

Chapter 85

**Electrical machinery and equipment and parts thereof;
sound recorders and reproducers,
television image and sound recorders and reproducers, and
parts and accessories of such articles**

Notes.

1.- This Chapter does not cover :

- (a) Electrically warmed blankets, bed pads, foot-muffs or the like; electrically warmed clothing, footwear or ear pads or other electrically warmed articles worn on or about the person;
- (b) Articles of glass of heading 70.11;
- (c) Machines and apparatus of heading 84.86;
- (d) Vacuum apparatus of a kind used in medical, surgical, dental or veterinary sciences (heading 90.18); or
- (e) Electrically heated furniture of Chapter 94.

2.- Headings 85.01 to 85.04 do not apply to goods described in heading 85.11, 85.12, 85.40, 85.41 or 85.42.

However, metal tank mercury arc rectifiers remain classified in heading 85.04.

3.- For the purposes of heading 85.07, the expression "electric accumulators" includes those presented with ancillary components which contribute to the accumulator's function of storing and supplying energy or protect it from damage, such as electrical connectors, temperature control devices (for example, thermistors) and circuit protection devices. They may also include a portion of the protective housing of the goods in which they are to be used.

4.- Heading 85.09 covers only the following electro-mechanical machines of the kind commonly used for domestic purposes :

- (a) Floor polishers, food grinders and mixers, and fruit or vegetable juice extractors, of any weight;
- (b) Other machines provided the weight of such machines does not exceed 20 kg.

The heading does not, however, apply to fans or ventilating or recycling hoods incorporating a fan, whether or not fitted with filters (heading 84.14), centrifugal clothes-dryers (heading 84.21), dish washing machines (heading 84.22), household washing machines (heading 84.50), roller or other ironing machines (heading 84.20 or 84.51), sewing machines (heading 84.52), electric scissors (heading 84.67) or to electrothermic appliances (heading 85.16).

5.- For the purposes of heading 85.23 :

- (a) "Solid-state non-volatile storage devices" (for example, "flash memory cards" or "flash electronic storage cards") are storage devices with a connecting socket, comprising in the same housing one or more flash memories (for example, "FLASH E2PROM") in the form of integrated circuits mounted on a printed circuit board. They may include a controller in the form of an integrated circuit and discrete passive components, such as capacitors and resistors;
- (b) The term "smart cards" means cards which have embedded in them one or more electronic integrated circuits (a microprocessor, random access memory (RAM) or read-only memory (ROM)) in the form of chips. These cards may contain contacts, a magnetic stripe or an embedded antenna but do not contain any other active or passive circuit elements.

- 6.- For the purposes of heading 85.34 "printed circuits" are circuits obtained by forming on an insulating base, by any printing process (for example, embossing, plating-up, etching) or by the "film circuit" technique, conductor elements, contacts or other printed components (for example, inductances, resistors, capacitors) alone or interconnected according to a pre-established pattern, other than elements which can produce, rectify, modulate or amplify an electrical signal (for example, semiconductor elements).

The expression "printed circuits" does not cover circuits combined with elements other than those obtained during the printing process, nor does it cover individual, discrete resistors, capacitors or inductances. Printed circuits may, however, be fitted with non-printed connecting elements.

Thin- or thick-film circuits comprising passive and active elements obtained during the same technological process are to be classified in heading 85.42.

- 7.- For the purpose of heading 85.36, "connectors for optical fibres, optical fibre bundles or cables" means connectors that simply mechanically align optical fibres end to end in a digital line system. They perform no other function, such as the amplification, regeneration or modification of a signal.

- 8.- Heading 85.37 does not include cordless infrared devices for the remote control of television receivers or other electrical equipment (heading 85.43).

