## 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

### Chapter Notes

1. This chapter does not cover:

(a) electrically warmed blankets, bed pans, 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 7011;

(c) machines and apparatus of heading 8486;

(d) vacuum apparatus of a kind used in medical, surgical, dental or veterinary science (heading 9018); or

(e) electrically heated furniture of Chapter 94.

2. Headings 8501 to 8504 do not apply to goods described in heading 8511, 8512, 8540, 8541 or 8542.

However, metal tank mercury arc rectifiers remain classified in heading 8504.

3. For the purposes of heading 8507, 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 (e.g., 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 8509 covers only the following electromechanical 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 20kg. The heading does not, however, apply to fans or ventilating or recycling hoods incorporating a fan, whether or not fitted with filters (heading 8414), centrifugal clothes-dryers (heading 8421), dishwashing machines (heading 8422), household washing machines (heading 8450), roller or other ironing machines (heading 8420 or 8451), sewing machines (heading 8452), electric scissors (heading 8467) or to electro-thermic appliances (heading 8516).

5. For the purposes of heading 8523:

(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 8534, '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 8542.

7. For the purpose of heading 8536, '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 8537 does not include cordless infrared devices for the remote control of television receivers or other electrical equipment (heading 8543).

9. For the purpose of headings 8541 and 8542:

(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:

* (1) 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, lndium phosphide) and are inseparably associated;
* (2) 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 inter connecting cables, on a single insulating substrate (glass, ceramic, etc.). These circuits may also include discrete components;
* (3) 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.
* (4) 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 8532, 8533, 8541, or inductors classifiable under heading 8504, 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 8541 and 8542 shall take precedence over any other heading in the nomenclature, except in the case of heading 8523, which might cover them by reference to, in particular, their function.

10. For the purposes of heading 8548, '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.

### Subheading notes

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.

### Additional notes

1. Subheadings 8519 20 10 and 8519 30 00 are to be taken not to apply to sound reproducing apparatus with laser reading system.

2. Subheading note 1 is applicable, mutatis mutandis, to subheading 8519 81 15.

3. For the purposes of subheadings 8528 71 15 and 8528 71 91 only, the term 'modem' covers devices or equipment that modulate and demodulate incoming and outgoing signals, such as V.90-modems or cable modems, and other devices that use like technologies for gaining access to the internet, such as VLAN, ISDN and ethernet. The extent of access to the internet may be limited by the service provider.

Apparatus of these subheadings must enable a two-way communication process or the two-way flow of information for the purposes of providing interactive information exchange.

