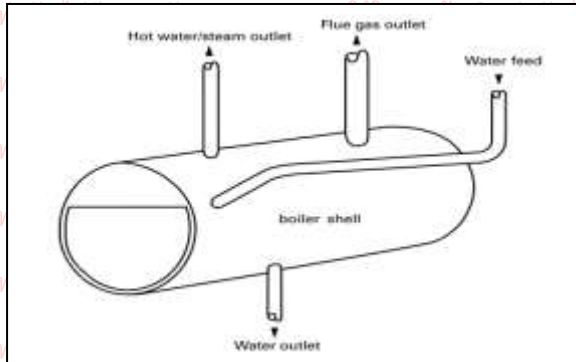
CHAPTER 84

8402.90.10

8403.90.10

BOILER BODIES, SHELLS OR CASINGS

Boiler bodies, shells or casings are pressure vessels usually made of boiler plate steel, enclosing the insulation, water and steam, boiler tubes and tube sheets, often enclosing also flues and the furnace.



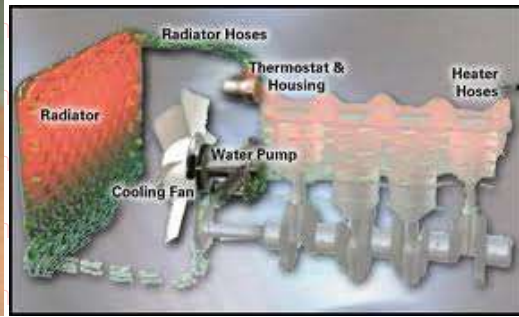
(Source: Philippines)

8413.30.40

WATER PUMPS OF A KIND USED FOR THE ENGINES OF MOTOR VEHICLES OF HEADING 87.02, 87.03 OR 87.04

The water pump circulates coolant throughout the engine. Water pumps use a rotating vane called an impeller that forces coolant outward at pressure. As the coolant is forced out towards the outer wall of the water pump, low pressure is created at the inlet of the water pump allowing coolant to flow into the water pump. The pressurized coolant is forced out of a passage and through the engine cooling system where it returns to the water pump.

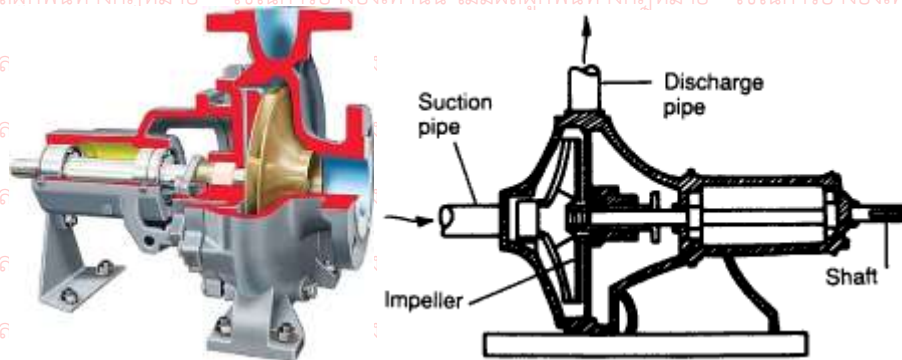
It is a rotary type water pump that usually sits near the front of the motor vehicle's engine, bolted into place either against the engine or the engine mounting. Hoses connect the water pump motor to the radiator as well as to a network of pipes running in a closed circuit through the engine itself. The central spindle extends out from the closed interior of the water pump motor to connect it by means of a fan belt to the engine's output. Water pumps are generally driven with pulleys and a belt using the crankshaft as a means of rotation.



(Source: Philippines)

8413.70.11 8413.70.19 SINGLE STAGE, SINGLE SUCTION HORIZONTAL SHAFT WATER PUMPS SUITABLE FOR BELT DRIVE OR DIRECT COUPLING, OTHER THAN PUMPS WITH SHAFTS COMMON WITH THE PRIME MOVER

These pumps are single-stage (single impeller), single-suction (water enters the impeller from only one side) centrifugal water pumps with the horizontal central shaft driven by a motor by means of a transmission belt (belt-pulley) or coupling. They are unlike direct-coupled pumps, in which the shaft is common to the prime mover (motor).



(Source: Philippines)

8414.59.10

FANS OF A KIND USED SOLELY OR PRINCIPALLY FOR COOLING MICROPROCESSORS, TELECOMMUNICATION APPARATUS, AUTOMATIC DATA PROCESSING MACHINES OR UNITS OF AUTOMATIC DATA PROCESSING MACHINES

This subheading covers fans for cooling microprocessors, telecommunication apparatus, automatic data processing machines or units of automatic data processing machines. The fan is operated by moving air for hot or cold air exchange in a devices and systems. Some features of the fans are small installation depth, low noise level and exceptional efficiency, and are particularly well suited for air flow through heat exchangers.

An example of fan covered by this subheading is the computer fan.

A computer fan is any fan inside, or attached to, a computer case used for active cooling. Fans are used to draw cooler air into the case from the outside, expel warm air from inside and move air across a heat sink to cool a particular component. Both axial and sometimes centrifugal (blower/squirrel-cage) fans are used in computers. Computer fans commonly come in standard sizes and are powered and controlled using 3-pin or 4-pin (Molex) fan connectors.



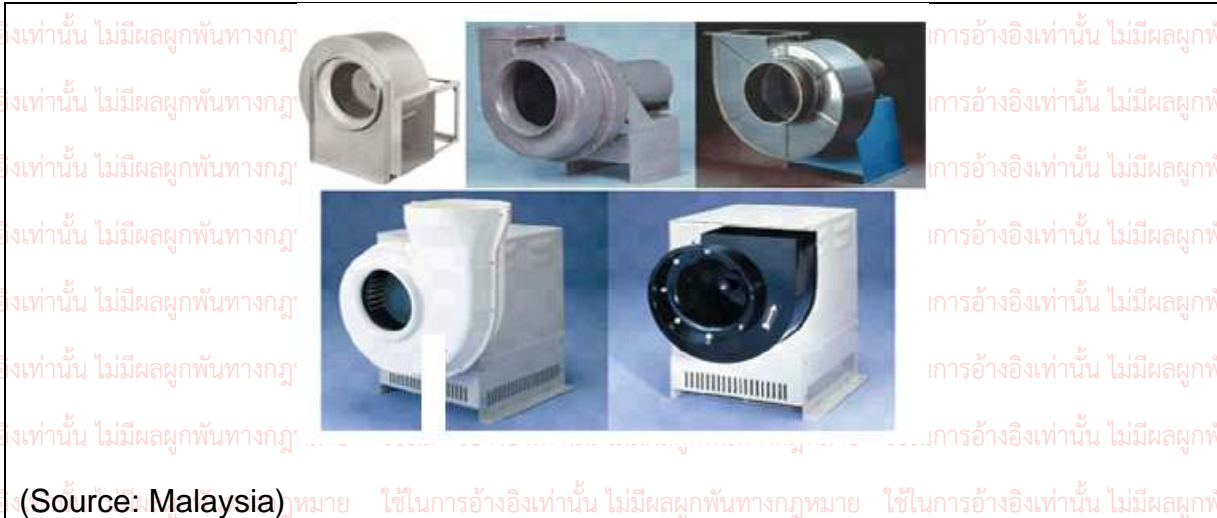
(Source: Malaysia and Philippines)

8414.59.30

8414.59.50

BLOWERS

Blowers are ducted centrifugal fans used to move a constant volume of air at low pressure (for example: a blower moves 0.5 m³/s at room temperature). Ducted centrifugal fans consist of a closed box, a chamber or housing with an air inlet and outlet and contain a fan with a rotating arrangement of vanes or blades which act on the air. Most blowers are powered by electric motors, but other sources of power may be used, including hydraulic or pneumatic motors.