- 9.- For the purposes of headings 85.41 and 85.42 :

(a) "Diodes, transistors and similar semiconductor devices" are semiconductor devices the operation of which depends on variations in resistivity on the application of an electric field;

(b) "Electronic integrated circuits" are :

- (i) Monolithic integrated circuits in which the circuit elements (diodes, transistors, resistors, capacitors, inductances, etc.) are created in the mass (essentially) and on the surface of a semiconductor or compound semiconductor material (for example, doped silicon, gallium arsenide, silicon germanium, indium phosphide) and are inseparably associated;
- (ii) Hybrid integrated circuits in which passive elements (resistors, capacitors, inductances, etc.), obtained by thin- or thick-film technology, and active elements (diodes, transistors, monolithic integrated circuits, etc.), obtained by semiconductor technology, are combined to all intents and purposes indivisibly, by interconnections or interconnecting cables, on a single insulating substrate (glass, ceramic, etc.). These circuits may also include discrete components;
- (iii) Multichip integrated circuits consisting of two or more interconnected monolithic integrated circuits combined to all intents and purposes indivisibly, whether or not on one or more insulating substrates, with or without leadframes, but with no other active or passive circuit elements.
- (iv) Multi-component integrated circuits (MCOs) : a combination of one or more monolithic, hybrid, or multi-chip integrated circuits with at least one of the following components : silicon-based sensors, actuators, oscillators, resonators or combinations thereof, or components performing the functions of articles classifiable under heading 85.32, 85.33, 85.41, or inductors classifiable under heading 85.04, formed to all intents and purposes indivisibly into a single body like an integrated circuit, as a component of a kind used for assembly onto a printed circuit board (PCB) or other carrier, through the connecting of pins, leads, balls, lands, bumps, or pads.

For the purpose of this definition :

1. "Components" may be discrete, manufactured independently then assembled onto the rest of the MCO, or integrated into other components.
2. "Silicon based" means built on a silicon substrate, or made of silicon materials, or manufactured onto integrated circuit die.

3. (a) "Silicon based sensors" consist of microelectronic or mechanical structures that are created in the mass or on the surface of a semiconductor and that have the function of detecting physical or chemical quantities and transducing these into electric signals, caused by resulting variations in electric properties or displacement of a mechanical structure. "Physical or chemical quantities" relates to real world phenomena, such as pressure, acoustic waves, acceleration, vibration, movement, orientation, strain, magnetic field strength, electric field strength, light, radioactivity, humidity, flow, chemicals concentration, etc.
- (b) "Silicon based actuators" consist of microelectronic and mechanical structures that are created in the mass or on the surface of a semiconductor and that have the function of converting electrical signals into physical movement.
- (c) "Silicon based resonators" are components that consist of microelectronic or mechanical structures that are created in the mass or on the surface of a semiconductor and have the function of generating a mechanical or electrical oscillation of a predefined frequency that depends on the physical geometry of these structures in response to an external input.
- (d) "Silicon based oscillators" are active components that consist of microelectronic or mechanical structures that are created in the mass or on the surface of a semiconductor and that have the function of generating a mechanical or electrical oscillation of a predefined frequency that depends on the physical geometry of these structures.

For the classification of the articles defined in this Note, headings 85.41 and 85.42 shall take precedence over any other heading in the Nomenclature, except in the case of heading 85.23, which might cover them by reference to, in particular, their function.

- 10.- For the purposes of heading 85.48, "spent primary cells, spent primary batteries and spent electric accumulators" are those which are neither usable as such because of breakage, cutting-up, wear or other reasons, nor capable of being recharged.

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Subheading Note.

- 1.- Subheading 8527.12 covers only cassette-players with built-in amplifier, without built-in loudspeaker, capable of operating without an external source of electric power and the dimensions of which do not exceed 170 mm x 100 mm x 45 mm.

GENERAL

(A) SCOPE AND STRUCTURE OF THE CHAPTER

This Chapter covers all electrical machinery and equipment, **other than** :

- (a) Machinery and apparatus of a kind covered by **Chapter 84**, which remains classified there even if electric (see the General Explanatory Note to that Chapter).
- and (b) Certain goods excluded from the Section as a whole (see the General Explanatory Note to Section XVI).

Contrary to the rules in Chapter 84, the goods of this Chapter remain classified here, even if they are of ceramic materials or glass, with the **exception** of glass envelopes (including bulbs and tubes) of **heading 70.11**.