| Classification | Description |
| --- | --- |
| **8501** | **Electric motors and generators (excluding generating sets)** |
| **8501 10** | **- Motors of an output not exceeding 37,5 W** |
| **8501 10 10** | - - Synchronous motors of an output not exceeding 18 W |
| **8501 10 10 10** | - - - For use in certain types of aircraft |
| **8501 10 10 20** | - - - Synchronous motor for a dishwasher with a water flow control mechanism with   - a length without axle of 24 mm (+/- 0,3),   - a diameter of 49,3 mm (+/- 0,3)   - a rated voltage of 220 V AC or more but not more than 240 V AC,   - a rated frequency of 50 Hz or more but not more than 60 Hz,   - an input power of not more than 4 W,   - a rotation speed of 4rpm or more but not more than 4,8rpm,   - an output torque of not less than 10kgf/cm |
| **8501 10 10 90** | - - - Other |
|  | - - Other |
| **8501 10 91** | - - - Universal AC/DC motors |
| **8501 10 91 10** | - - - - For use in certain types of aircraft |
| **8501 10 91 90** | - - - - Other |
| **8501 10 93** | - - - AC motors |
| **8501 10 93 10** | - - - - For use in certain types of aircraft |
| **8501 10 93 90** | - - - - Other |
| **8501 10 99** | - - - DC motors |
| **8501 10 99 10** | - - - - For use in certain types of aircraft |
|  | - - - - Other |
| **8501 10 99 54** | - - - - - DC motor, brushless, with an external diameter of not more than 25,4 mm, a rated speed of 2 260 (±15 %) rpm or 5 420 (±15 %) rpm, a supply voltage of 1,5 V or 3 V |
| **8501 10 99 56** | - - - - - DC Motor : - with a speed rotation of not more than 7000 rpm (without load), - with a nominal voltage of 12 V (± 4 V), - with a maximum power of 13,78 W ( at 3,09 A), - with a specified temperature range from -40°C to 160°C, - with a gear connection, - with a mechanical attachment interface, - with 2 electrical connections, - with a maximum torque of 100 Nm |
| **8501 10 99 57** | - - - - - DC motor:   - with a rotor speed of not more than 6 500 rpm when not loaded;   - with a rated voltage of 12,0 V (+/- 0,1);   - of a specified temperature range of - 40 °C or more, but not more than + 165 °C;   - with or without a connecting pinion;   - with or without an engine connector |
| **8501 10 99 58** | - - - - - DC Motor : - with a speed rotation of not more than 6500 rpm (without load), - with a nominal voltage of 12 V (± 4 V), - with a maximal power below than 20 W, - with a specified temperature range from -40°C to 160°C, - with a worm gear drive, - with a mechanical attachment interface, - with 2 electrical connections, - with a maximum torque of 75 Nm |
| **8501 10 99 60** | - - - - - DC motor   - with a rotor speed of 3 500 rpm or more but not more than 5 000 rpm loaded and not more than 6 500 rpm when not loaded   - with a power supply voltage of 100 V or more but not more than 240 V for use in the manufacture of electric fryers |
| **8501 10 99 65** | - - - - - Electric turbocharger actuator, with: - a DC motor, - an integrated gear mechanism, - a (pulling)force of 200 N or more at a minimum of 140°C elevated ambient temperature, - a (pulling) force of 250 N or more in each position of its stroke, - an effective stroke of 15 mm or more but not more than 25 mm, - with or without an on-board diagnostics interface |
| **8501 10 99 70** | - - - - - DC stepping motor, with   - an angle of step of 7,5 ° (± 0,5 °)   - a two-phase winding,    - a rated voltage of 9 V or more, but not more than 16,0 V   - of a specified temperature range covering at least - 40 °C to + 105 °C   - with or without connecting pinion   - with or without motor drive connector |
| **8501 10 99 75** | - - - - - Permanently excited DC motor with   - a multiple-phase winding   - an external diameter of 28 mm or more but not more than 35 mm,   - a rated speed of not more than 12 000 rpm,   - a power supply voltage of 8 V or more but not more than 27 V |
| **8501 10 99 79** | - - - - - DC motor with brushes and an internal rotor with a three-phase winding, whether or not equipped with a worm, of a specified temperature range covering at least - 20°C to + 70°C |
| **8501 10 99 80** | - - - - - DC stepping motor, with:   - an angle of step of 7,5° (± 0,5°),   - a pull-out torque at 25 °C of 25 mNm or more,   - a pull-out pulse rate of 1 500 pps or more,   - a two-phase winding, and   - a rated voltage of 10,5 V or more, but not more than 16,0 V |
| **8501 10 99 81** | - - - - - DC stepping motor, with an angle of step of 18 ° or more, a holding torque of 0,5 mNm or more, a coupling bracket the exterior dimensions of which do not exceed 22 mm x 68 mm, a two phase winding and an output of not more than 5 W |
| **8501 10 99 82** | - - - - - DC motor, brushless, with an external diameter of not more than 29 mm, a rated speed of 1 500 (±15 %) rpm or 6 800 (±15 %) rpm, a supply voltage of 2 V or 8 V |
| **8501 10 99 90** | - - - - - Other |
| **8501 20** | **- Universal AC/DC motors of an output exceeding 37,5 W** |
| **8501 20 00 10** | - - Of an output exceeding 735 W but not exceeding 150 kW, for use in civil aircraft |
| **8501 20 00 20** | - - Of an output of less than 750 W or exceeding 150 kW, for use in certain types of aircraft |
| **8501 20 00 30** | - - Universal AC/DC motor with - a rated output of 1,2 kW, - a supply voltage of 230 V, and - engine brake, - assembled to a reduction gear with output shaft, which is contained in a plastic housing for use as electric drive of lawnmower blades |
| **8501 20 00 90** | - - Other |
|  | **- Other DC motors; DC generators** |
| **8501 31** | - - Of an output not exceeding 750 W |
| **8501 31 00 10** | - - - Motors of an output exceeding 735 W, DC generators, for use in civil aircraft |
| **8501 31 00 20** | - - - for use in certain types of aircraft |
|  | - - - Other |
| **8501 31 00 30** | - - - DC motor, brushless, with a three-phase winding, an external diameter of 85 mm or more, but not exceeding 115 mm, a nominal torque of 2.23 Nm (± 1.0 Nm), of an output of more than 120 W but not exceeding 520 W, calculated with 1550 RPM (± 350 RPM) at a supply voltage of 12 V equipped with electronic circuit with sensors using the Hall effect, for use with an electric power steering control module (power steering motor) |
| **8501 31 00 30** | - - - - DC motor, brushless, with a three-phase winding, an external diameter of 85 mm or more, but not exceeding 115 mm, a nominal torque of 2.23 Nm (± 1.0 Nm), of an output of more than 120 W but not exceeding 520 W, calculated with 1550 RPM (± 350 RPM) at a supply voltage of 12 V equipped with electronic circuit with sensors using the Hall effect, for use with an electric power steering control module (power steering motor) |
| **8501 31 00 40** | - - - Permanently excited DC motor with   - a multiple-phase winding,   - an external diameter of 30 mm or more but not more than 80 mm,   - a rated speed of not more than 15 000 rpm,   - an output of 45 W or more but not more than 300 W and   - a supply voltage of 9 V or more but not more than 25 V |
| **8501 31 00 40** | - - - - Permanently excited DC motor with   - a multiple-phase winding,   - an external diameter of 30 mm or more but not more than 80 mm,   - a rated speed of not more than 15 000 rpm,   - an output of 45 W or more but not more than 300 W and   - a supply voltage of 9 V or more but not more than 25 V |
| **8501 31 00 45** | - - - - DC motors, brushless, with:   - an external diameter of 90 mm or more, but not more than 110 mm,   - a rated speed of not more than 3 680 rpm,   - an output of 600 W or more but not more than 740 W at 2 300 rpm and at 80 °C,   - a supply voltage of 12 V,   - a torque of not more than 5,67 Nm,   - a rotor position sensor,   - an electronic star-point relay, and   - for use with an electric power steering control module |
| **8501 31 00 45** | - - - DC motors, brushless, with:   - an external diameter of 90 mm or more, but not more than 110 mm,   - a rated speed of not more than 3 680 rpm,   - an output of 600 W or more but not more than 740 W at 2 300 rpm and at 80 °C,   - a supply voltage of 12 V,   - a torque of not more than 5,67 Nm,   - a rotor position sensor,   - an electronic star-point relay, and   - for use with an electric power steering control module |
| **8501 31 00 50** | - - - - DC motors, brushless, with: - an external diameter of 80 mm or more, but not more than 200 mm, - a supply voltage of 9 V or more, but not more than 16 V, - an output at 20 °C of 300 W or more, but not more than 750 W, - a torque at 20 °C of 2,00 Nm or more, but not more than 7,00 Nm, - a rated speed at 20 °C of 600 rpm or more, but not more than 3 100 rpm, - with or without the rotor angle position sensor of resolver type or Hall effect type, of the kind used in power steering systems for cars |
| **8501 31 00 50** | - - - DC motors, brushless, with: - an external diameter of 80 mm or more, but not more than 200 mm, - a supply voltage of 9 V or more, but not more than 16 V, - an output at 20 °C of 300 W or more, but not more than 750 W, - a torque at 20 °C of 2,00 Nm or more, but not more than 7,00 Nm, - a rated speed at 20 °C of 600 rpm or more, but not more than 3 100 rpm, - with or without the rotor angle position sensor of resolver type or Hall effect type, of the kind used in power steering systems for cars |
| **8501 31 00 55** | - - - DC motor with commutator, with   - an external diameter of 27.5 mm or more, but not more than 45 mm,   - a rated speed of 11 000 rpm or more, but not more than 23 200 rpm,   - a rated supply voltage of 3.6 V or more, but not more than 230 V,   - an output power of not more than 529 W,   - a free load current of not more than 3.1 A,   - a maximum efficiency of 54 % or more, for driving hand-held power tools |
| **8501 31 00 55** | - - - - DC motor with commutator, with   - an external diameter of 27.5 mm or more, but not more than 45 mm,   - a rated speed of 11 000 rpm or more, but not more than 23 200 rpm,   - a rated supply voltage of 3.6 V or more, but not more than 230 V,   - an output power of not more than 529 W,   - a free load current of not more than 3.1 A,   - a maximum efficiency of 54 % or more, for driving hand-held power tools |
| **8501 31 00 75** | - - - - Brushless DC motor assembly comprised of a motor and transmission, with: - electronic control operating by Hall Effect position sensors, - voltage input 9V or more but not more than 16V, - external diameter of the motor 70 mm or more but not more than 80 mm, - output motor power 350 W or more but not more than 550W, - maximum output torque 50 Nm or more but not more than 52 Nm, - maximum output rotation speed 280 rpm or more but not more than 300 rpm, - coaxial male spline outputs of outer diameter 20 mm (±1 mm), 17 teeth and minimum length of teeth 25 mm (± 1 mm), and - with distance between root of splines 119 mm (± 1 mm) for use in the manufacture of all-terrain or utility task vehicles |
| **8501 31 00 75** | - - - Brushless DC motor assembly comprised of a motor and transmission, with: - electronic control operating by Hall Effect position sensors, - voltage input 9V or more but not more than 16V, - external diameter of the motor 70 mm or more but not more than 80 mm, - output motor power 350 W or more but not more than 550W, - maximum output torque 50 Nm or more but not more than 52 Nm, - maximum output rotation speed 280 rpm or more but not more than 300 rpm, - coaxial male spline outputs of outer diameter 20 mm (±1 mm), 17 teeth and minimum length of teeth 25 mm (± 1 mm), and - with distance between root of splines 119 mm (± 1 mm) for use in the manufacture of all-terrain or utility task vehicles |
| **8501 31 00 78** | - - - - Automotive-ready, brushless and permanently excited direct current motor with: - a specified speed of not more than 4 100 rpm, - a minimum output of 400 W, but not more than 1,3 kW (at 12V), - a flange diameter of 90 mm or more, but not more than 150 mm, - a maximum length of 200 mm, measured from the beginning of the shaft to the outer ending, - a housing length of not more than 160 mm, measured from the flange to the outer ending, - a maximum of two-piece (basic housing including electric components and flange with minimum 2 and maximum 6 bore holes) aluminium diecast housing whether or not with a sealing compound (groove with an O-ring and grease), - a stator with single T-tooth design and single coil windings in 12/8 topology, and - surface magnets |
| **8501 31 00 78** | - - - Automotive-ready, brushless and permanently excited direct current motor with: - a specified speed of not more than 4 100 rpm, - a minimum output of 400 W, but not more than 1,3 kW (at 12V), - a flange diameter of 90 mm or more, but not more than 150 mm, - a maximum length of 200 mm, measured from the beginning of the shaft to the outer ending, - a housing length of not more than 160 mm, measured from the flange to the outer ending, - a maximum of two-piece (basic housing including electric components and flange with minimum 2 and maximum 6 bore holes) aluminium diecast housing whether or not with a sealing compound (groove with an O-ring and grease), - a stator with single T-tooth design and single coil windings in 12/8 topology, and - surface magnets |
| **8501 31 00 99** | - - - - Other |
| **8501 32** | - - Of an output exceeding 750 W but not exceeding 75 kW |
| **8501 32 00 10** | - - - For use in civil aircraft |
|  | - - - Other |
| **8501 32 00 50** | - - - - Fuel cell module containing at least polymer electrolyte membrane fuel cells whether or not in a housing with an integrated cooling system, for use in the manufacture of motor vehicle propulsion systems |
| **8501 32 00 60** | - - - - Traction motor, with:   - a torque output of 200 Nm or more but not more than 300 Nm   - a power output of 50 kW or more but not more than 100 kW   - a speed of not more than 12 500 rpm for use in the manufacture of electric vehicles |
| **8501 32 00 75** | - - - - Automotive-ready, brushless and permanently excited direct current motor with: - a specified speed of not more than 4 100 rpm, - a minimum output of 400 W, but not more than 1,3 kW (at 12V), - a flange diameter of 90 mm or more, but not more than 150 mm, - a maximum length of 200 mm, measured from the beginning of the shaft to the outer ending, - a housing length of not more than 160 mm, measured from the flange to the outer ending, - a maximum of two-piece (basic housing including electric components and flange with minimum 2 and maximum 6 bore holes) aluminium diecast housing whether or not with a sealing compound (groove with an O-ring and grease), - a stator with single T-tooth design and single coil windings in 12/8 topology, and - surface magnets |
| **8501 32 00 99** | - - - - Other |
| **8501 33** | - - Of an output exceeding 75 kW but not exceeding 375 kW |
| **8501 33 00 10** | - - - Motors of an output not exceeding 150 kW and generators, for use in civil aircraft |
| **8501 33 00 15** | - - - Traction motor, with:   - a torque output of 200 Nm or more but not more than 300 Nm   - a power output of 50 kW or more but not more than 100 kW   - a speed of not more than 12 500 rpm for use in the manufacture of electric vehicles |
| **8501 33 00 20** | - - - Of an output exceding 150 kW, for use in certain types of aircraft |
| **8501 33 00 30** | - - - Electric drive for motor vehicles, with an output of not more than 315 kW, with: • an AC or DC motor whether or not with transmission, • power electronics |
| **8501 33 00 55** | - - - Fuel cell module containing at least polymer electrolyte membrane fuel cells whether or not in a housing with an integrated cooling system, for use in the manufacture of motor vehicle propulsion systems |
| **8501 33 00 99** | - - - - Other |
| **8501 33 00 99** | - - - Other |
| **8501 34** | - - Of an output exceeding 375 kW |
| **8501 34 00 10** | - - - Generators for use in civil aircraft |
| **8501 34 00 99** | - - - - Other |
| **8501 34 00 99** | - - - Other |
| **8501 40** | **- Other AC motors, single-phase** |
| **8501 40 20** | - - Of an output not exceeding 750 W |
| **8501 40 20 10** | - - - Of an output exceeding 735 W, for use in civil aircraft |
| **8501 40 20 20** | - - - For use in certain types of aircraft |
| **8501 40 20 40** | - - - Electric AC commutator motor, single-phase, with an output of 250 W or more, an input power of 700 W or more but not more than 2 700 W, an external diameter of more than 120 mm (± 0,2 mm) but not more than 135 mm (± 0,2 mm), a rated speed of more than 30 000 rpm but not more than 50 000 rpm, equipped with air-inducting ventilator, for use in the manufacture of vacuum cleaners |