(Source: Malaysia)

8414.60.11	8414.80.11
LAMINAR AIRFLOW CABINETS	
<p>Laminar airflow cabinets are designed for creation of a bacterial dust free air space. They are used for work with low-risk substances and materials, when protection of working materials from the environment is required or work requires a sterile working zone.</p> <p>Ambient air enters at the top, pressurizes the blower plenum and clean air is forced through High Efficiency Particulate Air (HEPA) filters (99.99% effective). The air travels in a laminar flow (also known as streamline flow) down through a perforated work surface into the plenum area below the work surface and exhausts through the rear plenum to the exterior of the building or the central exhaust system.</p> <p>Laminar airflow cabinets are used in medical, pharmaceutical and other institutes with high requirements for air cleanliness in the working zone.</p>	
Horizontal Laminar Flow Work Station with Optional Table	Vertical Laminar Flow Work Station

8414.80.43

SEALED UNITS FOR AIR CONDITIONING MACHINES

An air conditioner compressor is usually found outdoors along with the condenser. The motor of the compressor works like a pump and moves the hot refrigerant gas from a room through the air ducts and the evaporator coil. Then it condenses that gas and causes it to reach a high temperature and pressure.

Air conditioning compressors have a cylinder and that cylinder has a piston. This piston moves up and down and draws the gas on the downward stroke and then on the upward stroke it compresses the gas.

It typically has a rounded steel outer shell that is permanently welded shut, and which seals operating gases inside the system. There is no route for gases to leak, such as around motor shaft seals.

Compressors are often described as being open, hermetic, or semi-hermetic, to describe how the compressor and motor drive is situated in relation to the gas or vapour being compressed. The industry name for a hermetic compressor is hermetically sealed compressor or sealed unit, while a semi-hermetic unit is commonly called a semi-hermetic compressor.

In hermetic and most semi-hermetic compressors, the compressor and motor driving the compressor are integrated, and operate within the pressurized gas envelope of the system. The motor is designed to operate and be cooled by the gas or vapour being compressed.

The difference between hermetic and semi-hermetic compressors is that the hermetic one uses a one-piece welded steel casing that cannot be opened for repair; if the hermetic compressor fails it is simply replaced with an entire new unit. A semi-hermetic compressor uses a large cast metal shell with gasketed covers that can be opened to replace the motor and pump components.

The primary advantage of hermetic and semi-hermetic compressors is that there is no route for the gas to leak out of the system. Open compressors rely on either natural leather or synthetic rubber seals to retain the internal pressure, and these seals require a lubricant such as oil to retain their sealing properties.



(Source: Malaysia)

8418.99.40
ALUMINIUM ROLL-BONDED PANELS OF A KIND USED FOR THE GOODS OF
SUBHEADING 8418.10.11, 8418.10.19, 8418.21.10, 8418.21.90 OR 8418.29.00
Modern refrigerators and freezers use aluminum panels produced using the roll-bond principle. This type of panel is made of two aluminum sheets assembled by a rolling process. Prior to rolling, the channel circuit is printed onto the sheets with graphite. After rolling, the channels are created by pressurising the panel at between 100-150 bars.



Aluminium roll-bonded panels

(Source: Philippines)



Aluminium roll-bonded panels

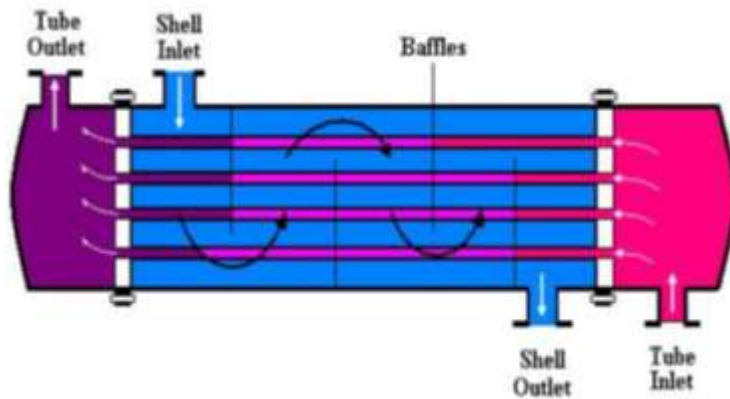
8419.50.20

HEAT EXCHANGE UNITS MADE OF TUBES OF FLUOROPOLYMERS, WITH BOTH INLET AND OUTLET TUBES HAVING AN INSIDE DIAMETER MEASURING 3 CM OR LESS

Heat exchangers that use fluoropolymer tubes (instead of metal tubes such as stainless steel, copper, aluminum) are ideally suited for facilitating heat transfer in chemically aggressive environments and where “very high or ultra-purity” is required. Heating and cooling of fluids by fluoropolymer coils is preferred when purity is of the utmost importance, for example in semiconductor processing where contamination from the heat exchange surface is unacceptable. In these cases, it is critical that the heat exchanger material does not corrode or leach into the chemical being processed.



Example of a heat exchanger made of tubes of fluoropolymer



Sample diagram of a heat exchange unit

(Source: Philippines)

8421.29.60

FILTERING OR PURIFYING APPARATUS FOR LIQUIDS OF FLUOROPOLYMERS AND WITH FILTER OR PURIFIER MEMBRANE THICKNESS NOT EXCEEDING 140 MICRONS

These refer to purifiers or filters for liquids (other than for water or beverages), made of “fluoropolymers” (used because of their unique non-adhesive and low friction properties as well as their superior heat, chemical and weather resistance and superior electrical properties) suitable for any liquid purification or filtering.

(Source: Philippines)

8421.99.21

8421.99.29

FILTERING CARTRIDGES FOR FILTERS OF SUBHEADING 8421.23

Filtering cartridges for filters of subheading 8421.23 are the essential parts of oil or petrol filters for internal combustion engines. They are manufactured and sold as original equipment and replacement parts for use in automotive oil or petrol filters. The essential component of these elements is filtering material of various kinds and shapes which may be mounted on frames, cores or the like. When oil or petrol passes through the filtering elements the larger particles suspended in those fluids is strained onto the surface of the filtering material, thus allowing only clean oil or petrol to permeate the filtering element. Filtering elements consequently work to eliminate dirt in oil or petrol and to cleanse those fluids for optimum use in automotive engines.



(Source: Thailand)

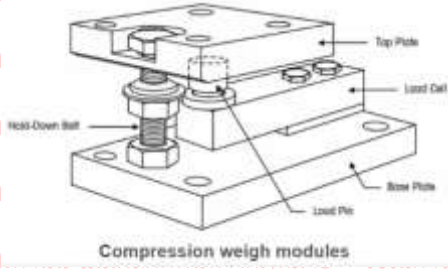
8423.90.31

8423.90.39

PARTS OF WEIGHING MACHINERY USING ELECTRONIC MEANS FOR GAUGING WEIGHT

Examples of parts of weighing machinery using electronic means for gauging weight, excluding machines for weighing motor vehicles