This Chapter covers :

- (1) Machines and apparatus for the production, transformation or storage of electricity, e.g., generators, transformers, etc. (headings 85.01 to 85.04) and primary cells (heading 85.06) and accumulators (heading 85.07).
- (2) Certain domestic appliances (heading 85.09), and shavers, hair clippers and hair-removing appliances (heading 85.10).
- (3) Certain machines and appliances which depend for their operation on the properties or effects of electricity, such as its electro-magnetic effects, heating properties, etc. (headings 85.05, 85.11 to 85.18, 85.25 to 85.31 and 85.43).
- (4) Instruments and appliances for recording or reproducing sound; video recorders or reproducers; parts and accessories for such instruments and appliances (headings 85.19 to 85.22).
- (5) Recording media for sound or similar recording of other phenomena (including video recording media, but **excluding** photographic or cinematographic films of **Chapter 37**) (heading 85.23).
- (6) Certain electrical goods not generally used independently, but designed to play a particular role as components, in electrical equipment, e.g., capacitors (heading 85.32), switches, fuses, junction boxes, etc. (heading 85.35 or 85.36), lamps (heading 85.39), thermionic, etc., valves and tubes (heading 85.40), diodes, transistors and similar semiconductor devices (heading 85.41), electrical carbons (heading 85.45).
- (7) Certain articles and materials which are used in electrical apparatus and equipment because of their conducting or insulating properties, such as insulated electric wire and assemblies thereof (heading 85.44), insulators (heading 85.46), insulating fittings and metal conduit tubing with an interior insulating lining (heading 85.47).

In addition to the electrical goods indicated above, the Chapter also covers permanent magnets, including those not yet magnetised, and permanent magnet work holders (heading 85.05).

It should, however, be noted that this Chapter covers **only certain types of electro-thermic apparatus**, e.g., furnaces, etc. (heading 85.14) and space heating equipment, domestic appliances, etc. (heading 85.16).

It should be further noted that certain electronic memory modules (e.g., SIMMs (Single In-line Memory Modules) and DIMMs (Dual In-line Memory Modules)) **which cannot be regarded as products of heading 85.23 or as multi-component integrated circuits (MCOs) of heading 85.42** (see Note 9 (b) (iv) to this Chapter), and **do not have another individual function** are to be classified by application of Note 2 to Section XVI as follows :

- (a) modules suitable for use solely or principally with automatic data processing machines are to be classified in **heading 84.73** as parts of those machines,
- (b) modules suitable for use solely or principally with other specific machines or with a number of machines of the same heading are to be classified **as parts of those machines or groups of machines**, and
- (c) where it is not possible to determine principal use, the modules are to be classified in **heading 85.48**.

In general, however, electrically heated apparatus falls in other Chapters (mainly in **Chapter 84**), for example : steam generating boilers and super-heated water boilers (**heading 84.02**), air conditioning machines (**heading 84.15**), roasting, distilling or other apparatus of **heading 84.19**, calendering or other rolling machines and cylinders therefor (**heading 84.20**), poultry incubators and brooders (**heading 84.36**), general purpose branding machines for wood, cork, leather, etc. (**heading 84.79**), medical apparatus (**heading 90.18**).

(B) PARTS

As regards parts in general, see the General Explanatory Note to Section XVI.

Non-electrical parts of the machines or apparatus of this Chapter are classified as follows :

- (i) Many are in fact articles falling in other Chapters (especially **Chapter 84**), for example, pumps and fans (**heading 84.13 or 84.14**), taps, cocks, etc. (**heading 84.81**), ball bearings (**heading 84.82**), transmission shafts, gearing, etc. (**heading 84.83**).
- (ii) Other non-electrical parts suitable for use solely or principally with a particular kind of electrical machine of this Chapter (or with a number of machines falling in the same heading) are to be classified with that machine (or those machines) or, if appropriate, in **heading 85.03, 85.22, 85.29 or 85.38**.
- (iii) Other non-electrical parts fall in **heading 84.87**.