| **8501 40 20 80** | - - - Other |
| **8501 40 80** | - - Of an output exceeding 750 W |
| **8501 40 80 10** | - - - Of an output not exceeding 150 kW, for use in civil aircraft |
| **8501 40 80 20** | - - - Of an output exceeding 150 kW, for use in certain types of aircraft |
| **8501 40 80 30** | - - - Electric AC commutator motor, single-phase, with an output of more than 750 W, an input power of 700 W or more but not more than 2 700 W, an external diameter of more than 120 mm (± 0,2 mm) but not more than 135 mm (± 0,2 mm), a rated speed of more than 30 000 rpm but not more than 50 000 rpm, equipped with air-inducting ventilator, for use in the manufacture of vacuum cleaners |
| **8501 40 80 50** | - - - Electric drive for motor vehicles, with an output of not more than 315 kW, with: • an AC or DC motor whether or not with transmission, • power electronics |
| **8501 40 80 90** | - - - Other |
|  | **- Other AC motors, multi-phase** |
| **8501 51** | - - Of an output not exceeding 750 W |
| **8501 51 00 10** | - - - Of an output exceeding 735 W, for use in civil aircraft |
| **8501 51 00 20** | - - - Of an output of less than 750 W, for use in certain types of aircraft |
| **8501 51 00 30** | - - - AC synchronous servo motor with resolver and brake for a maximum speed of not more than 6 000 rpm, with:  - an output of 340 W or more but not more than 7,4 kW,    - a flange of dimensions of not more than 180 mm x 180 mm, and    - a length from flange to extreme end of resolver of not more than 271 mm |
| **8501 51 00 90** | - - - Other |
| **8501 52** | - - Of an output exceeding 750 W but not exceeding 75 kW |
| **8501 52 20** | - - - Of an output exceeding 750 W but not exceeding 7,5 kW |
| **8501 52 20 10** | - - - - For use in civil aircraft |
|  | - - - - Other |
| **8501 52 20 50** | - - - - - AC synchronous servo motor with resolver and brake for a maximum speed of not more than 6 000 rpm, with:  - an output of 340 W or more but not more than 7,4 kW,    - a flange of dimensions of not more than 180 mm x 180 mm, and    - a length from flange to extreme end of resolver of not more than 271 mm |
| **8501 52 20 89** | - - - - - Other |
| **8501 52 30** | - - - Of an output exceeding 7,5 kW but not exceeding 37 kW |
| **8501 52 30 10** | - - - - For use in civil aircraft |
| **8501 52 30 90** | - - - - Other |
| **8501 52 90** | - - - Of an output exceeding 37 kW but not exceeding 75 kW |
| **8501 52 90 10** | - - - - For use in civil aircraft |
| **8501 52 90 90** | - - - - Other |
| **8501 53** | - - Of an output exceeding 75 kW |
| **8501 53 50** | - - - Traction motors |
| **8501 53 50 10** | - - - - Electric drive for motor vehicles, with an output of not more than 315 kW, with: • an AC or DC motor whether or not with transmission, • power electronics |
| **8501 53 50 90** | - - - - Other |
|  | - - - Other, of an output |
| **8501 53 81** | - - - - Exceeding 75 kW but not exceeding 375 kW |
| **8501 53 81 10** | - - - - - Of an output not exceeding 150 kW, for use in civil aircraft |
| **8501 53 81 20** | - - - - - Of an output exceeding 150 kW, for use in certain types of aircraft |
| **8501 53 81 90** | - - - - - Other |
| **8501 53 94** | - - - - Exceeding 375 kW but not exceeding 750 kW |
| **8501 53 94 10** | - - - - - For use in certain types of aircraft |
| **8501 53 94 90** | - - - - - Other |
| **8501 53 99** | - - - - Exceeding 750 kW |
| **8501 53 99 10** | - - - - - For use in certain types of aircrafts |
| **8501 53 99 90** | - - - - - Other |
|  | **- AC generators (alternators)** |
| **8501 61** | - - Of an output not exceeding 75 kVA |
| **8501 61 20** | - - - Of an output not exceeding 7,5 kVA |
| **8501 61 20 10** | - - - - For use in civil aircraft |
|  | - - - - Other |
| **8501 61 20 35** | - - - - Fuel cell module , AC generator with an output of 7.5 kVA or less, consisting of:   - a Hydrogen generator (desulphurizer, reformer and cleaner )   - a PEM fuel cell stack and   - an Inverter for use as a part in a heating appliance |
| **8501 61 20 35** | - - - - - Fuel cell module , AC generator with an output of 7.5 kVA or less, consisting of:   - a Hydrogen generator (desulphurizer, reformer and cleaner )   - a PEM fuel cell stack and   - an Inverter for use as a part in a heating appliance |
| **8501 61 20 99** | - - - - - Other |
| **8501 61 80** | - - - Of an output exceeding 7,5 kVA but not exceeding 75 kVA |
| **8501 61 80 10** | - - - - For use in civil aircraft |
| **8501 61 80 99** | - - - - - Other |
| **8501 61 80 99** | - - - - Other |
| **8501 62** | - - Of an output exceeding 75 kVA but not exceeding 375 kVA |
| **8501 62 00 10** | - - - For use in civil aircraft |
|  | - - - Other |
| **8501 62 00 30** | - - - - Fuel cell system  - consisting of at least phosphoric acid fuel cells,  - in a housing with integrated water management and gas treatment,  - for permanent, stationary energy supply |
| **8501 62 00 98** | - - - - - Other |
| **8501 62 00 98** | - - - - Other |
| **8501 63** | - - Of an output exceeding 375 kVA but not exceeding 750 kVA |
| **8501 63 00 10** | - - - For use in civil aircraft |
| **8501 63 00 99** | - - - Other |
| **8501 63 00 99** | - - - - Other |
| **8501 64 00** | - - Of an output exceeding 750 kVA |
| **8502** | **Electric generating sets and rotary converters** |
|  | **- Generating sets with compression-ignition internal combustion piston engines (diesel or semi-diesel engines)** |
| **8502 11** | - - Of an output not exceeding 75 kVA |
| **8502 11 20** | - - - Of an output not exceeding 7,5 kVA |
| **8502 11 20 10** | - - - - For use in civil aircraft |
| **8502 11 20 90** | - - - - Other |
| **8502 11 80** | - - - Of an output exceeding 7,5 kVA but not exceeding 75 kVA |
| **8502 11 80 10** | - - - - For use in civil aircraft |
| **8502 11 80 90** | - - - - Other |
| **8502 12** | - - Of an output exceeding 75 kVA but not exceeding 375 kVA |
| **8502 12 00 10** | - - - For use in civil aircraft |
| **8502 12 00 90** | - - - Other |
| **8502 13** | - - Of an output exceeding 375 kVA |
| **8502 13 20** | - - - Of an output exceeding 375 kVA but not exceeding 750 kVA |
| **8502 13 20 10** | - - - - For use in civil aircraft |
| **8502 13 20 90** | - - - - Other |
| **8502 13 40** | - - - Of an output exceeding 750 kVA but not exceeding 2 000 kVA |
| **8502 13 40 10** | - - - - For use in civil aircraft |
| **8502 13 40 90** | - - - - Other |
| **8502 13 80** | - - - Of an output exceeding 2 000 kVA |
| **8502 13 80 10** | - - - - For use in civil aircraft |
| **8502 13 80 90** | - - - - Other |
| **8502 20** | **- Generating sets with spark-ignition internal combustion piston engines** |
| **8502 20 20** | - - Of an output not exceeding 7,5 kVA |
| **8502 20 20 10** | - - - For use in civil aircraft |
| **8502 20 20 90** | - - - Other |
| **8502 20 40** | - - Of an output exceeding 7,5 kVA but not exceeding 375 kVA |
| **8502 20 40 10** | - - - For use in civil aircraft |
| **8502 20 40 90** | - - - Other |
| **8502 20 60** | - - Of an output exceeding 375 kVA but not exceeding 750 kVA |
| **8502 20 60 10** | - - - For use in civil aircraft |
| **8502 20 60 90** | - - - Other |
| **8502 20 80** | - - Of an output exceeding 750 kVA |
| **8502 20 80 10** | - - - For use in civil aircraft |
| **8502 20 80 90** | - - - Other |
|  | **- Other generating sets** |
| **8502 31** | - - Wind-powered |
| **8502 31 00 10** | - - - For use in civil aircraft |
| **8502 31 00 90** | - - - Other |
| **8502 39** | - - Other |
| **8502 39 20** | - - - Turbo-generators |
| **8502 39 20 10** | - - - - For use in civil aircraft |
| **8502 39 20 90** | - - - - Other |
| **8502 39 80** | - - - Other |
| **8502 39 80 10** | - - - - For use in civil aircraft |
| **8502 39 80 90** | - - - - Other |
| **8502 40** | **- Electric rotary converters** |
| **8502 40 00 10** | - - For use in civil aircraft |
| **8502 40 00 90** | - - Other |
| **8503** | **Parts suitable for use solely or principally with the machines of heading 8501 or 8502** |
| **8503 00 10** | **- Non-magnetic retaining rings** |
| **8503 00 10 10** | - - For use in certain types of aircraft |
| **8503 00 10 90** | - - Other |
|  | **- Other** |
| **8503 00 91** | - - Of cast iron or cast steel |
| **8503 00 91 10** | - - - For use in certain types of aircraft |
|  | - - - Other |
| **8503 00 91 31** | - - - - Rotor, at the inner side provided with one or two magnetic rings (uniform or sectional) whether or not incorporated in a steel ring |
| **8503 00 91 99** | - - - - Other |
| **8503 00 99** | - - Other |
| **8503 00 99 10** | - - - For use in certain types of aircraft |
|  | - - - Other |
| **8503 00 99 31** | - - - - Stamped collector of an electric motor, having an external diameter of not more than 16 mm |
| **8503 00 99 32** | - - - - Rotor, at the inner side provided with one or two magnetic rings (uniform or sectional) whether or not incorporated in a steel ring |
| **8503 00 99 33** | - - - - Stator for brushless motor of electrical power steering with a roundness tolerance of 50 μm |
| **8503 00 99 34** | - - - - Rotor for brushless motor of electrical power steering with a roundness tolerance of 50 μm |
| **8503 00 99 35** | - - - - Transmitter resolver for brushless motors of electrical power steering |
| **8503 00 99 40** | - - - - Fuel cell membrane, in rolls or sheets, with a width of not more than 150 cm, of a kind used for manufacture of fuel cells in heading 8501 |
| **8503 00 99 55** | - - - - Stator for brushless motor, with: - an internal diameter of 206,6 mm (± 0,5) - an external diameter of 265,0 mm (± 0,2) and - a width of 37,2 mm or more but not more than 47,8 mm of a kind used in the manufacture of washing machine, washer-dryer or dryer equipped with direct drive drums |
| **8503 00 99 60** | - - - - Engine cover for electronic belt drive steering system ​​of galvanized steel with a thickness of not more than 2,5 mm (± 0,25 mm) |
| **8503 00 99 70** | - - - - Keypads of silicone or plastic,   - whether or not with parts of metal, plastic, glass fibre reinforced epoxide resin or wood,   - whether or not printed or surface treated,   - whether or not with electrical conducting elements   - whether or not with keypads foil glued on the keyboard   - whether or not with protective foil   - single or multilayer |
| **8503 00 99 99** | - - - - Other |
| **8504** | **Electrical transformers, static converters (for example, rectifiers) and inductors** |
| **8504 10** | **- Ballasts for discharge lamps or tubes** |
| **8504 10 20** | - - Inductors, whether or not connected with a capacitor |
| **8504 10 20 10** | - - - For use in civil aircraft |
| **8504 10 20 90** | - - - Other |
| **8504 10 80** | - - Other |
| **8504 10 80 10** | - - - For use in civil aircraft |
| **8504 10 80 90** | - - - Other |
|  | **- Liquid dielectric transformers** |
| **8504 21 00** | - - Having a power handling capacity not exceeding 650 kVA |
| **8504 22** | - - Having a power handling capacity exceeding 650 kVA but not exceeding 10 000 kVA |
| **8504 22 10** | - - - Exceeding 650 kVA but not exceeding 1 600 kVA |
| **8504 22 90** | - - - Exceeding 1 600 kVA but not exceeding 10 000 kVA |
| **8504 23 00** | - - Having a power handling capacity exceeding 10 000 kVA |
|  | **- Other transformers** |
| **8504 31** | - - Having a power handling capacity not exceeding 1 kVA |
|  | - - - Measuring transformers |
| **8504 31 21** | - - - - For voltage measurement |
| **8504 31 21 10** | - - - - - For use in civil aircraft |
| **8504 31 21 90** | - - - - - Other |
| **8504 31 29** | - - - - Other |
| **8504 31 29 10** | - - - - - For use in civil aircraft |
| **8504 31 29 90** | - - - - - Other |
| **8504 31 80** | - - - Other |
| **8504 31 80 10** | - - - - For use in civil aircraft |
| **8504 31 80 30** | - - - - Switching transformers, having a power handling capacity of not more than 1 kVA for use in the manufacture of static converters |
| **8504 31 80 40** | - - - - Electrical transformers:   - with a capacity of 1 kVA or less   - without plugs or cables, for internal use in the manufacture of set top boxes and TVs |
| **8504 31 80 50** | - - - - Transformers for use in the manufacture of electronic drivers, control devices and LED light sources for lighting industry |
| **8504 31 80 90** | - - - - Other |
| **8504 32** | - - Having a power handling capacity exceeding 1 kVA but not exceeding 16 kVA |
| **8504 32 00 10** | - - - For use in civil aircraft |
| **8504 32 00 90** | - - - Other |
| **8504 33** | - - Having a power handling capacity exceeding 16 kVA but not exceeding 500 kVA |
| **8504 33 00 10** | - - - For use in civil aircraft |
| **8504 33 00 90** | - - - Other |
| **8504 34 00** | - - Having a power handling capacity exceeding 500 kVA |
| **8504 40** | **- Static converters** |
| **8504 40 30** | - - Of a kind used with telecommunication apparatus, automatic data-processing machines and units thereof |
| **8504 40 30 10** | - - - For use in civil aircraft |
| **8504 40 30 90** | - - - Other |
|  | - - Other |
| **8504 40 55** | - - - Accumulator chargers |
| **8504 40 55 10** | - - - - For use in civil aircraft |
| **8504 40 55 90** | - - - - Other |
|  | - - - Other |
| **8504 40 82** | - - - - Rectifiers |
| **8504 40 82 10** | - - - - - For use in civil aircraft |
| **8504 40 82 20** | - - - - - Electric rectifier, with a capacity of not more than 1 kVA, for use in the manufacture of appliances falling within subheading 8509 80 and heading 8510 |
| **8504 40 82 30** | - - - - - Power supply boards for use in the manufacture of goods falling under heading 8521 and 8528 |
| **8504 40 82 40** | - - - - - Printed circuit board equipped with a bridge rectifier circuit and other active and passive components   - with two output connectors   - with two input connectors which are available and useable in parallel   - able to switch between bright and dimmed operation mode   - with an input voltage of 40 V (+ 25 % -15 %) or 42 V (+ 25 % -15 %) in bright operation mode, with an input voltage of 30 V (± 4 V) in dimmed operation mode, or   - with an input voltage of 230 V (+20 % -15 %) in bright operation mode, with an input voltage of 160 V (± 15 %) in dimmed operation mode, or   - with an input voltage of 120 V (15 % -35 %) in bright operation mode, with an input voltage of 60 V (± 20 %) in dimmed operation mode   - with an input current reaching 80 % of its nominal value within 20 ms   - with an input frequency of 45 Hz or more, but not more than 65 Hz for 42 V and 230 V, and 45-70 Hz for 120 V versions   - with an maximum inrush current overshoot of not more than 250 % of the input current   - with a period of the inrush current overshoot of not more than 100 ms   - with an input current undershoot of not less than 50 % of the input current   - with a period of the inrush current undershoot of not more than 20 ms   - with a presettable output current   - with an output current reaching 90 % of its nominal pre-set value within 50 ms   - with an output current reaching zero within 30 ms after removal of the input voltage   - with an defined failure status in case of no-load or too-high load (end-of-life function) |
| **8504 40 82 50** | - - - - - Electric rectifier: - with an input AC voltage of 100-240 V at frequency of 50-60 Hz, - with two output DC voltages of 9 V or more but not more than 12 V and 396 V or more but not more than 420 V, - output cables without connectors, and - in a plastic enclosure with dimensions 110 mm (±0,5 mm) x 60 mm (±0,5mm) x 38mm (±1 mm) for use in the manufacture of products using IPL (Intensive Pulse Light) |
| **8504 40 82 90** | - - - - - Other |
|  | - - - - Inverters |
| **8504 40 84** | - - - - - Having a power handling capacity not exceeding 7,5 kVA |
| **8504 40 84 10** | - - - - - - For use in civil aircraft |
| **8504 40 84 90** | - - - - - - Other |
| **8504 40 88** | - - - - - Having a power handling capacity exceeding 7,5 kVA |
| **8504 40 88 10** | - - - - - - For use in civil aircraft |
|  | - - - - - - Other |
| **8504 40 88 30** | - - - - - - - DC to AC inverter for use in traction motor control for use in the manufacture of electric vehicles |
| **8504 40 88 99** | - - - - - - - Other |
| **8504 40 90** | - - - - Other |
| **8504 40 90 10** | - - - - - For use in civil aircraft |