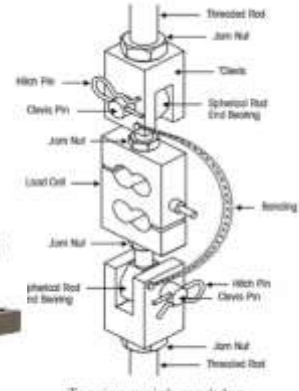
• Weigh Modules



Compression weigh modules



Compress weigh modules



Tension weigh modules



Tension weigh modules

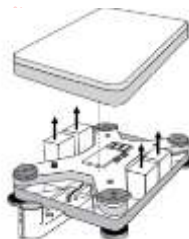
• Scale platform and weighing tray



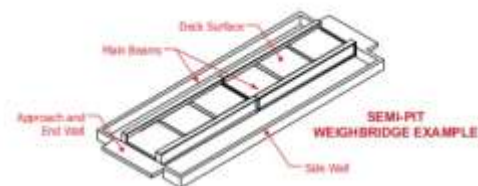
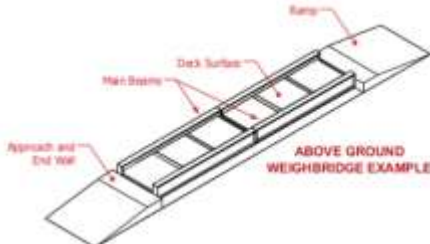
• Housing, casing and other parts

Examples of parts of truck scales using electronic means for gauging weight

- Weigh Modules - Truck scales usually use compression type modules.
- Weighbridge (pit type, semi-pit type, pitless type, and portable)



Platform base



Portable pitless

- Axle pads (two-pad or four-pad type)



Examples of parts that are common to weighing machines using electronic means for gauging weight

- Terminal/Indicator

8451.30.10

SINGLE ROLLER TYPE DOMESTIC IRONING MACHINES

A rotary type iron is an easy-to-use appliance which has a wide roller that allow the pressing of various textile products from shirts and pants to bed linens and tablecloths, resulting in a crisp, professional finish. The electronically controlled roller speed can be adjusted to suit the type of laundry being pressed, according to the previewed individual working speed. It is operated by way of a foot pedal, which allows the user to sit while ironing. It is specifically designed for home use and can be plugged into any 120 volt / 240 volt outlet.

Roller type ironing machine for domestic use



(Source: Malaysia)

8481.80.64

8481.80.65

HOG NIPPLE WATERERS

These are valves used by hogs (swine) to gain access to drinking water. They are cylindrical in shape and are equipped with a lever, spring and strainer. They have a thread at one end used for attachment to a pipe which is connected to a water source.

The valve functions when the hog's mouth touches it and the lever is activated creating an opening for the drinking water to pass through.

CHAPTER 85

8501.10.30 **8501.10.60**

SPINDLE MOTORS

Spindle motors are small size, single phase motors, with high precision used for hard disk (HD) drives, floppy disk (FD) drives, compact disc (CD) drives, digital versatile disc (DVD) drives, etc. Spindle motors rotate disks at 3,000 to 10,000 revolutions per minute. A read-write head moves above the disk, reading or writing the binary bits of data that are the building blocks of instructions and information for all computers.

8504.21.11 **8504.21.19** **8504.22.11** **8504.22.19**

STEP-VOLTAGE REGULATORS (AUTO TRANSFORMERS)

These are oil-filled auto transformers used to regulate line voltages into steps. Standard features include sealed-tank construction, pressure relief device, bushings, terminals, oil sight gauge, drain valve, etc.



1. Polyester paint gives greater resistance to corrosion in harsh environments.
2. Stainless steel casing.
3. Sealed tank with pressure relief device to vent gases produced during tap changes.
4. External metal oxide varistor (MOV) by-pass arrester.
5. Oil sight gauge allows oil level to be determined from ground level.
6. Motor capacitor in the control cabinet.
7. Single polarized jack plug.
8. Cover-mounted terminal block.
9. Control Panel.
10. Coil and tap changer.
11. High creep bushings.

(Source: Philippines)

8504.21.11	8504.21.92	8504.21.93	8504.22.11	8504.22.92
8504.22.93	8504.33.11	8504.33.19	8504.34.11	8504.34.12
8504.34.13	8504.34.22	8504.34.23	8504.34.24	

HIGH SIDE VOLTAGE

A transformer is a voltage changer. Most transformers are designed to either step voltage up or step it down. In a step-down transformer, the input voltage is higher than the output voltage so that the input voltage is the high side voltage and the output voltage is the low side voltage. In a step-up transformer, the input voltage is the low side voltage and the output voltage is the high side voltage.

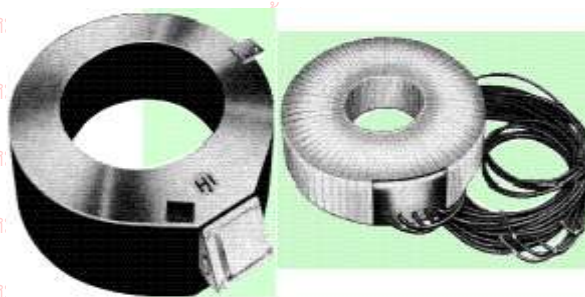
Since these subheadings are not broken down into step-down or step-up transformers the higher voltage will always be considered to be the “high side”, regardless of whether it is the input or the output voltage.

(Source: Thailand)

8504.31.21

RING TYPE CURRENT TRANSFORMERS WITH A VOLTAGE RATING NOT EXCEEDING 220 kV

In electrical engineering, a current transformer is used for measurement of electric currents. Current transformers, together with voltage transformers (potential transformers), are known as instrument transformers. When current in a circuit is too high to directly apply to measuring instruments, a current transformer produces a reduced current accurately proportional to the current in the circuit, which can be conveniently connected to measuring and recording instruments. A current transformer also isolates the measuring instruments from what may be very high voltage in the monitored circuit. Current transformers are commonly used in metering and protective relays in the electrical power industry. A typical example of low voltage single ratio metering current transformers is the ring type transformer.





(Source: Viet Nam)

8504.31.30

FLYBACK TRANSFORMERS

Flyback transformers are used in television receivers to provide the horizontal reflection voltage, the higher voltage for the second anode power supply of the picture tube, and the filament voltage for the high-voltage rectifier.

Flyback transformers are also called horizontal output transformers or horizontal sweep transformers.



(Source: Philippines)

8504.31.93

STEP UP/DOWN TRANSFORMERS, SLIDE REGULATORS

Step up/down transformers and slide regulators are transformers with unstable input in certain voltage ranges and having an output in certain voltages which can be adjusted manually. Stabilisers are transformers with unstable input in certain voltage ranges and having an output in fixed voltages which can be adjusted by electronic devices connected to input voltages.

(Source: Indonesia)

8504.31.92	8504.32.11	8504.32.41	8504.32.51	8504.33.11
8504.33.91	8504.34.11	8504.34.14	8504.34.22	8504.34.25

MATCHING TRANSFORMERS

Transformers are sometimes used to match the impedances of circuits. A transformer converts alternating current at one voltage to the same waveform at another voltage. The power input to the transformer and output from the transformer is the same (except for conversion losses). The side with the lower voltage is at low impedance (because this has the lower number of turns), and the side with the higher voltage is at a higher impedance (as it has more turns in its coil).

One example of this method involves a television balloon transformer. This transformer converts a balanced signal from the antenna (via 300-ohm twin-lead) into an unbalanced signal (75-ohm coaxial cable such as RG-6). To match the impedances of both devices, both cables must be connected to a matching transformer with a turns ratio of 2 (such as a 2:1 transformer). In this example, the 75-ohm cable is connected to the transformer side with fewer turns; the 300-ohm line is connected to the transformer side with more turns.

8504.50.20

CHIP TYPE FIXED INDUCTORS

Chip type fixed inductors are in the form of small chips used for cellular telephones, televisions, video tape recorders (VTRs), etc., usable for small voltage ampere levels. They are used in power circuit for limiting the flow of current in the event of a short circuit.



(Source: Singapore)

8516.10.11

WATER DISPENSER FITTED ONLY WITH WATER HEATER FOR DOMESTIC USE

Domestic water dispenser of a kind fitted solely with heating device is an apparatus for dispensing hot and normal temperature drinking water from water gallon. The device is not equipped with pump or any other similar mechanical liquid dispensing device, but merely dispense water by gravitation through 2 separate mechanical valves.



