Chapter 78

Lead and articles thereof

Note.

1.- In this Chapter the following expressions have the meanings hereby assigned to them :

(a) **Bars and rods**

Rolled, extruded, drawn or forged products, not in coils, which have a uniform solid cross-section along their whole length in the shape of circles, ovals, rectangles (including squares), equilateral triangles or regular convex polygons (including " flattened circles " and " modified rectangles ", of which two opposite sides are convex arcs, the other two sides being straight, of equal length and parallel). Products with a rectangular (including square), triangular or polygonal cross-section may have corners rounded along their whole length. The thickness of such products which have a rectangular (including " modified rectangular ") cross-section exceeds one-tenth of the width. The expression also covers cast or sintered products, of the same forms and dimensions, which have been subsequently worked after production (otherwise than by simple trimming or de-scaling), provided that they have not thereby assumed the character of articles or products of other headings.

(b) **Profiles**

Rolled, extruded, drawn, forged or formed products, coiled or not, of a uniform cross-section along their whole length, which do not conform to any of the definitions of bars, rods, wire, plates, sheets, strip, foil, tubes or pipes. The expression also covers cast or sintered products, of the same forms, which have been subsequently worked after production (otherwise than by simple trimming or de-scaling), provided that they have not thereby assumed the character of articles or products of other headings.

(c) **Wire**

Rolled, extruded or drawn products, in coils, which have a uniform solid cross-section along their whole length in the shape of circles, ovals, rectangles (including squares), equilateral triangles or regular convex polygons (including " flattened circles " and " modified rectangles ", of which two opposite sides are convex arcs, the other two sides being straight, of equal length and parallel). Products with a rectangular (including square), triangular or polygonal cross-section may have corners rounded along their whole length. The thickness of such products which have a rectangular (including " modified rectangular ") cross-section exceeds one-tenth of the width.

(d) **Plates, sheets, strip and foil**

Flat-surfaced products (other than the unwrought products of heading 78.01), coiled or not, of solid rectangular (other than square) cross-section with or without rounded corners (including " modified rectangles " of which two opposite sides are convex arcs, the other two sides being straight, of equal length and parallel) of a uniform thickness, which are :

- of rectangular (including square) shape with a thickness not exceeding one-tenth of the width,
- of a shape other than rectangular or square, of any size, provided that they do not assume the character of articles or products of other headings.

Heading 78.04 applies, *inter alia,* to plates, sheets, strip and foil with patterns (for example, grooves, ribs, chequers, tears, buttons, lozenges) and to such products which have been perforated, corrugated, polished or coated, provided that they do not thereby assume the character of articles or products of other headings.

(e) **Tubes and pipes**

Hollow products, coiled or not, which have a uniform cross-section with only one enclosed void along their whole length in the shape of circles, ovals, rectangles (including squares), equilateral triangles or regular convex polygons, and which have a uniform wall thickness. Products with a rectangular (including square), equilateral triangular or regular convex polygonal cross-section, which may have corners rounded along their whole length, are also to be considered as tubes and pipes provided the inner and outer cross-sections are concentric and have the same form and orientation. Tubes and pipes of the foregoing cross-sections may be polished, coated, bent, threaded, drilled, waisted, expanded, cone-shaped or fitted with flanges, collars or rings.

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Subheading Note.

1.- In this Chapter the expression " refined lead " means :

Metal containing by weight at least 99.9 % of lead, provided that the content by weight of any other element does not exceed the limit specified in the following table :

TABLE - Other elements

Element		Limiting content % by weight
Ag	Silver	0.02
As	Arsenic	0.005
Bi	Bismuth	0.05
Ca	Calcium	0.002
Cd	Cadmium	0.002
Cu	Copper	0.08
Fe	Iron	0.002
S	Sulphur	0.002
Sb	Antimony	0.005
Sn	Tin	0.005
Zn	Zinc	0.002
Other	(for example Te), each	0.001

GENERAL

This Chapter covers lead and its alloys, and certain articles thereof.

Lead is mainly extracted from galena, a natural lead sulphide ore often containing silver. The crushed ore, after concentration by flotation, is generally roasted or sintered, and is then reduced by smelting. During the roasting or sintering process, the sulphide is largely converted into oxide; in the smelting process, the oxide is reduced to lead by means of coke and a flux. In this manner " bullion lead " or " work lead " is obtained; this contains a number of impurities, frequently including silver. It is therefore generally further refined to produce almost completely pure lead.

Lead is also obtained by remelting lead waste and scrap.

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Lead is a heavy, bluish-grey metal; it is very malleable, easily melted and very soft (it can be marked easily with the thumb nail). It resists the action of most acids (e.g., sulphuric acid or hydrogen chloride) and is therefore used in the construction of chemical plant.

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Because of its low melting point lead is easily alloyed with other elements. The **principal lead alloys** which may fall in this Chapter under the provisions of Note 5 to Section XV (see the General Explanatory Note to that Section), are the following :

(1) Lead-tin alloys used, for example, in lead-based soft solders, in terne-plate and in foil for the packing of tea.

(2) Lead-antimony-tin alloys used for printing type and in anti-friction bearings.

(3) Lead-arsenic alloys used for lead shot.

(4) Lead-antimony alloys (hard lead), used for bullets, accumulator plates, etc.

(5) Lead-calcium, lead-antimony-cadmium, lead-tellurium alloys.

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The Chapter covers :

(A) Unwrought lead and waste and scrap (headings 78.01 and 78.02).

(B) Products generally obtained by rolling or extruding the unwrought lead of heading 78.01 (headings 78.04 and 78.06); lead powders and flakes (heading 78.04).

(C) Tubes, pipes and fittings and the other articles of the residual heading 78.06 which covers all other lead articles **other than** those covered by Note 1 to Section XV or included in **Chapter 82** or **83** or those more specifically covered elsewhere in the Nomenclature.

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Products and articles of lead may be subjected to various treatments to improve the properties or appearance of the metal, etc. These treatments are generally those referred to at the end of the General Explanatory Note to Chapter 72, and do not affect the classification of the goods.

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The classification of **composite articles** is explained in the General Explanatory Note to Section XV.