| **8504 40 90 15** | - - - - - Semiconductor power module (so called Smart Power Module) for converting single-phase AC input voltage into 2 or 3-phase AV voltage used to power up polyphase AC variable-speed electrical drives, in a casing fitted with one or more integrated circuits, IGBTs, diodes and thermistors, having an output voltage of 600 VAC or 650 VAC, and a rated current of 4 A or more, but not more than 30 A |
| **8504 40 90 25** | - - - - - Direct current to direct current converter - without housing or - with housing with connection pins, connection studs, screw connectors, unprotected line connections, connection elements which allow the mounting to a printed circuit board by soldering or any other technology, or other wiring connections requiring further processing |
| **8504 40 90 30** | - - - - - Static converter comprising a power switch with insulated-gate bipolar transistors (IGBTs), contained in a housing, for use in the manufacture of microwave ovens of subheading 8516 50 00 |
| **8504 40 90 40** | - - - - - Semiconductor power modules comprising:   - power transistors,   - integrated circuits,   - whether or not containing diodes and with or without thermistors,   - an operating voltage of not more than 600 V,   - not more than three electrical outputs each containing two power switches (whether MOSFET (Metal Oxide Semiconductor Field-Effect Transistor) or IGBT (Insulated Gate Bi-polar Transistors)) and internal drives, and   - a rms (root mean square) current rating of not more than 15,7 A |
| **8504 40 90 50** | - - - - - Drive unit for industrial robot with: - one or six 3-phase motor outputs with maximum 3 x 32 A, - a main power input of 220 V AC or more, but not more than 480 V AC, or 280 V DC or more, but not more than 800 V DC - a logic power input of 24 V DC, - an EtherCat communication interface, - and a dimension of 150 x 140 x 120 mm or more, but not more than 335 x 430 x 179 mm |
| **8504 40 90 60** | - - - - - Transfer moulded semiconductor power module comprising: - power transistors, - integrated circuits, - whether or not containing diodes and with or without thermistors, - a circuit configuration, - either containing a direct drive stage with an operating voltage of more than 600 V, - or containing a direct drive stage with an operating voltage of not more than 600 V and a rms current of more than 15,7 A, - or including one or more power factor correction modules |
| **8504 40 90 70** | - - - - - Module for converting alternating current into direct current and direct current into direct current with   - a rated power of not more than 100 W   - an input voltage of 80 V or more, but not more than 305 V   - an certified input frequency of 47 Hz or more, but not more than 440 Hz   - one or more constant voltage output(s)   - an operating temperature range of - 40 °C or more, but not more than + 85 °C,   - pins for mounting to a printed circuit |
| **8504 40 90 80** | - - - - - Power converter containing:   - a DC to DC converter   - a charger of a capacity of not not more than 7 kw   - switching functions for use in the manufacture of electric vehicles |
| **8504 40 90 90** | - - - - - Other |
| **8504 50** | **- Other inductors** |
| **8504 50 20** | - - Of a kind used with telecommunication apparatus and for power supplies for automatic data-processing machines and units thereof |
| **8504 50 95** | - - Other |
| **8504 50 95 10** | - - - For use in civil aircraft |
| **8504 50 95 20** | - - - Inductors with one or more windings, having an inductance of not more than 62 mH per winding/coil |
| **8504 50 95 40** | - - - Coil choke with:  - an inductance of 4,7 μH (± 20 %),  - a DC resistance of not more than 0,1 Ohms,  - an insulation resistance of 100 MOhms or more at 500 V (DC) for use in the manufacture of LCD and LED module power boards |
| **8504 50 95 50** | - - - Solenoid coil with   - a power consumption of not more than 6 W,   - an insulation resistance of more than 100 M ohms, and   - an insert hole of 11,4 mm or more, but not more than 11,8 mm |
| **8504 50 95 60** | - - - Inductors with one or more windings, with an inductance per winding of not more than 350 mH, for use in the manufacture of electronic control gear, control units and LED light sources for the lighting industry |
| **8504 50 95 70** | - - - Solenoid coil with: - a rated power of more than 10 W but not more than 15 W, - an insulation resistance of 100 M Ohms or more, - a DC resistance of not more than 34,8 Ohm (± 10 %) at 20°C, - a rated current of not more than 1,22 A, - a rated voltage of not more than 25 V |
| **8504 50 95 80** | - - - Self-induction coil - with one or more windings, with an inductivity per winding of no more than 62 mH, attached to one or more carrier materials, - with ferrites, - with one or more Negative Temperature Coefficient resistors as a temperature sensor, - whether or not with insulation covers, spacers and connection cables |
| **8504 50 95 90** | - - - other |
| **8504 90** | **- Parts** |
|  | - - Of transformers and inductors |
| **8504 90 05** | - - - Electronic assemblies of machines of subheading 8504 50 20 |
|  | - - - Other |
| **8504 90 11** | - - - - Ferrite cores |
| **8504 90 11 10** | - - - - - Ferrite cores, other than for deflection yokes |
| **8504 90 11 20** | - - - - - Reactor cores for use in a High Voltage Direct Current thyristor converter |
| **8504 90 11 90** | - - - - - Other |
| **8504 90 18** | - - - - Other |
| **8504 90 18 10** | - - - - - For use in certain types of aircraft |
| **8504 90 18 99** | - - - - - Other |
|  | - - Of static converters |
| **8504 90 91** | - - - Electronic assemblies of machines of subheading 8504 40 30 |
| **8504 90 99** | - - - Other |
| **8504 90 99 10** | - - - - For use in certain types of aircraft |
| **8504 90 99 20** | - - - - Thyristor SGCT (Symmetric Gate-Commutated Thyristor) with integrated gate driver:   - being a power electronic circuit mounted on the PCB, equipped with SGCT thyristor and electric and electronic components,   - having an ability to block the voltage - 6 500 V - in both directions (conducting and the reverse direction) of a kind used in medium voltagestatic converters (rectifiers and inverters) |
| **8504 90 99 90** | - - - - Other |
| **8505** | **Electromagnets; permanent magnets and articles intended to become permanent magnets after magnetisation; electromagnetic or permanent magnet chucks, clamps and similar holding devices; electromagnetic couplings, clutches and brakes; electromagnetic lifting heads** |
|  | **- Permanent magnets and articles intended to become permanent magnets after magnetisation** |
| **8505 11** | - - Of metal |
| **8505 11 00 10** | - - - For use in certain types of aircraft |
|  | - - - Other |
| **8505 11 00 31** | - - - - Permanent magnet having a remanence of 455mT (±15mT) |
| **8505 11 00 47** | - - - - Articles in the form of a triangle, square or rectangle, whether or not shaped or with rounded corners intended to become permanent magnets after magnetization, containing neodymium, iron and boron, with dimensions:   - a length of 9 mm or more but not more than 105 mm,   - a width of 5 mm or more but not more than 105 mm, and   - a height of 2 mm or more but not more than 55 mm |
| **8505 11 00 50** | - - - - Bars specifically shaped, intended to become permanent magnets after magnetization, containing neodymium, iron and boron, with dimensions:   - a length of 15 mm or more but not more than 52 mm,   - a width of 5 mm or more but not more than 42 mm, of a kind to be used in the manufacture of electric servomotors for industrial automation |
| **8505 11 00 55** | - - - - Flat bars of an alloy of samarium and cobalt with   - a length of 30,4 mm (± 0,05 mm);   - a width of 12,5 mm (± 0,15 mm);   - a thickness of 6,9 mm (± 0,05 mm), or composed of ferrites in the shape of a quarter sleeves with:   - a length of 46 mm (± 0,75 mm);   - a width of 29,7 mm (± 0,2 mm), intended to become permanent magnets after magnetisation, of a kind used in car starters and devices extending the drive range of electric cars |
| **8505 11 00 63** | - - - - Rings, tubes, bushings or collars made from an alloy of neodymium, iron and boron, with - an external diameter of not more than 45 mm, - a height of not more than 45 mm, of a kind used in the manufacture of permanent magnets after magnetisation |
| **8505 11 00 65** | - - - - Permanent magnets consisting of an alloy of neodymium, iron and boron, either in the shape of a rectangle, whether or not rounded, with a rectangular or a trapezoidal section having - a length of not more than 140 mm, - a width of not more than 90 mm and - a thickness of not more than 55 mm, or in the shape of curved rectangle (tile type) having - a length of not more than 75 mm, - a width of not more than 40 mm, - a thickness of not more than 7 mm and - a radius of curvature of more than 86 mm but not more than 241 mm or in the shape of a disc with a diameter of not more than 90 mm, whether or not containing a hole in the centre |
| **8505 11 00 70** | - - - - Disc consisting of an alloy of neodymium, iron and boron, covered with nickel or zinc, that after magnetisation is intended to become a permanent magnet   - whether or not containing a hole in the centre,   - with a diameter of not more than 90 mm, of a kind used in car loudspeakers |
| **8505 11 00 75** | - - - - A quarter sleeve intended to become permanent magnet after magnetization, - consisting of at least neodymium, iron and boron, - with a width of 9,1 mm or more but not more than 10,5 mm, - with a length of 20 mm or more but not more than 30,1 mm, of a kind used on rotors for the manufacture of fuel pumps |
| **8505 11 00 99** | - - - - Other |
| **8505 19** | - - Other |
| **8505 19 10** | - - - Permanent magnets of agglomerated ferrite |
| **8505 19 10 10** | - - - - For use in certain types of aircraft |
| **8505 19 10 90** | - - - - Other |
| **8505 19 90** | - - - Other |
| **8505 19 90 10** | - - - - For use in certain types of aircraft |
|  | - - - - Other |
| **8505 19 90 30** | - - - - - Articles of agglomerated ferrite in the shape of a disc with a diameter of not more than 120 mm, containing a hole in the centre intended to become permanent magnets after magnetisation with a remanence between 245 mT and 470 mT |
| **8505 19 90 40** | - - - - - Flat bars of an alloy of samarium and cobalt with   - a length of 30,4 mm (± 0,05 mm);   - a width of 12,5 mm (± 0,15 mm);   - a thickness of 6,9 mm (± 0,05 mm), or composed of ferrites in the shape of a quarter sleeves with:   - a length of 46 mm (± 0,75 mm);   - a width of 29,7 mm (± 0,2 mm), intended to become permanent magnets after magnetisation, of a kind used in car starters and devices extending the drive range of electric cars |
| **8505 19 90 50** | - - - - - Article of agglomerated ferrite in the shape of a rectangular prism to become a permanent magnet after magnetisation - whether or not with bevelled edges - of a length of 27 mm or more but not more than 32 mm (± 0,15 mm), - of a width of 8,5 mm or more but not more than 9,5 mm (+0,05 mm / -0,09 mm), - of a thickness of 5,5 mm or more but not more than 5,8 mm (+0/-0,2 mm), and - of a weight of 6,1 g or more but not more than 8,3 g |
| **8505 19 90 89** | - - - - - Other |
| **8505 20** | **- Electromagnetic couplings, clutches and brakes** |
| **8505 20 00 10** | - - For use in certain types of aircraft |
| **8505 20 00 30** | - - Electromagnetic clutch, for use in the manufacture of compressors of air conditioning machines of motor vehicles |
| **8505 20 00 90** | - - Other |
| **8505 90** | **- Other, including parts** |
|  | - - Electromagnets; electromagnetic or permanent magnet chucks, clamps and similar holding devices |
| **8505 90 21** | - - - Electromagnets of a kind used solely or principally for magnetic resonance imaging apparatus other than electromagnets of heading 9018 |
| **8505 90 29** | - - - Other |
| **8505 90 29 10** | - - - - For use in certain types of aircraft |
| **8505 90 29 30** | - - - - Coil for an electromagnetic valve, with:   - a plunger   - a diameter of 12,9 mm (+/- 0,1),   - a height without plunger of 20,5 mm (+/- 0,1),   - an electric cable with connector, and in a cylindrical metal housing |
| **8505 90 29 91** | - - - - Solenoid with a plunger, operating at a nominal supply voltage of 24 V at a nominal DC of 0,08 A, for use in the manufacture of products falling within heading 8517 |
| **8505 90 29 99** | - - - - Other |
| **8505 90 50** | - - Electromagnetic lifting heads |
| **8505 90 50 10** | - - - For use in certain types of aircraft |
| **8505 90 50 90** | - - - Other |
| **8505 90 90** | - - Parts |
| **8505 90 90 10** | - - - For use in certain types of aircraft |
| **8505 90 90 90** | - - - Other |
| **8506** | **Primary cells and primary batteries** |
| **8506 10** | **- Manganese dioxide** |
|  | - - Alkaline |
| **8506 10 11** | - - - Cylindrical cells |
| **8506 10 18** | - - - Other |
|  | - - Other |
| **8506 10 91** | - - - Cylindrical cells |
| **8506 10 98** | - - - Other |
| **8506 30 00** | **- Mercuric oxide** |
| **8506 40 00** | **- Silver oxide** |
| **8506 50** | **- Lithium** |
| **8506 50 10** | - - Cylindrical cells |
| **8506 50 10 10** | - - - Lithium cylindrical primary cells with:   - a diameter of 14,0 mm or more but not more than 26,0 mm;   - a length of 2,2 mm or more but not more than 51 mm;   - a voltage of 1,5 V or more, but not more than 3,6 V;   - a capacity of 0,15 Ah or more, but not more than 5,00 Ah for use in the manufacture of telemetry and medical devices, electronic meters or remote controls |
| **8506 50 10 90** | - - - Other |
| **8506 50 30** | - - Button cells |
| **8506 50 30 10** | - - - Lithium manganese dioxide cell, with: - a diameter of 20 mm or more but not more than 25 mm - a length of 3 mm or more but not more than 6 mm - a voltage of 3 V or more but not more than 3,4 V - a capacity of 200 mAh or more but not more than 600 mAh - an automotive test temperature range from -40°C to +125°C for use as a component within the manufacture of Tyre Pressure Measuring Systems (TPMS) |
| **8506 50 30 90** | - - - Other |
| **8506 50 90** | - - Other |
| **8506 50 90 10** | - - - Lithium iodine single cell battery the dimensions of which do not exceed 9 mm x 23 mm x 45 mm and a voltage of not more than 2,8 V |
| **8506 50 90 20** | - - - Unit consisting of not more than 2 lithium batteries embedded in a socket for integrated circuits (battery-buffered socket), with not more than 32 connections and incorporating a control circuit |
| **8506 50 90 30** | - - - Lithium-iodine or lithium-silver vanadium oxide single cell battery of dimensions of not more than 28 mm x 45 mm x 15 mm and a capacity of not less than 1,05 Ah |
| **8506 50 90 90** | - - - Other |
| **8506 60 00** | **- Air-zinc** |
| **8506 80** | **- Other primary cells and primary batteries** |
| **8506 80 05** | - - Dry zinc-carbon batteries of a voltage of 5,5 V or more but not exceeding 6,5 V |
| **8506 80 80** | - - Other |
| **8506 90** | **- Parts** |
| **8506 90 00 10** | - - Cathode, in rolls, for air zinc button cell batteries (hearing aid batteries) |
| **8506 90 00 90** | - - Other |
| **8507** | **Electric accumulators, including separators therefor, whether or not rectangular (including square)** |
| **8507 10** | **- Lead-acid, of a kind used for starting piston engines** |
| **8507 10 20** | - - Working with liquid electrolyte |
| **8507 10 20 10** | - - - For use in civil aircraft |
|  | - - - Other |
| **8507 10 20 30** | - - - - Lead-acid accumulators or -modules, of a kind used for starting piston engines with   - a nominal capacity of not more 32 Ah,   - a length of not more than 205 mm,   - a width of not more than 130 mm and   - a height of not more than 190 mm for use in the manufacture of articles of CN-code 8711 |
| **8507 10 20 80** | - - - - Lead acid starter battery, with:  - a charge acceptance capacity of 200 % or more of the level of an equivalent conventional flooded battery during the first 5 seconds of charge,    - a liquid electrolyte,  for use in the manufacture of passenger cars and light commercial vehicles employing high regenerative alternator controls or start/stop systems with high regenerative alternator controls |
| **8507 10 20 99** | - - - - Other |
| **8507 10 80** | - - Other |
| **8507 10 80 10** | - - - For use in civil aircraft |
| **8507 10 80 90** | - - - Other |
| **8507 20** | **- Other lead-acid accumulators** |
| **8507 20 20** | - - Working with liquid electrolyte |
| **8507 20 20 10** | - - - For use in civil aircraft |
| **8507 20 20 90** | - - - Other |
| **8507 20 80** | - - Other |