(Source: Indonesia)

8519.81.71

OTHER SOUND REPRODUCING APPARATUS, CASSETTE TYPE, OF A KIND SUITABLE FOR CINEMATOGRAPHY OR BROADCASTING

These products are specifically designed for use in cinematography or broadcasting, and are not for domestic use.

They have a:

- High quality digital processor,
- Input and output interfaces that can be both balanced and unbalanced,
- Time code signal interface or reference signal interface for synchronization purposes, and
- Signal lever indicator for input and output, allowing the user to adjust each input or output to create sound effects such as stereo, surround sound, etc.



(Source: Viet Nam)

8521.10.10

8521.90.11

8521.90.91

VIDEO RECORDING OR REPRODUCING APPARATUS, OF A KIND USED IN CINEMATOGRAPHY OR TELEVISION BROADCASTING

These products are specifically designed for use in cinematography or television broadcasting, and are not for domestic use.

They have a:

- high quality digital processor,
- input and output interface such as digital visual interface (DVI), serial digital interface – standard definition (SDI-SD) and serial digital interface – high definition (SDI-HD),

- time code signal interface or reference signal interface for synchronisation purposes, and the
- ability to create video effects.



Example of a magnetic tape-type video recording or reproducing apparatus

(Source: Viet Nam)

8535.90.10

TAP CHANGER ASSEMBLIES FOR ELECTRICITY DISTRIBUTION OR POWER TRANSFORMERS

Tap changer assemblies permit the rapid and convenient changing of the high voltage tap connections without contaminating the internal parts of the transformer. They are designed for use in transformers filled with transformer oil.

(Source: Philippines)

8536.10.13

8536.10.93

FUSE BLOCKS, OF A KIND USED FOR MOTOR VEHICLES

Fuse blocks contain multiple individual fused circuits with connections that enter and exit from the bottom of the block. They are used to protect the wiring and electrical equipment of vehicles. They are available in different styles.



Example: Circuit Fuse Block

Source: Philippines

8536.50.20

OVER-CURRENT AND RESIDUAL-CURRENT AUTOMATIC SWITCHES

Example of over-current and automatic switch:



SZC23 series AC current sensing switch is designed and manufactured to solve the AC current monitoring. It uses the principle of mutual inductance to sense the AC straight-through current, isolate the AC current, and output a normally open or normally closed switching signal to directly control various automation industrial equipment, such as flash, buzzer, relay, single-chip or other power load equipment. It is suitable for AC current measurement and monitoring, AC motor overload protection, and electronic switch of automatic control system, among others.

Specifications:

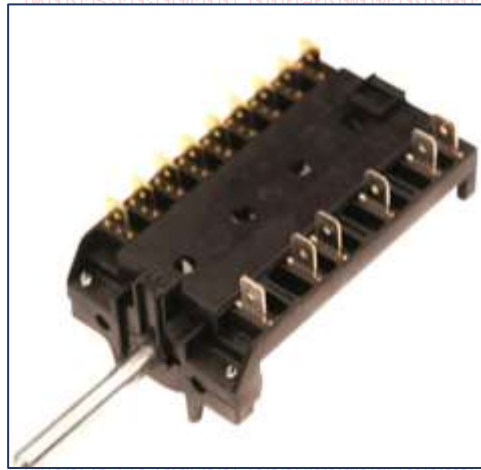
Model:	SZC23-NO-AL-CH
Power supply:	Not required
Rated load:	0.5A@240V AC/DC
Input current:	0.2-30A AC
Switch on minimum:	0.5±0.2A
Maximum overload:	100%
Leakage current:	0.1A
Accuracy:	1%
Hysteresis:	1%
Response time:	200ms
Repeatability:	100%
Working temperature:	-20~60
Waterproof:	IP30
Dimensions:	65*25*47mm / 2.56*0.98*1.85in
Hole diameter:	10mm / 0.4in
Package weight:	Approx. 56g/2.0oz

(Source: Philippines)

8536.50.3x

COMMUTATOR FOR STOVES AND RANGES

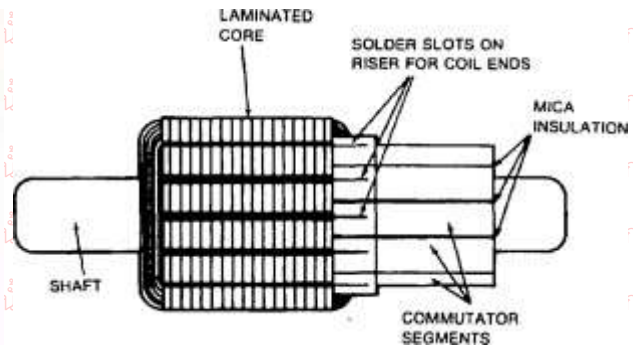
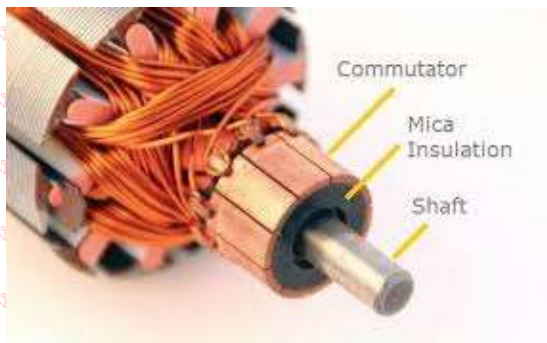
This is a rotary electrical switch, by turning the control knob of which, the inner spindle can be rotated to consecutively make and break, electrical connections at several specific positions, progressively stepping up as necessary (or stepping down on the reverse) resulting in a corresponding increase (or decrease as applicable) of the electricity input to the machine concerned.



A typical sample of a commutator, used in an electric oven or a kitchen range:

Courtesy: Manufacturer's website

This should not be confused with the commutator found in the electric motors, shown below:



Source: Consultant/Internet

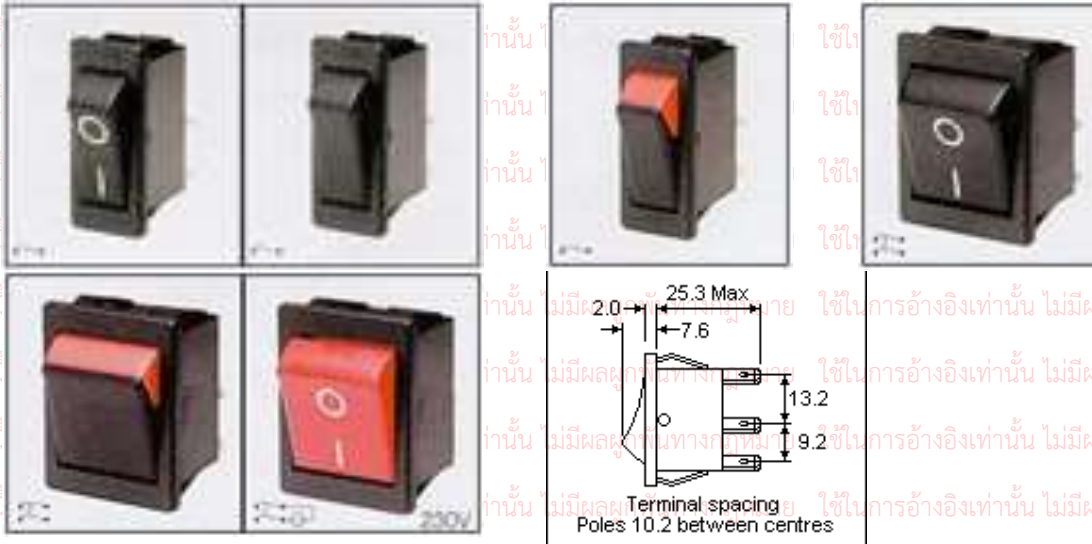
8536.50.32

8536.50.33

8536.50.39

HIGH INRUSH SWITCHES

High inrush switches are capable of handling an abrupt increase in current. This switching system ensures that the contact welds formed when switching on, are positively separated by the plunger tube acting directly on the step in the moving contact.



(Source: Philippines)

8537.10.12

CONTROL PANELS FITTED WITH A PROGRAMMABLE PROCESSOR

These control panels are used for the automation of electromechanical processes, such as the control of machinery on factory assembly lines, amusement rides, or lighting fixtures. These control panels are designed for multiple input and output arrangements, extended temperature ranges, immunity to electrical noise, and resistance to vibration and impact. Programs to control machine operation are typically stored in battery-backed or non-volatile memory.

(Source: Viet Nam)

8537.10.13

CONTROL PANELS OF A KIND SUITABLE FOR GOODS OF HEADING 84.15, 84.18, 84.50, 85.08, 85.09 OR 85.16

These kinds of control panels consist of printed circuit boards (PCBs) which are installed in the goods of heading 84.15, 84.18, 84.50, 85.08, 85.09 or 85.16. They are programmed control panels used to control the operating of air conditioners, washing machines, vacuum cleaners, etc.

(Source: Viet Nam)

8539.31.30

COMPACT FLUORESCENT LAMPS WITH BUILT IN BALLAST

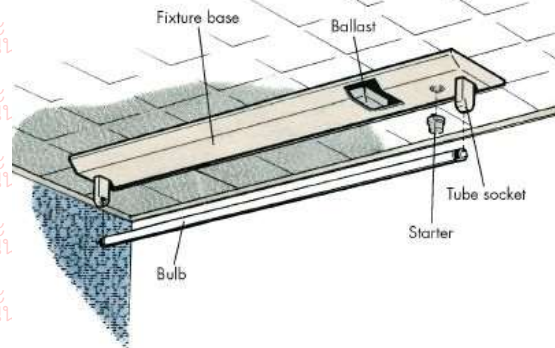
Compact fluorescent lamps with built in ballast is an integrated fluorescent lamps which combine the non-replaceable tube and ballast in a single unit as part of the bulb base itself. Compact fluorescent lamps with built in ballast is different with non-integrated fluorescent lamp fixture which has a replaceable bulb and separate ballast in the base or fixture.



Compact fluorescent lamps with built in ballast



Non-integrated fluorescent lamp fixture



(Source: Indonesia)

8543.70.50

MICROWAVE AMPLIFIERS

A microwave amplifier is a device for enhancing the output power signal of a microwave device, usually by increasing the amplitude or height of the wave that directly relates to its power level. This is accomplished by channeling additional input power to the microwave device so that its microwave radiation carries more energy. Such amplifiers are usually operated at low frequencies of the radio wave spectrum, which range around 300 megahertz or higher, and they are used for a variety of purposes from broadband communications to radar systems and electronic warfare by the military.

(Source: Philippines)

8543.70.50

DIGITAL FLIGHT-DATA RECORDERS

A flight recorder is an electronic recording device placed in an aircraft for the purpose of facilitating the investigation of aviation accidents and incidents. Due to their importance, these ICAO-regulated devices are carefully engineered and constructed to withstand the force of a high-speed impact and the heat of an intense fire. Contrary to the popular term "black box", the exterior of the flight recorder is coated with heat-resistant bright orange paint for high visibility in wreckage, and the unit is usually mounted in the aircraft's tail section, where it is more likely to survive a severe crash.

The digital design of flight recorder employs solid-state memory and use digital recording techniques, making them much more resistant to shock, vibration and moisture. With the reduced power requirements of solid-state recorders, it is now practical to incorporate a battery in the units, so that recording can continue until flight termination, even if the aircraft electrical system fails.

The two components of flight recorder are:

1. Flight Data Recorder (FDR; also ADR, for accident data recorder) is an electronic device employed to record instructions sent to any electronic systems on an aircraft.
2. Cockpit Voice Recorder (CVR) is a flight recorder used to record the audio environment in the flight deck of an aircraft for the purpose of investigation of accidents and incidents. This is typically achieved by recording the signals of the microphones and earphones of the pilots' headsets and of an area microphone in the roof of the cockpit.

With the advent of digital recorders, the flight data recorder (FDR) and cockpit voice recorder (CVR) can be manufactured in one fireproof, shock proof, and waterproof container as a combined digital Cockpit Voice and Data Recorder (CVDR).



Picture 1. Actual photo of FDR and CVR and their components



Picture 2. An example of a 25-Hour Cockpit Voice and Data Recorder (CVDR)
(Source: Philippines)

CHAPTER 87

Chapter 87

COMPLETELY KNOCKED DOWN

For the purposes of Chapter 87, the term “Completely Knocked Down” refers to complete or essentially complete vehicles presented unassembled, fulfilling the condition as defined by the competent national authorities.

(Source: Indonesia)

Chapter 87

g.v.w.

The g.v.w. (gross vehicle weight) is the road weight specified by the manufacturer as being the maximum design weight capacity of the vehicle. This weight is the combined weight of the vehicle, the maximum specified load, the driver and a tank full of fuel.

87.02

87.03

VANS

For the purpose of heading 87.02 and 87.03, the term “vans” can be defined as a type of vehicle principally designed for the transport of persons, with the following characteristics:

- having a boxy-shape body,
- the engine is substantially mounted either underneath the driver’s seat, at the front passenger’s seat, or at the rear,
- hinged doors for the front and at least one sliding door to enter the rear and a door with window at the rear end of the vehicle,
- seat with high H-point,
- not having a permanent panel or barrier between passenger area and cargo area.

Example of van :



(Source: Indonesia)

8702.10.71	8702.10.72	8702.10.79	8702.20.61	8702.20.62
8702.20.69	8702.30.61	8702.30.69	8702.40.61	8702.40.69
8702.90.51	8702.90.59			

SPECIALLY DESIGNED FOR USE IN AIRPORTS

Bus transport within an airport may take the following forms:

Where airports do not use a passenger boarding, for long distance transfers or for reasons of safety, passengers may be transferred from the airport terminal arrival or departure gate to the aircraft using an airside transfer bus or apron bus. Buses operating on the airport apron cross active taxiways (where aircraft have the right-of-way) and can carry 80 to 100 passengers, including their carry-on baggage.

Airside buses are not the type of buses that run on public highways – and they are extra long and wide in order to hold the maximum number of passengers. Airport buses are usually fitted with minimal or no seating, with passengers standing for the journey, have doors on each side with a low floor. Airport buses are usually fitted with flashing beacons for operating airside near runways. They may also feature driving cabs at both ends.



(Source: Viet Nam)

87.03

SEDAN



A 'sedan', sometimes called a 'saloon' is an enclosed passenger car in a three-box configuration with permanent separate compartments for engine, passengers and cargo. Generally, sedan has two rows of seats.

(Source: Indonesia)

87.03

GO-KARTS

A Go-kart is a light, low-framed vehicle used for recreational racing. The wheels and tyres are much smaller than those used on a normal car, with the rims made of magnesium alloy, aluminium, or composite materials, and can support cornering forces in excess of 2 g (20 m/s²), depending on chassis, engine, and motor setup. It can be powered by a fuel engine with a capacity of up to 1,500 cc, electric motors or combination thereof.