| **8507 20 80 10** | - - - For use in civil aircraft |
| **8507 20 80 90** | - - - Other |
| **8507 30** | **- Nickel-cadmium** |
| **8507 30 20** | - - Hermetically sealed |
| **8507 30 20 10** | - - - For use in civil aircraft |
| **8507 30 20 30** | - - - Cylindrical nickel-cadmium accumulator or module, with a length of 65,3mm (±1,5mm) and a diameter of 14,5mm (±1mm), having a nominal capacity of 1000mAh or more, for use in the manufacture of rechargeable batteries |
| **8507 30 20 90** | - - - Other |
| **8507 30 80** | - - Other |
| **8507 30 80 10** | - - - For use in civil aircraft |
| **8507 30 80 90** | - - - Other |
| **8507 40** | **- Nickel-iron** |
| **8507 40 00 10** | - - For use in civil aircraft |
| **8507 40 00 90** | - - Other |
| **8507 50** | **- Nickel-metal hydride** |
| **8507 50 00 10** | - - For use in civil aircraft |
| **8507 50 00 20** | - - Rectangular accumulator or module, with a length of not more than 69 mm, a width of not more than 36 mm and a thickness of not more than 12 mm, for use in the manufacture of rechargeable batteries |
| **8507 50 00 30** | - - Cylindrical nickel-hydride accumulator or module, of a diameter of not more than 14,5mm, for the manufacture of rechargeable batteries |
| **8507 50 00 40** | - - Nickel-metal Hydride (NiMH) battery assembly, with: - a voltage of 190 V or more but not more than 210 V, - a length of 220 mm or more but not more than 280 mm, - a width of 500 mm or more but not more than 600 mm, - a height of 100 mm or more but not more than 150 mm for use in the manufacture of motor vehicles of Chapter 87 |
| **8507 50 00 90** | - - Other |
| **8507 60** | **- Lithium-ion** |
| **8507 60 00 10** | - - For use in civil aircraft |
| **8507 60 00 15** | - - Cylindrical lithium-ion-accumulators or modules with:   - a nominal capacity of 8,8 Ah or more, but not more than 18 Ah,   - a nominal voltage of 36 V or more, but not more than 48 V,   - a power of 300 Wh or more, but not more than 648 Wh, for use in the manufacture of electric bicycles |
| **8507 60 00 17** | - - Lithium-ion starter accumulator, consisting of four rechargeable lithium-ion secondary cells, with:   - a rated voltage of 12 V,   - a length of 350 mm or more but not more than 355 mm,   - a width of 170 mm or more but not more than 180 mm,   - a height of 180 mm or more but not more than 195 mm,   - weighing 10 kg or more but not more than 15 kg   - a nominal charge of 60 Ah or more, but not more than 80 Ah |
| **8507 60 00 20** | - - Rectangular accumulator or module, with a length of not more than 69 mm, a width of not more than 36 mm and a thickness of not more than 12 mm, for use in the manufacture of rechargeable batteries |
| **8507 60 00 23** | - - Lithium-ion-accumulator or module with:   - a nominal capacity of 72 Ah or more, but not more than 100 Ah,   - a nominal voltage of 3,2 V   - a weight of 1,9 kg more, but not more than 3,4 kg for use in the manufacture of rechargeable hybrid electric vehicle batteries |
| **8507 60 00 25** | - - Rectangular modules for incorporation in lithium-ion rechargeable batteries, with:   - a width of 352,5 mm (± 1 mm) or 367,1 mm (±1mm)   - a depth of 300 mm (± 2 mm) or 272,6 mm (± 1 mm)   - a height of 268,9 mm (± 1,4 mm) or 229,5 mm (± 1mm)   - a weight of 45,9 kg or 46,3 kg   - a rating of 75 Ah and   - a nominal voltage of 60 V |
| **8507 60 00 27** | - - Lithium-ion cylindrical accumulator with:   - a nominal capacity of 10 Ah or more, but not more than 20 Ah;   - a nominal voltage of 12,8 V (± 0.05) or more, but not more than 15,2 V (± 0,05);   - a power of 128 Wh or more, but not more than 256 Wh, for use in the manufacture of electric bicycle drives |
| **8507 60 00 30** | - - Cylindrical lithium-ion accumulator or module, with a length of 63mm or more and a diameter of 17,2mm or more, having a nominal capacity of 1200 mAh or more, for use in the manufacture of rechargeable batteries |
| **8507 60 00 33** | - - Lithium-ion accumulator, with:   - a length of 150 mm or more, but not more than 300 mm   - a width of 700 mm or more, but not more than 1 000 mm   - a height of 1 100 mm or more, but not more than 1 500 mm   - a weight of 75 kg or more, but not more than 160 kg   - a nominal capacity not less than 150 Ah and not more than 500 Ah |
| **8507 60 00 37** | - - Lithium-ion accumulator, with:   - a length of 1 200 mm or more, but not more than 2 000 mm   - a width of 800 mm or more, but not more than 1 300 mm   - a height of 2 000 mm or more, but not more than 2 800 mm   - a weight of 1 800 kg or more, but not more than 3 000 kg   - a nominal capacity of 2 800 Ah or more but not more than 7 200 Ah |
| **8507 60 00 43** | - - Lithium-ion accumulators, with   - a thickness of not more than 4,15 mm,   - a width of not more than 245,15 mm,   - a length of not more than 90,15 mm,   - a nominal capacity of 1 000 mAh or more but not more than 10 000 mAh,   - a weight of not more than 250 g for use in the manufacture of products falling within subheading 8471 30 00 |
| **8507 60 00 45** | - - Rechargeable Lithium-ion Polymer Battery with:   - a nominal capacity of 1 060 mAh,   - a nominal voltage of 7,4 V (average voltage at 0,2 C discharge),   - a charging voltage of 8,4 V (±0,05),   - a length of 86,4 mm ((±0,1),   - a width of 45 mm (±0,1),   - a height of 11 mm (±0,1), for use in the manufacture of cash registers |
| **8507 60 00 47** | - - Lithium-ion accumulators, with   - a thickness of not more than 4,15 mm,   - a width of not more than 75,15 mm,   - a length of not more than 150,15 mm,   - a nominal capacity of 1 000 mAh or more but not more than 10 000 mAh,   - a weight of not more than 150 g, for use in the manufacture of products falling within subheading 8517 12 00 |
| **8507 60 00 50** | - - Modules for the assembly of batteries of ion lithium electric accumulators with:   - a length of 298 mm or more, but not more than 408 mm,   - a width of 33,5 mm or more, but not more than 209 mm,   - a height of 138 mm or more, but not more than 228 mm,   - a weight of 3,6 kg or more, but not more than 17 kg, and   - a power of 458 kWh or more, but not more than 2 158 kWh |
| **8507 60 00 53** | - - Batteries of lithium-ion electric accumulators or rechargeable module:   - a length of 1 203 mm or more, but not more than 1 297 mm,   - a width of 282 mm or more, but not more than 772 mm,   - a height of 792 mm or more, but not more than 839 mm,   - a weight of 253 kg or more, but not more than 293 kg,   - power of 22 kWh or 26 kWh, and   - constituted of 24 or 48 modules |
| **8507 60 00 60** | - - Lithium-ion rechargeable batteries, with: • a length of 1213mm or more, but not more than 1575mm,  • a width of 245mm or more but not more than 1200mm,  • a height of 265mm or more, but not more than 755mm,  • a weight of 265kg or more but not more than 294kg,  • a nominal capacity of 66.6Ah,  put up in packs of 48 modules |
| **8507 60 00 65** | - - Cylindrical Lithium Ion Cell with    - 3,5 VDC to 3,8 VDC,    - 300 mAh to 900 mAh and    - a diameter of 10,0 mm to 14,5 mm |
| **8507 60 00 71** | - - Lithium-ion rechargeable batteries, with:   - a length of 700 mm or more, but not more than 2 820 mm   - a width of 935 mm or more, but not more than 1 660 mm   - a height of 85 mm or more, but not more than 700 mm   - a weight of 250 kg or more, but not more than 700 kg   - a power of not more than 175 kWh |
| **8507 60 00 75** | - - Rectangular lithium-ion-accumulator, with    - a metal casing,    - a length of 173 mm (± 0,15 mm),    - a width of 21 mm (± 0,1 mm),    - a height of 91 mm (± 0,15 mm),    - a nominal voltage of 3,3 V and,    - a nominal capacity of 21 Ah or more |
| **8507 60 00 80** | - - Rectangular lithium-ion-accumulator or module, with   - a metal casing,   - a length of 171 mm (± 3 mm),   - a width of 45,5 mm (± 1 mm),   - a height of 115 mm (± 1 mm),   - a nominal voltage of 3,75 V and   - a nominal capacity of 50 Ah for use in the manufacture of rechargeable batteries for motor vehicles |
| **8507 60 00 85** | - - Rectangular modules for incorporation in lithium-ion rechargeable batteries:   - of a length of 312 mm or more, but not more than 350 mm   - of a width of 79,8 mm or more, but not more than 225 mm   - of a height of 35 mm or more, but not more than 168 mm   - of a weight of 3,95 kg or more, but not more than 8,56 Kg   - with a rating of 66,6 Ah or more, but not more than 129 Ah |
| **8507 60 00 90** | - - Other |
| **8507 80** | **- Other accumulators** |
| **8507 80 00 10** | - - For use in civil aircraft |
| **8507 80 00 20** | - - Rechargeable Lithium-ion Polymer Battery with:   - a nominal capacity of 1 060 mAh,   - a nominal voltage of 7,4 V (average voltage at 0,2 C discharge),   - a charging voltage of 8,4 V (±0,05),   - a length of 86,4 mm ((±0,1),   - a width of 45 mm (±0,1),   - a height of 11 mm (±0,1), for use in the manufacture of cash registers |
| **8507 80 00 90** | - - Other |
| **8507 90** | **- Parts** |
| **8507 90 30** | - - Separators |
| **8507 90 30 10** | - - - For use in civil aircraft |
| **8507 90 30 90** | - - - Other |
| **8507 90 80** | - - Other |
| **8507 90 80 10** | - - - For use in civil aircraft |
|  | - - - Other |
| **8507 90 80 60** | - - - - Roll of laminate foil of graphite and copper, with: - a width of 610 mm or more but not more than 620 mm, and - a diameter of 690 mm or more but not more than 710 mm, for use in the manufacture of lithium-ion electric rechargeable batteries |
| **8507 90 80 70** | - - - - Cut plate of nickel-plated copper foil, with: - a width of 70mm (± 5mm), - a thickness of 0,4mm (± 0,2mm), - a length of not more than 55mm, for use in the manufacture of lithium-ion electric rechargeable batteries |
| **8507 90 80 80** | - - - - Sheet in the form of a roll consisting of a laminate of lithium and manganese bonded to aluminium, with: - a width of 595 mm or more but not more than 605 mm, and - a diameter of 690 mm or more but not more than 710 mm, for use in the manufacture of cathodes for lithium-ion electric rechargeable batteries |
| **8507 90 80 99** | - - - - Other |
| **8508** | **Vacuum cleaners** |
|  | **- With self-contained electric motor** |
| **8508 11 00** | - - Of a power not exceeding 1 500 W and having a dust bag or other receptacle capacity not exceeding 20 l |
| **8508 19 00** | - - Other |
| **8508 60 00** | **- Other vacuum cleaners** |
| **8508 70** | **- Parts** |
| **8508 70 00 10** | - - Electronic circuit card without separate housing for actuating and controlling vacuum cleaner brushes powered by not more than 300 W |
| **8508 70 00 20** | - - Electronic circuit cards that  - are connected by wire or radio frequency to each other and the motor controller card, and    - regulate the functioning (switching on or off and suction capacity) of vacuum cleaners according to a stored program,    - whether or not fitted with indicators that display the functioning of the vacuum cleaner (suction capacity and/or dust bag full and/or filter full) |
| **8508 70 00 90** | - - Other |
| **8509** | **Electromechanical domestic appliances, with self-contained electric motor, other than vacuum cleaners of heading 8508** |
| **8509 40 00** | **- Food grinders and mixers; fruit or vegetable juice extractors** |
| **8509 80 00** | **- Other appliances** |
| **8509 90 00** | **- Parts** |
| **8510** | **Shavers, hair clippers and hair-removing appliances, with self-contained electric motor** |
| **8510 10 00** | **- Shavers** |
| **8510 20 00** | **- Hair clippers** |
| **8510 30 00** | **- Hair-removing appliances** |
| **8510 90 00** | **- Parts** |
| **8511** | **Electrical ignition or starting equipment of a kind used for spark-ignition or compression-ignition internal combustion engines (for example, ignition magnetos, magneto-dynamos, ignition coils, sparking plugs and glow plugs, starter motors); generators (for example, dynamos, alternators) and cut-outs of a kind used in conjunction with such engines** |
| **8511 10** | **- Sparking plugs** |
| **8511 10 00 10** | - - For use in civil aircraft |
| **8511 10 00 90** | - - Other |
| **8511 20** | **- Ignition magnetos; magneto-dynamos; magnetic flywheels** |
| **8511 20 00 10** | - - For use in civil aircraft |
| **8511 20 00 90** | - - Other |
| **8511 30** | **- Distributors; ignition coils** |
| **8511 30 00 10** | - - For use in civil aircraft |
| **8511 30 00 30** | - - Igniter integrated coil assembly with:   - an igniter,   - a coil on plug assembly with an integrated mounting bracket,   - a housing,   - a length of 90 mm or more but not more than 200 mm (+/- 5 mm),   - an operating temperature of -40 °C or more but not more than 130 °C,   - a voltage of 10,5 V or more, but not more than 16 V |
| **8511 30 00 55** | - - Ignition coil: - with a length of 50 mm or more, but not more than 200 mm, - with an operating temperature of - 40 °C or more, but not more than 140 °C, and - with a voltage of 9 V or more, but not more than 16 V, - with or without connection cable, for use in the manufacture of engines of motor vehicles |
| **8511 30 00 90** | - - Other |
| **8511 40** | **- Starter motors and dual purpose starter-generators** |
| **8511 40 00 10** | - - For use in civil aircraft |
| **8511 40 00 90** | - - Other |
| **8511 50** | **- Other generators** |
| **8511 50 00 10** | - - For use in civil aircraft |
| **8511 50 00 90** | - - Other |
| **8511 80** | **- Other equipment** |
| **8511 80 00 10** | - - For use in civil aircraft |
| **8511 80 00 20** | - - Glow-plug for pre-heating of the diesel engines with:   - an operating temperature of more than 800 °C,   - a voltage of 5 V or more, but not more than 16 V,   - a heating rod containing silicon nitride (Si@3N@4) and molybdenum disilicide (MoSi@2), and   - a metal housing for use in the manufacture of diesel engines of motor vehicles |
| **8511 80 00 90** | - - Other |
| **8511 90** | **- Parts** |
| **8511 90 00 10** | - - For use in certain types of aircraft |
| **8511 90 00 90** | - - Other |
| **8512** | **Electrical lighting or signalling equipment (excluding articles of heading 8539), windscreen wipers, defrosters and demisters, of a kind used for cycles or motor vehicles** |
| **8512 10 00** | **- Lighting or visual signalling equipment of a kind used on bicycles** |
| **8512 20** | **- Other lighting or visual signalling equipment** |
| **8512 20 00 20** | - - Information screen displaying at least time, date and status of safety features in a vehicle with an operating voltage of 12 V or more, but not more than 14,4 V, of a kind used in the manufacturing of goods of Chapter 87 |
| **8512 20 00 30** | - - Lighting module, containing at least:   - two LEDs,   - glass or plastic lenses, focusing/scattering the light emitted by the LEDs,   - reflectors redirecting the light emitted by the LEDs, in an aluminium housing with a radiator, mounted at a bracket with an actuator |
| **8512 20 00 40** | - - Fog lamp with a galvanised inner surface, containing:   - a plastic holder with three or more brackets,   - one or more 12 V bulbs,   - a connector,   - a plastic cover,   - whether or not with a connection cable for use in the manufacture of goods of Chapter 87 |
| **8512 20 00 50** | - - Cabin overhead lamp in a plastic housing whether or not with a storage box, with an operating voltage of 8 V or more but not more than 16 V, containing: - at least two light sources, - light switch, - whether or not emergency call button (E-Call), - whether or not panoramic roof slide switch, - whether or not microphone, - whether or not ultrasonic sensor (UIP sensor) for use in the manufacture of motor vehicles |
| **8512 20 00 90** | - - Other |
| **8512 30** | **- Sound signalling equipment** |
| **8512 30 10** | - - Burglar alarms of a kind used for motor vehicles |
| **8512 30 90** | - - Other |
| **8512 30 90 10** | - - - Horn assembly operating on piezomechanical principle for generating a specific sound signal, with a voltage of 12 V, comprising:   - coil,   - magnet,   - metal membrane,   - connector,   - holder of a kind used in the manufacture of goods of Chapter 87 |
| **8512 30 90 20** | - - - Warning buzzer for parking sensor system in a plastic casing operating on the piezo-mechanic principle, containing:   - a printed circuit board,   - a connector,   - whether or not a metal holder of a kind used in the manufacture of goods of chapter 87 |