(Source: Singapore)

8703.21.31	8703.21.91	8703.31.31	8703.31.91
THREE-WHEELED VEHICLES			
<p>These vehicles have mechanical characteristics similar to that of conventional motor cars, i.e., they are fitted with a compression-ignition internal combustion piston engine (diesel or semi-diesel) or a spark-ignition internal combustion piston engine AND fitted with the reverse gear and a differential. However, they are not fitted with motor car type steering wheels.</p>			
<p>They are usually presented with a bench-type seat at the rear-end of the vehicle and are used for transportation of persons. Passengers' area is separated from that of the driver.</p>			
<p>Examples of three-wheeled vehicles under these subheadings:</p>			



8704.21.25	8704.22.25	8704.22.45	8704.23.25	8704.23.65
8704.23.85	8704.31.25	8704.32.25	8704.32.45	8704.32.65
8704.32.85	8704.32.97			

HOOKLIFT LORRIES (TRUCKS)

These are lorries (trucks) with loader hook-lift hoists which are mounted on the lorries to enable hauliers to change out flatbeds, dumpster bodies and similar containers. These are primarily used in conjunction with tilt frame bodies and specialised containers, generally designed especially for the transportation of waste in liquid form such as mud or sludge.



(Source: Viet Nam)

8705.90.60

MOBILE EXPLOSIVE PRODUCTION VEHICLES

These are especially designed/constructed vehicles with precautionary measures and equipment necessary for safe mixing, conveying and keeping of industrial explosives. They are mounted with warning signs/lights to indicate the dangerous nature to the public.

The storage and mixing area (tank) is mounted well away from the engine and exhaust pipe. Engine is suitably covered to contain heat and the exhaust pipe is directed upwards. The vehicle is fitted with a battery having a nominal voltage of less than 24 volts, direct current (DC). All electric circuits are made spark/explosive proof and water proof.

The tank for keeping and mixing explosives is made very strong to withstand high impacts, and is equipped with a control panel and levers, and mechanical devices inside. The pump and conveyor screw for mixing/moving explosives are of special design to prevent building up of high pressure and temperature.

(Source: Viet Nam)

8706.00.34

CHASSIS FITTED WITH ENGINES FOR VEHICLES SPECIALLY DESIGNED FOR TRAVELLING ON SNOW

Examples of chassis of vehicles specially designed for travelling on snow:



Source: <https://usiskis.com/tech-help/snowmobile-chassis-setup/>

(Source: Singapore)

8708.29.93 8708.29.96

INTERIOR TRIM FITTINGS

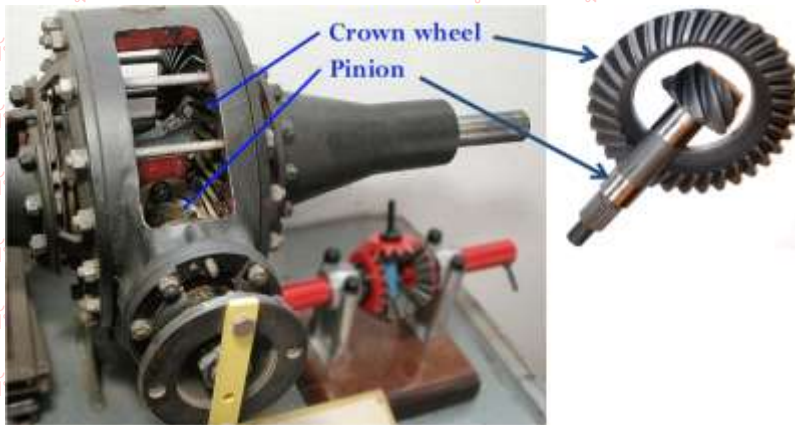
These are the facings, panels, linings and covers inside a motor vehicle.

(Source: Philippines)

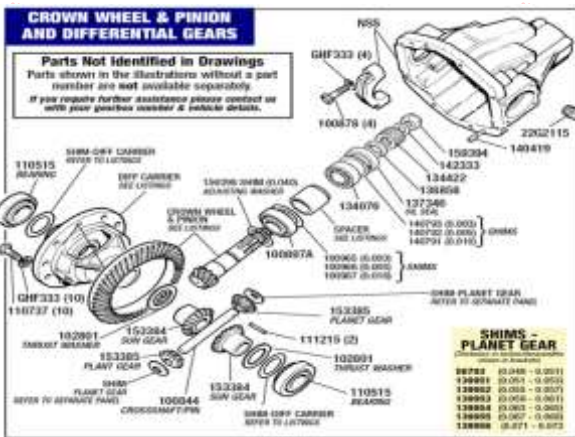
8708.50.91 8708.50.94 8708.50.96

CROWN WHEELS AND PINIONS

The crown wheels and pinions of a differential are part of a "traditional" rear-wheel-drive car or truck. A pinion is a round smaller gear that drives in a 90-degree angle towards a crown wheel in a differential drive. Power is supplied from the engine, via the gearbox, to a driveshaft (British term: propeller shaft), which runs to the rear axle. A pinion gear at the end of the propeller shaft is encased within the differential itself, and it engages with the large ring gear (British term: crown wheel), located in the rear axle housing of a rear-wheel drive car or truck.



Crown wheel and pinions



Rear axle housing (consist of crown wheel and pinion)



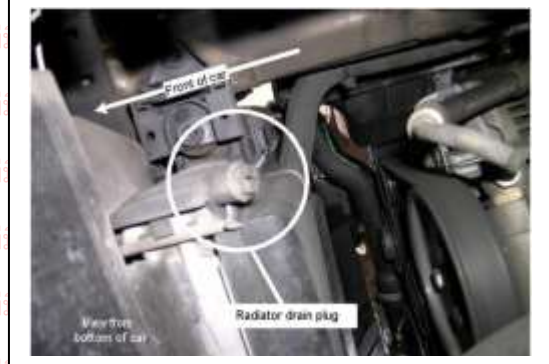
(Source: Malaysia)

8708.91.93

8708.91.94

RADIATOR DRAIN PLUG

A small plug, normally on the bottom of radiator tank, used for draining coolant and water. It can be of the screw-in or push-in design, and are made of plastic or metal.



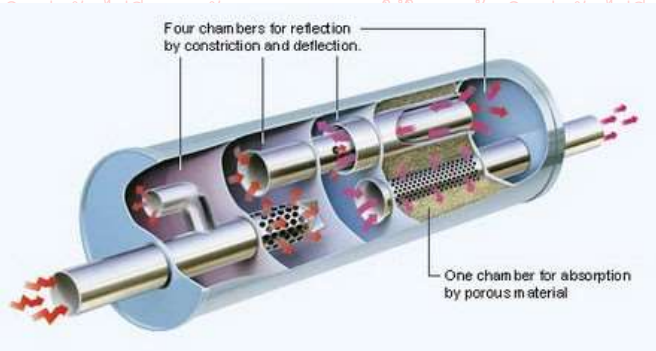
(Source: Philippines)

8708.92.52





8708.92.62

PARTS

By ECAE



(Source: Viet Nam)

8708.99.24	8708.99.25	
PARTS OF FUEL TANKS		
 <p data-bbox="747 304 893 346" style="text-align: center;">Filler pipe</p>		
 <p data-bbox="990 682 1136 724" style="text-align: right;">Upper half</p> <p data-bbox="990 934 1136 976" style="text-align: right;">Lower half</p>		
 <p data-bbox="535 1134 665 1176" style="text-align: center;">Fuel cap</p>	 <p data-bbox="1023 1134 1250 1176" style="text-align: center;">Fuel tank band</p>	
(Source: Philippines)		

8708.99.50		
RADIATOR SHROUDS		
<p>Radiator shrouds bridge the gap between the car frame and the radiator to help guide air. They are designed to keep air flowing through the radiator instead of up and over the top of it. The shroud is constructed completely of carbon fibre or metal.</p>		



(Source: Philippines)

8711.10.14	8711.10.94	8711.20.13	8711.20.93	8711.60.12	8711.60.92
“POCKET MOTORCYCLES”					
<p>"Pocket motorcycle" is a miniature motorcycle. It has a usual height of less than 50 cm (20 in), and a length of up to 1 m (3 ft 3 in). Its cylinder capacity typically ranges from 40 to 50 cc but could go up to as high as 150 cc.</p>					
(Source: Singapore)					

8711.20.11	8711.20.91	8711.30.11	8711.30.19	8711.40.11	8711.40.19
MOTOCROSS MOTORCYCLES					
<p>Motocross is a type of motorcycle sport or all-terrain vehicle racing held on enclosed off-road circuits. The name "motocross" is derived from the words "motorcycle" and "cross-country". Motocross motorcycles are rear-wheel drive cycles with a maximum number of 6 speeds. The engines are single reciprocating internal combustion piston engine having displacements of 50 – 125 cc 2-stroke or 150 – 250 cc 4-stroke (250 Motocross Class) and 150 – 250 cc 2-stroke or 251 – 450 cc 4-stroke (450 Motocross Class).</p> <p>Supermoto involves taking a motocross motorcycle meant to be raced off-road and converting it to be raced on tracks consisting of both dirt and pavement. The motorcycles are fitted with special road racing tires with grooved tread to grip both the pavement and dirt.</p> <p>Supercross is a cycle racing sport involving racing specialised high performance off-road motorcycles on artificially-made dirt tracks consisting of steep jumps and obstacles.</p> <p>Freestyle Motocross (FMX), a relatively new variation of supercross, does not involve racing and instead concentrates on performing acrobatic stunts while jumping motocross motorcycles.</p>					

Motorcross



(Source: Malaysia)

8712.00.20

8714.91.10

8714.92.10

8714.93.10

8714.94.10

8714.95.10

8714.96.10

8714.99.11

8714.99.12

BICYCLES DESIGNED TO BE RIDDEN BY CHILDREN AND PARTS AND ACCESSORIES THEREFOR

For the purposes of AHTN 8712.00.20, the expression "bicycle designed to be ridden by children" refer only to bicycle:

- having the maximum length between the seat (at the lowest position) and the pedal at the lowest point not exceeding 43 cm; and
- having wheel diameter not exceeding 16 inches or 40.64 cm.

















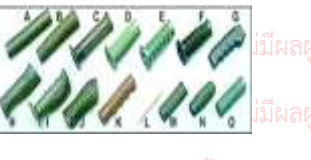
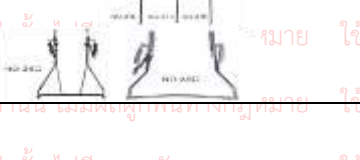
The above measurements and other criteria determining the identification of children's bicycles may vary according to the national regulations.

Parts and accessories that can be used for both adults' and children's bicycles are to be classified as parts or accessories for adult's bicycles.



(Source: Malaysia)

8714.99.11	8714.99.12	8714.99.91	8714.99.94
BICYCLE PARTS AND ACCESSORIES			
<p>Bicycle parts and accessories can be distinguished from each other by virtue of the fact that parts are bicycle components that are essential and integral to the operation of the bicycle, while accessories merely enhance the operation of the bicycle.</p>			
Examples of bicycle parts			
<p>Shock absorber</p>	<p>SWITCH GEAR</p>	<p>Axle & Cups</p>	<p>Brake caliper and brake kit</p>
<p>Disc brake and Caliper</p>	<p>Saddle</p>	<p>Rear Derailleurs, Lower cog</p>	<p>Handle Bars</p>
<p>Spokes and nipples</p>	<p>CHAIN ADJUSTER</p>	<p>Seat Pillar or seat post</p>	<p>Handle Stems</p>
<p>Brake Level</p>	<p>FORK</p>	<p>Pedals</p>	

 <p>FRAME LUG CAPS</p>	 <p>FRAME LUG NUTS</p>	 <p>Free-wheel sprocket wheel</p>	 <p>Single and double chain wheel</p>	 <p>Brake cable</p>
<p>Examples of bicycle accessories</p>				
 <p>REFLECTORS</p>	 <p>Bar End</p>	 <p>Steel Bicycle Axle Foot Pegs</p>		
 <p>TRAINING WHEEL</p>	 <p>Bottle bracket</p>	 <p>CARRIER</p>		
 <p>QUICK RELEASE</p>	 <p>STABILIZER WHEEL KIT</p>	 <p>BACK REST</p>		
 <p>CHAIN COVER</p>	 <p>Wheel fender/wheel cover/mudguard</p>	 <p>HAND GRIPS</p>		
 <p>STAND</p>				

(Source: Malaysia)

CHAPTER 90

9018.90.10

FIBRE-OPTIC HEADBAND LAMPS OF A KIND DESIGNED FOR MEDICAL USE

These lamps are mains powered, not battery operated.

Fiber optic headband for surgeon



TECHNICAL SPECIFICATIONS

HEAD LIGHT

Fiber Optic Head Band:

State-of-art multiple coated systems concentrates and focuses the brightest white light available-virtual shadow free. Unique design enables headlight adjustment from side to side and from straight down and upward positions. Coaxial Fiber optic Headlight is available with a variable 5-80mm light spot. Convenient Focusing sleeves for uniform quality illumination. Absolutely, no heat through distance lamp source. Adjustable plastic Head-Band with lock

LIGHT SOURCE

Halogen Light Source (Double Port):

Variable light intensity without color temperature change.

Special, Long-life Halogen bulb with Reflector.

Brilliant halogen illumination 24V-250W

Brightness: more than 50,000 Lux.

Fiber Optic Cable

5mm diameter

7.5 feet length(2.3meter)

(Source: Malaysia)

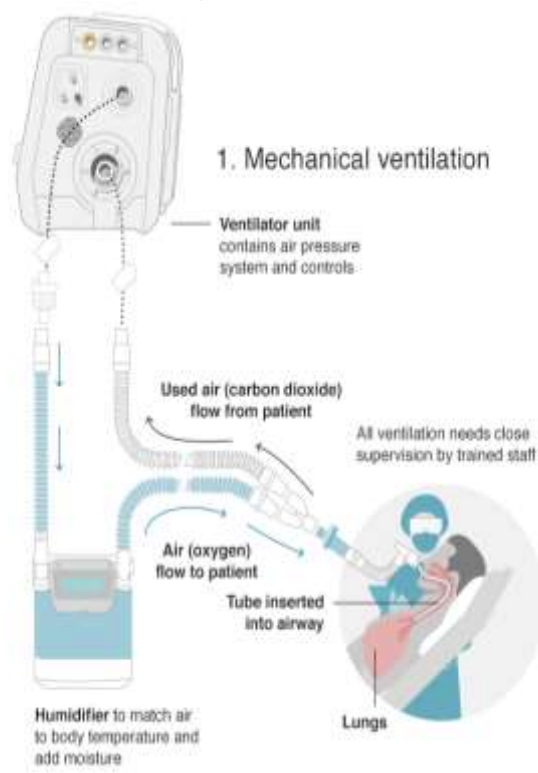
9019.20.10

INVASIVE VENTILATORS

Ventilator is a machine that supports or assists breathing often needed by patients who cannot breathe on their own, either because of an illness or because of a severe injury. The purpose of using this machine is to provide adequate oxygen to patients.