| **8512 30 90 30** | - - - Sound alarm device for protection against burglary into the vehicle: - with an operating temperature of - 45 °C or more, but not more than + 95 °C, - with a voltage of 9 V or more but not more than 16 V, - in a plastic housing, - whether or not with a metal holder for use in the manufacture of motor vehicles |
| **8512 30 90 90** | - - - Other |
| **8512 40** | **- Windscreen wipers, defrosters and demisters** |
| **8512 40 00 10** | - - Car door mirror heating foil:   - with two electrical contacts,   - with an adhesive layer on both sides (on the side of the plastic holder of the mirror and on the side of the mirror glass),   - with a protective paper film on both sides |
| **8512 40 00 90** | - - Other |
| **8512 90** | **- Parts** |
| **8512 90 10** | - - Of apparatus of subheading 8512 30 10 |
| **8512 90 90** | - - Other |
| **8513** | **Portable electric lamps designed to function by their own source of energy (for example, dry batteries, accumulators, magnetos), other than lighting equipment of heading 8512** |
| **8513 10 00** | **- Lamps** |
| **8513 90 00** | **- Parts** |
| **8514** | **Industrial or laboratory electric furnaces and ovens (including those functioning by induction or dielectric loss); other industrial or laboratory equipment for the heat treatment of materials by induction or dielectric loss** |
| **8514 10** | **- Resistance heated furnaces and ovens** |
| **8514 10 10** | - - Bakery and biscuit ovens |
| **8514 10 80** | - - Other |
| **8514 10 80 10** | - - - Glass Filament Melter with heater basket/bushing assembly:   - electrically heated,   - with opening   - with a multiplicity of tips (holes) of platinum/rhodium alloy   - used to melt glass batches and condition molten glass   - for drawing into continuous fibres |
| **8514 10 80 90** | - - - Other |
| **8514 20** | **- Furnaces and ovens functioning by induction or dielectric loss** |
| **8514 20 10** | - - Induction furnaces and ovens |
| **8514 20 80** | - - Dielectric furnaces and ovens |
| **8514 20 80 10** | - - - Cavity assembly comprising at least:   - a transformer with an input of not more than 240 V and an output of not more than 3 000 W   - an AC or DC fan motor with an output of not more than 42 watts   - a housing made of stainless steel    - with or without a magnetron of a microwave output power of not more than 900 W for use in the manufacture of built-in products of headings 8514 2080, 8516 5000 and 8516 6080 |
| **8514 20 80 90** | - - - Other |
| **8514 30** | **- Other furnaces and ovens** |
| **8514 30 20** | - - Of a kind used solely or principally for the manufacture of printed circuits or printed circuit assemblies |
| **8514 30 80** | - - Other |
| **8514 40 00** | **- Other equipment for the heat treatment of materials by induction or dielectric loss** |
| **8514 90** | **- Parts** |
| **8514 90 30** | - - Of other furnaces and ovens of subheading 8514 30 20 |
| **8514 90 70** | - - Other |
| **8515** | **Electric (including electrically heated gas), laser or other light or photon beam, ultrasonic, electron beam, magnetic pulse or plasma arc soldering, brazing or welding machines and apparatus, whether or not capable of cutting; electric machines and apparatus for hot spraying of metals or cermets** |
|  | **- Brazing or soldering machines and apparatus** |
| **8515 11 00** | - - Soldering irons and guns |
| **8515 19** | - - Other |
| **8515 19 10** | - - - Wave soldering machines of a kind used solely or principally for the manufacture of printed circuit assemblies |
| **8515 19 90** | - - - Other |
|  | **- Machines and apparatus for resistance welding of metal** |
| **8515 21 00** | - - Fully or partly automatic |
| **8515 29 00** | - - Other |
|  | **- Machines and apparatus for arc (including plasma arc) welding of metals** |
| **8515 31 00** | - - Fully or partly automatic |
| **8515 39** | - - Other |
|  | - - - For manual welding with coated electrodes, complete with welding or cutting devices, and consigned with |
| **8515 39 13** | - - - - Transformers |
| **8515 39 18** | - - - - Generators or rotary converters or static converters, rectifiers or rectifying apparatus |
| **8515 39 90** | - - - Other |
| **8515 80** | **- Other machines and apparatus** |
| **8515 80 10** | - - For treating metals |
| **8515 80 90** | - - Other |
| **8515 90** | **- Parts** |
| **8515 90 20** | - - Of wave soldering machines of subheading 8515 19 10 |
| **8515 90 80** | - - Other |
| **8515 90 80 10** | - - - Tungsten welding electrodes, including tungsten bars and rods for welding electrodes, containing 94 % or more by weight of tungsten, other than those obtained simply by sintering, whether or not cut to length |
| **8515 90 80 30** | - - - Keypads of silicone or plastic,   - whether or not with parts of metal, plastic, glass fibre reinforced epoxide resin or wood,   - whether or not printed or surface treated,   - whether or not with electrical conducting elements   - whether or not with keypads foil glued on the keyboard   - whether or not with protective foil   - single or multilayer |
| **8515 90 80 90** | - - - Other |
| **8516** | **Electric instantaneous or storage water heaters and immersion heaters; electric space-heating apparatus and soil-heating apparatus; electrothermic hairdressing apparatus (for example, hairdryers, hair curlers, curling tong heaters) and hand dryers; electric smoothing irons; other electrothermic appliances of a kind used for domestic purposes; electric heating resistors, other than those of heading 8545** |
| **8516 10** | **- Electric instantaneous or storage water heaters and immersion heaters** |
| **8516 10 11** | - - Instantaneous water heaters |
| **8516 10 80** | - - Other |
|  | **- Electric space-heating apparatus and electric soil-heating apparatus** |
| **8516 21 00** | - - Storage heating radiators |
| **8516 29** | - - Other |
| **8516 29 10** | - - - Liquid-filled radiators |
| **8516 29 50** | - - - Convection heaters |
|  | - - - Other |
| **8516 29 91** | - - - - With built-in fan |
| **8516 29 99** | - - - - Other |
|  | **- Electrothermic hairdressing or hand-drying apparatus** |
| **8516 31 00** | - - Hairdryers |
| **8516 32 00** | - - Other hairdressing apparatus |
| **8516 33 00** | - - Hand-drying apparatus |
| **8516 40 00** | **- Electric smoothing irons** |
| **8516 50** | **- Microwave ovens** |
| **8516 50 00 10** | - - Cavity assembly comprising at least:   - a transformer with an input of not more than 240 V and an output of not more than 3 000 W   - an AC or DC fan motor with an output of not more than 42 watts   - a housing made of stainless steel    - with or without a magnetron of a microwave output power of not more than 900 W for use in the manufacture of built-in products of headings 8514 2080, 8516 5000 and 8516 6080 |
| **8516 50 00 90** | - - Other |
| **8516 60** | **- Other ovens; cookers, cooking plates, boiling rings; grillers and roasters** |
| **8516 60 10** | - - Cookers (incorporating at least an oven and a hob) |
| **8516 60 50** | - - Cooking plates, boiling rings and hobs |
| **8516 60 70** | - - Grillers and roasters |
| **8516 60 80** | - - Ovens for building in |
| **8516 60 80 10** | - - - Cavity assembly comprising at least:   - a transformer with an input of not more than 240 V and an output of not more than 3 000 W   - an AC or DC fan motor with an output of not more than 42 watts   - a housing made of stainless steel    - with or without a magnetron of a microwave output power of not more than 900 W for use in the manufacture of built-in products of headings 8514 2080, 8516 5000 and 8516 6080 |
| **8516 60 80 90** | - - - Other |
| **8516 60 90** | - - Other |
|  | **- Other electrothermic appliances** |
| **8516 71 00** | - - Coffee or tea makers |
| **8516 72 00** | - - Toasters |
| **8516 79** | - - Other |
| **8516 79 20** | - - - Deep fat fryers |
| **8516 79 70** | - - - Other |
| **8516 79 70 10** | - - - - Ironing boards, including sleeve boards, whether or not free standing, with a steam soaking and/or heating top and/or blowing top |
| **8516 79 70 90** | - - - - Other |
| **8516 80** | **- Electric heating resistors** |
| **8516 80 20** | - - Assembled with an insulated former |
| **8516 80 20 10** | - - - Assembled only with a simple insulated former and electrical connections, used for anti-icing or de-icing, for use in civil aircraft |
| **8516 80 20 20** | - - - Car door mirror heating foil:   - with two electrical contacts,   - with an adhesive layer on both sides (on the side of the plastic holder of the mirror and on the side of the mirror glass),   - with a protective paper film on both sides |
| **8516 80 20 90** | - - - Other |
| **8516 80 80** | - - Other |
| **8516 90** | **- Parts** |
| **8516 90 00 10** | - - For heating aircraft and wing surfaces, mounted on propeller aeroplanes, and for use in certain types of aircraft |
|  | - - Other |
| **8516 90 00 51** | - - - Legs, tops and iron rests of ironing boards, including of sleeve boards, whether or not free standing, with a steam soaking and/or heating top and/or blowing top |
| **8516 90 00 60** | - - - Ventilation sub-assembly of an electric deep-fat fryer:   - fitted with a motor having a power rating of 8 W at 4 600 rpm,   - governed by an electronic circuit,   - operating at ambient temperatures above 110 °C,   - fitted with a thermoregulator |
| **8516 90 00 70** | - - - Inner pot   - containing side and central openings,   - of annealed aluminium,   - with a ceramic coating, heat resistant to more than 200° C for use in the manufacture of an electric fryer |
| **8516 90 00 80** | - - - Door assembly incorporating a capacitive sealing element and wavelength choke for use in the manufacture of built-in products of headings 8514 2080, 8516 5000 and 8516 6080 |
| **8516 90 00 99** | - - - Other |
| **8517** | **Telephone sets, including telephones for cellular networks or for other wireless networks; other apparatus for the transmission or reception of voice, images or other data, including apparatus for communication in a wired or wireless network (such as a local or wide area network), other than transmission or reception apparatus of heading 8443, 8525, 8527 or 8528** |
|  | **- Telephone sets, including telephones for cellular networks or for other wireless networks** |
| **8517 11 00** | - - Line telephone sets with cordless handsets |
| **8517 12 00** | - - Telephones for cellular networks or for other wireless networks |
| **8517 18 00** | - - Other |
|  | **- Other apparatus for the transmission or reception of voice, images or other data, including apparatus for communication in a wired or wireless network (such as a local or wide area network)** |
| **8517 61 00** | - - Base stations |
| **8517 62 00** | - - Machines for the reception, conversion and transmission or regeneration of voice, images or other data, including switching and routing apparatus |
| **8517 69** | - - Other |
| **8517 69 10** | - - - Videophones |
| **8517 69 20** | - - - Entry-phone systems |
| **8517 69 30** | - - - Reception apparatus for radio-telephony or radio-telegraphy |
| **8517 69 90** | - - - Other |
| **8517 70 00** | **- Parts** |
| **8518** | **Microphones and stands therefor; loudspeakers, whether or not mounted in their enclosures; headphones and earphones, whether or not combined with a microphone, and sets consisting of a microphone and one or more loudspeakers; audio-frequency electric amplifiers; electric sound amplifier sets** |
| **8518 10** | **- Microphones and stands therefor** |
| **8518 10 30** | - - Microphones having a frequency range of 300 Hz to 3,4 kHz, of a diameter not exceeding 10 mm and a height not exceeding 3 mm, of a kind used for telecommunications |
| **8518 10 30 10** | - - - For use in civil aircraft |
| **8518 10 30 90** | - - - Other |
| **8518 10 95** | - - Other |
| **8518 10 95 10** | - - - For use in civil aircraft |
| **8518 10 95 90** | - - - Other |
|  | **- Loudspeakers, whether or not mounted in their enclosures** |
| **8518 21 00** | - - Single loudspeakers, mounted in their enclosures |
| **8518 22** | - - Multiple loudspeakers, mounted in the same enclosure |
| **8518 22 00 10** | - - - For use in civil aircraft |
| **8518 22 00 90** | - - - Other |
| **8518 29** | - - Other |
| **8518 29 30** | - - - Loudspeakers having a frequency range of 300 Hz to 3,4 kHz, of a diameter not exceeding 50 mm, of a kind used for telecommunications |
| **8518 29 30 10** | - - - - For use in civil aircraft |
| **8518 29 30 90** | - - - - Other |
| **8518 29 95** | - - - Other |
| **8518 29 95 10** | - - - - For use in civil aircraft |
|  | - - - - Other |
| **8518 29 95 30** | - - - - - Loudspeakers of:   - an impedance of 3 Ohm or more, but not more than 16 Ohm,   - a nominal power of 2 W or more, but not more than 20 W,   - with or without plastic bracket, and   - with or without electric cable fitted with connectors, of a kind used for TV sets and video monitors manufacture as well as home entertainment systems |
| **8518 29 95 40** | - - - - - Loudspeaker   - of an impedance of 1,5 Ohm or more, but not more than 10 Ohm,   - of a diameter of 25 mm or more but not more than 80 mm,   - with frequency range of 150 Hz to 20 kHz,   - with rated power of 5W or more, but not more than 40W,and   - whether or not with electric cable with connector,   - whether or not with a bracket used in the manufacture of goods of Chapter 87 |
| **8518 29 95 99** | - - - - - Other |
| **8518 30** | **- Headphones and earphones, whether or not combined with a microphone, and sets consisting of a microphone and one or more loudspeakers** |
| **8518 30 20** | - - Line telephone handsets |
| **8518 30 95** | - - Other |
| **8518 30 95 10** | - - - For use in civil aircraft |
| **8518 30 95 20** | - - - Headphone and earphone for hearing aids, contained in a housing the exterior dimensions of which, excluding connecting points, do not exceed 5 mm x 6 mm x 8 mm |
| **8518 30 95 90** | - - - Other |
| **8518 40** | **- Audio-frequency electric amplifiers** |
| **8518 40 30** | - - Telephonic and measurement amplifiers |
| **8518 40 80** | - - Other |
| **8518 40 80 10** | - - - For use in civil aircraft |
|  | - - - Other |
| **8518 40 80 91** | - - - - Circuit board sub-assembly, comprising digital audio signal decoding, audio signal processing and amplification with dual and/or multi-channel functionality |
| **8518 40 80 92** | - - - - Circuit board sub-assembly, comprising power supply, active equalizer and power amplifier circuits |
| **8518 40 80 93** | - - - - Audio power amplifier with: - an output power of 50 W, - an operating voltage of more than 9 V but not more than 16 V, - an electrical impedance of not more than 4 Ohm, - a sensitivity of more than 80 dB - in a metal housing for use in the manufacture of motor vehicles |
| **8518 40 80 99** | - - - - Other |
| **8518 50** | **- Electric sound amplifier sets** |
| **8518 50 00 10** | - - For use in civil aircraft |
| **8518 50 00 90** | - - Other |
| **8518 90** | **- Parts** |
| **8518 90 00 10** | - - For use in certain types of aircraft |
|  | - - Other |
| **8518 90 00 30** | - - - Magnet system consisting of :   - a steel coreplate, in the form of a disk on one side provided with a cylinder   - a neodymium magnet   - an upper plate   - a lower plate of a kind used in car loudspeakers |
| **8518 90 00 35** | - - - Metal plate   - of steel,   - perforated and   - measuring 60,30 mm (+0,00 mm / - 0,40 mm) x 15,5 mm (+0,00 mm / - 0,40 mm) x 4,40 mm (± 0,05 mm) for use in the manufacture of loudspeaker passive radiators |
| **8518 90 00 40** | - - - Loudspeaker cone, made from paper pulp or polypropylene, with accompanying dustcaps, of a kind used in car loudspeakers |
| **8518 90 00 45** | - - - Loudspeaker centering ring, consisting of one or more vibration dampers and minimum 2 non-insulated copper cables, therein woven or pressed of the kind used in car loudspeakers |
| **8518 90 00 50** | - - - Diaphragm for an electrodynamic speaker with   - an outside diameter of 25 mm or more but not more than 250 mm,   - a resonance frequency of 20 Hz or more but not more than 150 Hz,   - a total height of 5 mm or more but not more than 50 mm,   - an edge thickness of 0,1 mm or more but not more than 3 mm |
| **8518 90 00 60** | - - - Upper plate for a loudspeaker magnet system of integrally punched, stamped and plated steel, in the shape of a disk, whether or not containing a hole in the centre, of a kind used in car loudspeakers |
| **8518 90 00 80** | - - - Integrated car loudspeaker housing, consisting of:   - a speaker frame and magnet system holder with a protective coating and   - an embossed anti-dust cloth |