Invasive ventilator utilizes a tube which is physically inserted into the patient's trachea through the throat, thus invading the respiratory airway (in the medical field, this process is called tracheal intubation). Invasive ventilator has two lines for air flowing to the patient and for exhaled air flowing away from the patient. Invasive ventilator has several modes such as:

- Controlled ventilation (volume control CMV, pressure control CMV, VC-ACV, PC-ACV, VC-SIMV, PC-SIMV)
- Intelligent ventilation (auto MV and PRVC)
- Supported ventilation (SIMV + PS)



Picture 1. Illustration of the usage of the invasive ventilator

CHAPTER 93

9303.20.10

HUNTING SHOTGUNS

Sporting

Some of the most common uses of shotguns are the sports of skeet shooting, trap shooting and sporting clays. These involve shooting clay discs, also known as clay pigeons, thrown in by hand or by machine. Both skeet and trap competitions are featured at the Olympic Games.

Hunting

The shotgun is popular for bird hunting, it is also used for more general forms of hunting especially in semi-populated areas where the range of rifle bullets may pose a hazard. Use of a smooth bore shotgun with a rifled slug or, alternatively, a rifled barrel shotgun with a sabot slug, improves accuracy to 100 m (110 yd) or more. This is well within the range of the majority of kill shots by experienced hunters using shotguns.

However, given the relatively low muzzle velocity of slug ammunition, typically around 500 m/s (about 1600 feet per second), and the blunt, poorly streamlined shape of typical slugs (which cause them to lose velocity very rapidly, compared to rifle bullets), a hunter must pay close attention to the ballistics of the particular ammunition used to ensure an effective and humane kill shot.

At any reasonable range, shotgun slugs make effective lethal wounds due to their tremendous mass, reducing the length of time that an animal might suffer. For example, a typical 12 gauge shotgun slug is a blunt piece of metal that could be described as an 18 mm (.729 inch) caliber that weighs 28 grams (432 grains). For comparison, a common deer-hunting rifle round is a 7.62 mm (.308 inch) slug weighing 9.7 grams (150 grains), but the dynamics of the rifle cartridge allow for a different type of wound, and a much further reach.

Shotguns are often used with rifled barrels in locations where it is not lawful to hunt with a rifle. Typically, a sabot slug is used in these barrels for maximum accuracy and performance. Shotguns are often used to hunt whitetail deer in the thick brush and briars of the Southeastern and upper Midwestern United States, where, due to the dense cover, ranges tend to be close – 25 m or less.

Sabot slugs are essentially very large hollowpoint bullets, and are streamlined for maximum spin and accuracy when shot through a rifled barrel. They have greater ranges than older Foster and Brenneke-type slugs.

(Source: Viet Nam)

CHAPTER 94

9401.69.10 **9401.79.10**

SEATS COMBINED WITH RATTAN

Seats combined with rattan are seats with wooden or metal frame combined with rattan as their base and/or backrest but not merely for ornamental use.



(Source: Indonesia)

9402.90.11

COMMODES

Commode is a piece of furniture that looks like a chair but has a container in the seat that people who are ill or old can use as a toilet.



Picture 1. Examples of Commodes

Source: Viet Nam

9402.90.12

OPERATING TABLES – ELECTRICALLY OPERATED

An operating table is a table on which a patient lies during a surgical procedure. Sometimes known as a surgical table or operation table, operating tables are typically used within an operating room or surgical suite of a hospital, ambulatory surgery center, or other healthcare facilities where surgeries are performed. Operating tables may be either stationary or mobile to move room to room. Operating tables are used in various types of procedures such as cardiothoracic, orthopaedic, bariatric, robotic, urologic, and more.

Electrically operating table is electrically driven that are regulated by an electronic system (it uses remote control to make changes to the position of the patient who is undergoing surgery).

Operating table that is electrically, electro-hydraulically or electro-mechanical driven, with any accessories for operational purposes



Picture 1. Example of operating tables, electrically operated

(Source: Indonesia)

9402.90.13

OPERATING TABLES – NOT ELECTRICALLY OPERATED

An operating table is a table on which a patient lies during a surgical procedure. Sometimes known as a surgical table or operation table, operating tables are typically used within an operating room or surgical suite of a hospital, ambulatory surgery center, or other healthcare facilities where surgeries are performed. Operating tables may be either stationary or mobile to move room to room. Operating tables are used in various types of procedures such as cardiothoracic, orthopedic, bariatric, robotic, urologic, and more.

Not electrically operating table does not have any electric function and depends on manually or hydraulically driven device (usually a lever) to make necessary adjustment on the position of the table.

Operating table that is manually or hydraulically driven, with any accessories for operational purposes.



Picture 1. Example of operating tables, not electrically operated

(Source: Indonesia)

9402.90.14

EXAMINATION TABLES

These are tables used in a place of medical care, for examination of patients. Generally, these tables may be with fixed height or adjustable.



Manual Examination Table



Electric Examination Table

Picture 1. Examples of examination tables

(Source: Indonesia)

9402.90.15

HOSPITAL BEDS

A hospital bed is a bed specially designed for hospitalized patients or others in need of some form of health care. These beds have special features both for the comfort and well-being of the patient and for the convenience of health care workers. Beds have side rails that can be raised or lowered, which serve as protection for the patient.

WHO defines a hospital bed as a bed that is regularly maintained and staffed for the accommodation and full-time care of a succession of inpatients and is situated in wards or a part of the hospital where continuous medical care for inpatients is provided.

- Hospital bed, fixed height, with any type side rails, without mattress
- Hospital bed, variable height, manually or electrically driven, With any type side rails, without mattress.



Picture 1. Examples of hospital beds

(Source: Indonesia)

9403.20.10 9403.60.10 9403.70.20 9403.89.10

FUME CUPBOARDS

A fume cupboard or fume hood is a type of local ventilation device that is designed to limit exposure to hazardous or noxious fumes, vapors or dusts. A fume cupboard is typically a large piece of equipment enclosing five sides of a work area, the bottom of which is most commonly located at a standing work height.

Two main types exist, ducted and recirculating. The principle is the same for both types: air is drawn in from the front (open) side of the cabinet, and either expelled outside the building or made safe through filtration and fed back into the room.

Secondary functions of these devices may include explosion protection, spill containment and other functions necessary to the work being done within the device.

Fume cupboards typically protect only the user and are most commonly used in laboratories where hazardous or noxious chemicals are released during testing, research, development or teaching. They are also used in industrial applications or other activities where hazardous or noxious vapors, gases or dusts are generated or released.

Because one side (the front) of a fume hood is open to the room occupied by the user, and the air within the fume hood is potentially contaminated, the proper flow of air from the room into the hood is critical to its function. Much of fume hood design and operation is focused on maximizing the proper containment of the air and fumes within the fume hood.



Source: Wikipedia

9404.29.20

MATTRESSES, HYPERTHERMIA / HYPOTHERMIA TYPE

These mattresses are generally filled with a liquid mixed with anti-algae solution and attached to a temperature controller. They are normally used for premature babies in neonatal intensive care units.

Hypertthermia type: Mattresses specially designed for cooling a patient with hypertthermia, a condition of having an abnormally high body temperature.

CHAPTER 95

9503.00.80

PORTABLE INTERACTIVE ELECTRONIC EDUCATIONAL DEVICES
PRIMARILY DESIGNED FOR CHILDREN

These portable battery operated devices (weighing not more than 10kg) are designed usually with the appearance of so-called laptops, tablets, smartphones and similar articles. They are, in particular, intended to be used by children for playful learning activities due to their design and simple operation.

These devices support learning by means of interaction between the child and the device. They enable the child to make a choice between various input options, based on one or more subjects, themes, etc. The devices are able to respond to these inputs and to provide feedback based on pre-programmed information. The child can consequently assess the level of its own success and learn from the experience.



(Source: Philippines)

CHAPTER 96

9601.90.12

PEARL NUCLEUS

Pearl Nucleus is a spherical shell bead cut from mother of pearl, shell of a mussel or oyster, to be implanted in the oysters for producing cultured pearls.

(Source: Indonesia)