| **8518 90 00 91** | - - - Integrally cold-upsetted steel coreplate, in the form of a disk on one side provided with a cylinder, for use in the manufacture of loudspeakers |
| **8518 90 00 99** | - - - Other |
| **8519** | **Sound recording or sound reproducing apparatus** |
| **8519 20** | **- Apparatus operated by coins, banknotes, bank cards, tokens or by other means of payment** |
| **8519 20 10** | - - Coin- or disc-operated record-players |
|  | - - Other |
| **8519 20 91** | - - - With laser reading system |
| **8519 20 99** | - - - Other |
| **8519 20 99 10** | - - - - Music reproducers and automatic announcers, for use in certain types of aircraft |
| **8519 20 99 90** | - - - - Other |
| **8519 30 00** | **- Turntables (record-decks)** |
| **8519 50 00** | **- Telephone answering machines** |
|  | **- Other apparatus** |
| **8519 81** | - - Using magnetic, optical or semiconductor media |
|  | - - - Sound reproducing apparatus (including cassette-players), not incorporating a sound recording device |
| **8519 81 11** | - - - - Transcribing machines |
|  | - - - - Other sound reproducing apparatus |
| **8519 81 15** | - - - - - Pocket-size cassette-players |
|  | - - - - - Other, cassette-type |
| **8519 81 21** | - - - - - - With an analogue and digital reading system |
| **8519 81 21 10** | - - - - - - - Music reproducers and automatic announcers, for use in certain types of aircraft |
| **8519 81 21 90** | - - - - - - - Other |
| **8519 81 25** | - - - - - - Other |
|  | - - - - - Other |
|  | - - - - - - With laser reading system |
| **8519 81 31** | - - - - - - - Of a kind used in motor vehicles, of a type using discs of a diameter not exceeding 6,5 cm |
| **8519 81 35** | - - - - - - - Other |
| **8519 81 45** | - - - - - - Other |
| **8519 81 45 10** | - - - - - - - Music reproducers and automatic announcers, for use in certain types of aircraft |
| **8519 81 45 90** | - - - - - - - Other |
|  | - - - Other apparatus |
| **8519 81 51** | - - - - Dictating machines not capable of operating without an external source of power |
| **8519 81 70** | - - - - Other magnetic tape recorders incorporating sound reproducing apparatus |
| **8519 81 95** | - - - - Other |
| **8519 81 95 10** | - - - - - For use in civil aircraft |
| **8519 81 95 90** | - - - - - Other |
| **8519 89 00** | - - Other |
| **8521** | **Video recording or reproducing apparatus, whether or not incorporating a video tuner** |
| **8521 10** | **- Magnetic tape-type** |
| **8521 10 20** | - - Using tape of a width not exceeding 1,3 cm and allowing recording or reproduction at a tape speed not exceeding 50 mm per second |
| **8521 10 95** | - - Other |
| **8521 10 95 10** | - - - For use in civil aircraft |
| **8521 10 95 90** | - - - Other |
| **8521 90** | **- Other** |
| **8521 90 00 10** | - - Video-reproducing apparatus, for certain types of aircraft |
| **8521 90 00 20** | - - Digital video recorder:   - without a hard disk drive,   - with or without a DVD-RW drive,   - with either motion detection or capability of motion detection through IP connectivity via LAN connector   - with or without a USB serial port, for use in the manufacture of Closed-circuit television (CCTV) surveillance systems |
| **8521 90 00 90** | - - Other |
| **8522** | **Parts and accessories suitable for use solely or principally with the apparatus of heading 8519 or 8521** |
| **8522 10 00** | **- Pick-up cartridges** |
| **8522 90** | **- Other** |
| **8522 90 20** | - - Light-Emitting Diode (LED) backlight modules, which are lighting sources that consist of one or more LEDs, and one or more connectors and are mounted on a printed circuit or other similar substrate, and other passive components, whether or not combined with optical components or protective diodes, and used as backlight illumination for liquid crystal displays (LCDs) |
| **8522 90 30** | - - Styli; diamonds, sapphires and other precious or semi-precious stones (natural, synthetic or reconstructed) for styli, whether or not mounted |
|  | - - Other |
|  | - - - Electronic assemblies |
| **8522 90 41** | - - - - Of apparatus of subheading 8519 50 00 |
| **8522 90 49** | - - - - Other |
| **8522 90 49 10** | - - - - - Assemblies and sub-assemblies consisting of two or more parts or pieces fastened or joined together, for apparatus of subheadings 8519 81 95 and 8519 89 90, for use in civil aircraft |
| **8522 90 49 20** | - - - - - For cockpit voice-recorders for use in certain types of aircraft |
| **8522 90 49 30** | - - - - - Parts and accesories for music reproducers and automatic announcers, for use in certain types of aircraft |
| **8522 90 49 50** | - - - - - Electronic assembly for a laser read-head of a compact disc player, comprising:   - a printed circuit,   - a photo-detector, in the form of a monolithic integrated circuit, contained in a housing,   - not more than 3 connectors,   - not more than 1 transistor,   - not more than 3 variable and 4 fixed resistors,   - not more than 5 capacitors, the whole mounted on a support |
| **8522 90 49 60** | - - - - - Printed circuit board assembly comprising:   - a radio tuner (capable of receiving and decoding radio signals and transmitting those signals within the assembly) without signal processing capabilities,   - a microprocessor capable of receiving remote control messages and controlling the tuner chipset, for use in the manufacture of home entertainment systems |
| **8522 90 49 65** | - - - - - Printed circuit board subassembly, comprising:  - a radio tuner, capable of receiving and decoding radio signals and transmitting those signals within the assembly, with a signal decoder,    - a radio frequency (RF) remote control receiver,    - an infrared remote control signal transmitter,    - a SCART signal generator    - a TV state sensor  for use in the manufacture of home entertainment systems |
| **8522 90 49 70** | - - - - - Assembly, comprising at least a flexible printed circuit, a laser driver integrated circuit and a signal converter integrated circuit |
| **8522 90 49 90** | - - - - - Other |
| **8522 90 70** | - - - Single cassette-deck assemblies with a total thickness not exceeding 53 mm, of a kind used in the manufacture of sound recording and reproducing apparatus |
| **8522 90 80** | - - - Other |
| **8522 90 80 05** | - - - - Assemblies and sub-assemblies consisting of two or more parts or pieces fastened or joined together, for apparatus of subheadings 8519 81 95 and 8519 89 90, for use in civil aircraft |
| **8522 90 80 10** | - - - - For cockpit voice-recorders for use in certain types of aircraft |
| **8522 90 80 20** | - - - - Parts and accessories for music reproducers and automatic announcers, for use in certain types of aircraft |
| **8522 90 80 30** | - - - - Metal holder, metal fixing item or internal stiffener of metal, for use in the manufacture of televisions, monitors and video players |
| **8522 90 80 65** | - - - - Assembly for optical discs, comprising at least an optical unit and DC motors, capable or not of double layer recording |
| **8522 90 80 70** | - - - - Video tape recording/reproducing assembly comprising at least a motor and a printed circuit board containing integrated circuits with driver or control functions, whether or not incorporating a transformer, for use in the manufacture of products falling within heading 8521 |
| **8522 90 80 75** | - - - - Optical reading head for CD player, consisting of one laser diode, one photo detector integrated circuit and one beam splitter |
| **8522 90 80 80** | - - - - Laser optical drive unit assembly (so called mecha units) for the recording and/or reproduction of digital video and/or audio signals, comprising at least a laser optical reading and/or writing unit, one or more DC motors and not containing a printed circuit board or containing a printed circuit board not capable of signal processing for sounds and images, for use in the manufacture of products falling within headings 8519, 8521, 8526, 8527, 8528 or 8543 |
| **8522 90 80 83** | - - - - Blu-ray optical pick-up unit, whether or not recordable, for use with Blu-ray, DVD and CD discs, comprising at least:   - laser diodes operating at three different wavelengths,   - a photo detector integrated circuit and    - an actuator, for the manufacture of products falling within heading 8521 |
| **8522 90 80 84** | - - - - Blu-ray drive mechanism, whether or not recordable, for use with Blu-ray, DVD and CD discs, comprising at least:   - an optical pick up unit with laser diodes operating at three different wavelengths,   - a spindle motor,   - a stepping motor |
| **8522 90 80 85** | - - - - Video head drum, with video heads or with video and audio heads and an electric motor, for use in the manufacture of products falling within heading 8521 |
| **8522 90 80 97** | - - - - Tuner transforming high-frequency signals into mid-frequency signals, for use in the manufacture of products falling under heading 8521 |
| **8522 90 80 99** | - - - - Other |
| **8523** | **Discs, tapes, solid-state non-volatile storage devices, 'smart cards' and other media for the recording of sound or of other phenomena, whether or not recorded, including matrices and masters for the production of discs, but excluding products of Chapter 37** |
|  | **- Magnetic media** |
| **8523 21 00** | - - Cards incorporating a magnetic stripe |
| **8523 29** | - - Other |
|  | - - - Magnetic tapes; magnetic discs |
| **8523 29 15** | - - - - Unrecorded |
| **8523 29 19** | - - - - Other |
| **8523 29 90** | - - - Other |
|  | **- Optical media** |
| **8523 41** | - - Unrecorded |
| **8523 41 10** | - - - Discs for laser reading systems of a recording capacity not exceeding 900 megabytes, other than erasable |
| **8523 41 30** | - - - Discs for laser reading systems of a recording capacity exceeding 900 megabytes but not exceeding 18 gigabytes, other than erasable |
| **8523 41 90** | - - - Other |
| **8523 49** | - - Other |
|  | - - - Discs for laser reading systems |
| **8523 49 10** | - - - - Digital versatile discs (DVD) |
| **8523 49 20** | - - - - Other |
| **8523 49 90** | - - - Other |
|  | **- Semiconductor media** |
| **8523 51** | - - Solid-state non-volatile storage devices |
| **8523 51 10** | - - - Unrecorded |
| **8523 51 90** | - - - Other |
| **8523 52 00** | - - 'Smart cards' |
| **8523 59** | - - Other |
| **8523 59 10** | - - - Unrecorded |
| **8523 59 90** | - - - Other |
| **8523 80** | **- Other** |
| **8523 80 10** | - - Unrecorded |
| **8523 80 90** | - - Other |
| **8525** | **Transmission apparatus for radio-broadcasting or television, whether or not incorporating reception apparatus or sound recording or reproducing apparatus; television cameras, digital cameras and video camera recorders** |
| **8525 50 00** | **- Transmission apparatus** |
| **8525 60 00** | **- Transmission apparatus incorporating reception apparatus** |
| **8525 80** | **- Television cameras, digital cameras and video camera recorders** |
|  | - - Television cameras |
| **8525 80 11** | - - - With three or more camera tubes |
| **8525 80 19** | - - - Other |
| **8525 80 19 20** | - - - - Assembly for television cameras of dimensions of not more than 10 mm x 15 mm x 18 mm, comprising an image sensor, an objective and a color processor, having an image resolution of not more than 1024 x 1280 pixels, whether or not fitted with cable and/or housing, for the manufacture of goods of subheading 8517 12 00 |
| **8525 80 19 31** | - - - - Camera:   - of a weight of not more than 5,9 kg,   - without a housing,   - of dimensions of not more than 405 mm x 315 mm,   - with a single Charge-Couple-Device (CCD) or Complementary Metal Oxide Semiconductor (CMOS) sensor,   - with effective pixels of not more than 5 megapixels, for use in closed circuit television (CCTV) surveillance systems or in appliances for eye-checks |
| **8525 80 19 50** | - - - - Remote camera head, whether or not contained in a housing   - with dimensions (without cable socket) of not more than 27 x 30 x 38,5 mm (widthxheightxlength),   - with three MOS imaging sensors with two or more effective megapixels per sensor and a prism block for distribution of the RGB spectrum colours to the three sensors,   - with a C-Mount lens mount,   - with a weight of not more than 70 g,   - with an LVDS digital video output,   - with a permanent EEPROM memory for local storage of calibration data for colour rendering and defective pixel compensation for use in the manufacture of miniaturised industrial camera systems |
| **8525 80 19 55** | - - - - Camera module with a resolution of 1 920 x 1 080 P HD with two microphones for use in the manufacture of products falling within heading 8528 |
| **8525 80 19 60** | - - - - Image scanning cameras, using:   - a "Dynamic"- or "Static overlay lines" system,   - an output NTSC video signal,   - a voltage of 6,5 V or more,   - an illuminance of 0,5 lux or more |
| **8525 80 19 65** | - - - - Cameras using MIPI electrical interface with:   - an image sensor,   - an objective (lens),   - a colour processor,   - a flexible printed circuit board or a printed circuit board,   - whether or not capable of receiving audio signals,   - a module dimension of not more than 15mm x 15mm x 15mm ,   - a resolution of 2 mega pixel or more (1616\*1232 pixels and higher),   - whether or not wired, and   - a housing for use in the manufacture of products falling within subheading 8517 12 00 or 8471 30 00 |
| **8525 80 19 70** | - - - - Long wavelength infrared camera (LWIR camera) (according to ISO/TS 16949), with:   - a sensitivity in the wavelength area of 7,5 μm or more, but not more than 17 μm,   - a resolution of up to 640 x 512 pixels,   - a weight of not more than 400 g,   - measurements of not more than 70 mm x 86 mm x 82 mm,   - whether or not in a housing   - with automotive- qualified plug and   - a deviation of the output signal over the entire work temperature range of not more than 20 % |
| **8525 80 19 90** | - - - - Other |
| **8525 80 30** | - - Digital cameras |
|  | - - Video camera recorders |
| **8525 80 91** | - - - Only able to record sound and images taken by the television camera |
| **8525 80 91 10** | - - - - Camera:   - of a weight of not more than 5,9 kg,   - without a housing,   - of dimensions of not more than 405 mm x 315 mm,   - with a single Charge-Couple-Device (CCD) or Complementary Metal Oxide Semiconductor (CMOS) sensor,   - with effective pixels of not more than 5 megapixels, for use in closed circuit television (CCTV) surveillance systems or in appliances for eye-checks |
| **8525 80 91 90** | - - - - Other |
| **8525 80 99** | - - - Other |
| **8526** | **Radar apparatus, radio navigational aid apparatus and radio remote control apparatus** |
| **8526 10** | **- Radar apparatus** |
| **8526 10 00 10** | - - For use in civil aircraft |
| **8526 10 00 20** | - - Radar sensor with control unit for autonomous emergency car braking system for use in manufacture of goods of Chapter 87 |
| **8526 10 00 30** | - - Radar sensor equipment with a control unit of blind spot detection system - with a voltage of 8 V or more but not more than 16 V, - in a plastic housing, - with cable and connector for use in the manufacture of motor vehicles |
| **8526 10 00 90** | - - Other |
|  | **- Other** |
| **8526 91** | - - Radio navigational aid apparatus |
| **8526 91 20** | - - - Radio navigational receivers |
| **8526 91 20 10** | - - - - For use in civil aircraft |
| **8526 91 20 20** | - - - - Assembly for GPS system having a position determination function, without display, and a weight of not more than 2 500 g |
| **8526 91 20 30** | - - - - Control unit of the emergency call system containing GSM and GPS module, for use in the manufacture of goods of Chapter 87 |
| **8526 91 20 99** | - - - - Other |
| **8526 91 80** | - - - Other |
| **8526 91 80 10** | - - - - For use in civil aircraft |
| **8526 91 80 90** | - - - - Other |
| **8526 92** | - - Radio remote control apparatus |
| **8526 92 00 10** | - - - For use in civil aircraft |
| **8526 92 00 90** | - - - Other |
| **8527** | **Reception apparatus for radio-broadcasting, whether or not combined, in the same housing, with sound recording or reproducing apparatus or a clock** |
|  | **- Radio-broadcast receivers capable of operating without an external source of power** |
| **8527 12** | - - Pocket-size radio cassette players |
| **8527 12 10** | - - - With an analogue and digital reading system |
| **8527 12 90** | - - - Other |
| **8527 13** | - - Other apparatus combined with sound recording or reproducing apparatus |
| **8527 13 10** | - - - With laser reading system |
|  | - - - Other |
| **8527 13 91** | - - - - Of the cassette-type with an analogue and digital reading system |
| **8527 13 99** | - - - - Other |
| **8527 19 00** | - - Other |
|  | **- Radio-broadcast receivers not capable of operating without an external source of power, of a kind used in motor vehicles** |
| **8527 21** | - - Combined with sound recording or reproducing apparatus |
|  | - - - Capable of receiving and decoding digital radio data system signals |
| **8527 21 20** | - - - - With laser reading system |
|  | - - - - Other |
| **8527 21 52** | - - - - - Of the cassette-type with an analogue and digital reading system |
| **8527 21 59** | - - - - - Other |
|  | - - - Other |
| **8527 21 70** | - - - - With laser reading system |
|  | - - - - Other |
| **8527 21 92** | - - - - - Of the cassette-type with an analogue and digital reading system |
| **8527 21 98** | - - - - - Other |
| **8527 29 00** | - - Other |
|  | **- Other** |
| **8527 91** | - - Combined with sound recording or reproducing apparatus |
|  | - - - Within the same housing one or more loudspeakers |
| **8527 91 11** | - - - - Of the cassette-type with an analogue and digital reading system |
| **8527 91 19** | - - - - Other |
|  | - - - Other |
| **8527 91 35** | - - - - With laser reading system |
|  | - - - - Other |
| **8527 91 91** | - - - - - Of the cassette-type with an analogue and digital reading system |
| **8527 91 99** | - - - - - Other |
| **8527 91 99 20** | - - - - - - Assembly consisting of at least:   - an audio frequency amplifier unit, comprising at least an audio frequency amplifier and a sound generator,   - a transformer and   - a radio broadcast receiver  for use in the manufacture of consumer electronic products |
| **8527 91 99 90** | - - - - - - Other |
| **8527 92** | - - Not combined with sound recording or reproducing apparatus but combined with a clock |
| **8527 92 10** | - - - Alarm clock radios |
| **8527 92 90** | - - - Other |
| **8527 99** | - - Other |
| **8527 99 00 10** | - - - Printed circuit board assembly comprising:   - a radio tuner (capable of receiving and decoding radio signals and transmitting those signals within the assembly) without signal processing capabilities,   - a microprocessor capable of receiving remote control messages and controlling the tuner chipset, for use in the manufacture of home entertainment systems |
| **8527 99 00 20** | - - - Printed circuit board subassembly, comprising:   - a radio tuner, capable of receiving and decoding radio signals and transmitting those signals within the assembly, with a signal decoder,   - a radio frequency (RF) remote control receiver,   - an infrared remote control signal transmitter,   - a SCART signal generator   - a TV state sensor for use in the manufacture of home entertainment systems |
| **8527 99 00 90** | - - - Other |
| **8528** | **Monitors and projectors, not incorporating television reception apparatus; reception apparatus for television, whether or not incorporating radio-broadcast receivers or sound or video recording or reproducing apparatus** |
|  | **- Cathode-ray tube monitors** |
| **8528 42 00** | - - Capable of directly connecting to and designed for use with an automatic data processing machine of heading 8471 |
| **8528 49** | - - Other |
| **8528 49 00 10** | - - - Video monitor comprising:   - a flat screen monochrome cathode-ray tube with a diagonal measurement of the screen of not more than 110 mm and equipped with a deflector yoke, and   - a printed circuit on which are mounted a deflection unit, a video-amplifier and a transformer, the whole mounted or not on a chassis, for the manufacture of video entry-phones, video telephones or surveillance apparatus |
| **8528 49 00 90** | - - - Other |
|  | **- Other monitors** |
| **8528 52** | - - Capable of directly connecting to and designed for use with an automatic data processing machine of heading 8471 |
| **8528 52 10** | - - - Of a kind solely or principally used in an automatic data-processing system of heading 8471 |
|  | - - - Other |
| **8528 52 91** | - - - - With a screen of the liquid crystal display (LCD) technology |
| **8528 52 99** | - - - - Other |
| **8528 59** | - - Other |
| **8528 59 00 10** | - - - Liquid crystal display colour video monitors, excluding those combined with other apparatus, having a DC input voltage of 7 V or more but not more than 30 V, with a diagonal measurement of the screen of 33,2 cm or less,   - without a housing, with back cover and mounting frame,   - or with a housing, used for permanent incorporation or permanent mounting, during industrial assembly, into goods of Chapters 84 to 90 and 94 |
| **8528 59 00 20** | - - - Liquid crystal display colour video monitor assembly mounted on a frame,   - excluding those combined with other apparatus,   - comprising touch screen facilities, a printed circuit board with drive circuitry and power supply, used for permanent incorporation or permanent mounting into entertainment systems for vehicles |
| **8528 59 00 90** | - - - Other |
|  | **- Projectors** |
| **8528 62 00** | - - Capable of directly connecting to and designed for use with an automatic data processing machine of heading 8471 |
| **8528 69** | - - Other |
| **8528 69 20** | - - - Monochrome |
| **8528 69 80** | - - - Other |
| **8528 69 80 10** | - - - - Video projector consisting of three cathode-ray tubes each with a lens, for use in certain types of aircraft |
| **8528 69 80 90** | - - - - Other |
|  | **- Reception apparatus for television, whether or not incorporating radio-broadcast receivers or sound or video recording or reproducing apparatus** |
| **8528 71** | - - Not designed to incorporate a video display or screen |
|  | - - - Video tuners |
| **8528 71 11** | - - - - Electronic assemblies for incorporation into automatic data-processing machines |
| **8528 71 15** | - - - - Apparatus with a microprocessor-based device incorporating a modem for gaining access to the Internet, and having a function of interactive information exchange, capable of receiving television signals (so-called 'set-top boxes which have a communication function', including those incorporating a device performing a recording or reproducing function, provided that they retain the essential character of a set top box which has a communication function) |
| **8528 71 19** | - - - - Other |
|  | - - - Other |
| **8528 71 91** | - - - - Apparatus with a microprocessor-based device incorporating a modem for gaining access to the Internet, and having a function of interactive information exchange, capable of receiving television signals (so-called 'set-top boxes which have a communication function', including those incorporating a device performing a recording or reproducing function, provided that they retain the essential character of a set top box which has a communication function) |
| **8528 71 99** | - - - - Other |
| **8528 72** | - - Other, colour |
| **8528 72 10** | - - - Television projection equipment |
| **8528 72 20** | - - - Apparatus incorporating a video recorder or reproducer |
|  | - - - Other |
| **8528 72 30** | - - - - With integral tube |
| **8528 72 40** | - - - - With a screen of the liquid crystal display (LCD) technology |
| **8528 72 60** | - - - - With a screen of the plasma display panel (PDP) technology |
| **8528 72 80** | - - - - Other |
| **8528 73 00** | - - Other, monochrome |
| **8529** | **Parts suitable for use solely or principally with the apparatus of headings 8525 to 8528** |
| **8529 10** | **- Aerials and aerial reflectors of all kinds; parts suitable for use therewith** |
|  | - - Aerials |
| **8529 10 11** | - - - Telescopic and whip-type aerials for portable apparatus or for apparatus for fitting in motor vehicles |
|  | - - - Outside aerials for radio or television broadcast receivers |
| **8529 10 31** | - - - - For reception via satellite |
| **8529 10 39** | - - - - Other |
| **8529 10 65** | - - - Inside aerials for radio or television broadcast receivers, including built-in types |
| **8529 10 65 10** | - - - - For use in civil aircraft |
| **8529 10 65 90** | - - - - Other |
| **8529 10 69** | - - - Other |
| **8529 10 80** | - - Aerial filters and separators |
| **8529 10 80 10** | - - - For use in civil aircraft |
| **8529 10 80 20** | - - - Ceramic filter package comprising 2 ceramic filters and 1 ceramic resonator for a frequency of 10,7 MHz (±30 kHz), contained in a housing |
| **8529 10 80 50** | - - - Ceramic filter for a centre frequency of 450 kHz (±1,5 kHz) or 455 kHz (±1,5 kHz), with a bandwidth of not more than 30 kHz at 6 dB and not more than 70 kHz at 40 dB, contained in a housing |
| **8529 10 80 60** | - - - Filters, excluding surface acoustic wave filters, for a center frequency of 485 MHz or more but not more than 1 990 MHz with an insertion loss of not more than 3,5 dB, contained in a housing |
| **8529 10 80 70** | - - - Ceramic filters   - with an applicable frequency range of 10 kHz or more but no more than 100 MHz   - with a housing of ceramic plates provided with electrodes of a kind used in electrical-mechanical transducer or resonator in audio visual and communication equipment |
| **8529 10 80 90** | - - - Other |
| **8529 10 95** | - - Other |
| **8529 90** | **- Other** |
| **8529 90 15** | - - Organic light-emitting diode modules and organic light-emitting diode panels for the apparatus of subheadings 8528 72 or 8528 73 |
|  | - - Other |
| **8529 90 20** | - - - Parts of apparatus of subheadings 8525 60 00, 8525 80 30, 8528 42 00, 8528 52 10 and 8528 62 00 |
|  | - - - Other |
|  | - - - - Cabinets and cases |
| **8529 90 41** | - - - - - Of wood |
| **8529 90 49** | - - - - - Of other materials |
| **8529 90 65** | - - - - Electronic assemblies |
| **8529 90 65 10** | - - - - - Assemblies and sub-assemblies consisting of two or more parts or pieces fastened or joined together, for apparatus of heading 8526, for use in civil aircraft |
| **8529 90 65 15** | - - - - - Electronic assembly comprising at least   - a printed circuit   - processors for multi-media applications and video signal processing   - FPGA (Field Programmable Gate Array)   - Flash memory   - operating memory   - HDMI, VGA, USB and RJ-45 interfaces   - sockets and plugs for connecting a LCD-monitor, a LED lighting and a control panel |
| **8529 90 65 20** | - - - - - Of other transmitter-receivers excluding VHF radio communication transmitter-receivers complying with standard ARINC 566 A, and on-board intercommunication systems complying with standard ARINC 306 or 412 - of receivers excluding radio-broadcasting or television apparatus and receivers for selective calling equipment (SELCAL) complying with standard ARINC 531 or 596 - Other, excluding receivers for OMEGA radio navigation systems complying with standard ARINC 580 or 599 |
| **8529 90 65 25** | - - - - - Printed circuit board assembly comprising:   - a radio tuner (capable of receiving and decoding radio signals and transmitting those signals within the assembly) without signal processing capabilities,   - a microprocessor capable of receiving remote control messages and controlling the tuner chipset, for use in the manufacture of home entertainment systems |
| **8529 90 65 30** | - - - - - Parts of TV-apparatus, having micro-processor and video-processor functions, comprising at least a micro-controller and a video-processor, mounted on a leadframe and contained in a plastic housing |
| **8529 90 65 40** | - - - - - Printed circuit board subassembly, comprising:   - a radio tuner, capable of receiving and decoding radio signals and transmitting those signals within the assembly, with a signal decoder,   - a radio frequency (RF) remote control receiver,   - an infrared remote control signal transmitter,   - a SCART signal generator   - a TV state sensor for use in the manufacture of home entertainment systems |
| **8529 90 65 45** | - - - - - Satellite radio receiver module transforming satellite high frequency signals to digital audio coded signal, for use in the manufacture of products falling within heading 8527 |
| **8529 90 65 50** | - - - - - Tuner transforming high-frequency signals into mid-frequency signals, for use in the manufacture of products falling under heading 8528 |
| **8529 90 65 65** | - - - - - Printed circuit board for distributing supply voltage and control signals directly to a control circuit on a TFT glass panel of a LCD module |
| **8529 90 65 75** | - - - - - Modules comprising at least semiconductor chips for: • the generation of driving signals for pixel addressing, or  • driving addressing pixels |
| **8529 90 65 80** | - - - - - Tuner transforming high-frequency signals into digital signal, for use in the manufacture of products falling under heading 8527 |
| **8529 90 65 85** | - - - - - Assembly consisting of at least:   - an audio frequency amplifier unit, comprising at least an audio frequency amplifier and a sound generator,   - a transformer and   - a radio broadcast receiver  for use in the manufacture of consumer electronic products |
| **8529 90 65 90** | - - - - - Other |
|  | - - - - Other |
| **8529 90 91** | - - - - - Light-emitting diode (LED) backlight modules, which are lighting sources that consist of one or more LEDs, and one or more connectors and are mounted on a printed circuit or other similar substrate, and other passive components, whether or not combined with optical components or protective diodes, and used as backlight illumination for liquid crystal displays (LCDs) |
|  | - - - - - Other |
| **8529 90 92** | - - - - - - For television cameras of subheadings 8525 80 11 and 8525 80 19 and apparatus of headings 8527 and 8528 |
| **8529 90 92 10** | - - - - - - - Of other transmitter-receivers excluding VHF radio communication transmitter-receivers complying with standard ARINC 566 A, and on-board intercommunication systems complying with standard ARINC 306 or 412 - of receivers excluding radio-broadcasting or television apparatus and receivers for selective calling equipment (SELCAL) complying with standard ARINC 531 or 596 - Other, excluding receivers for OMEGA radio navigation systems complying with standard ARINC 580 or 599 |
| **8529 90 92 15** | - - - - - - - LCD modules,   - solely consisting of one or more TFT glass or plastic cells,   - not combined with touch screen facilities,   - with one or more printed circuits boards with control electronics for pixel addressing only,   - with or without backlight unit and   - with or without inverters |
| **8529 90 92 20** | - - - - - - - Assemblies and sub-assemblies consisting of two or more parts or pieces fastened or joined together, for apparatus of heading 8526, for use in civil aircraft |
| **8529 90 92 25** | - - - - - - - LCD modules, not combined with touch screen facilities, solely consisting of:  - one or more TFT glass or plastic cells,    - a die cast heat sink,    - a backlight unit,    - one printed circuit board with micro controller, and    - LVDS (Low Voltage Differential Signalling) interface,  for use in the manufacture of radios for motor vehicles |
| **8529 90 92 32** | - - - - - - - Optical unit for video projection, comprising a colour separation system, a positioning mechanism and lenses, for use in the manufacture of products falling within heading 8528 |
| **8529 90 92 33** | - - - - - - - LCD modules combined with touch screen facilities - solely consisting of one or more TFT cells, - with a diagonal measurement of the screen of 10,7 cm or more but not more than 36 cm, - with or without LED backlight, - with control electronics for pixel addressing only, - without an EPROM memory (Erasable Programmable Read-only Memory), - with digital RGB Interface (Red, Green, Blue Interface), Touch-Screen Interface used solely for installation in motor vehicles of Chapter 87 |
| **8529 90 92 37** | - - - - - - - Fastening and covering ledges of aluminium alloy containing:   - silicon and magnesium,   - with a length of 300 mm or more but not more than 2 200 mm, specifically shaped for use in the manufacture of TV sets |
| **8529 90 92 39** | - - - - - - - LCD modules with: - a diagonal measurement of the screen of 14,5 cm or more but not more than 25,5 cm, - a LED backlight, - a printed circuit board with EPROM (Erasable Programmable Read-only Memory), microcontroller, timing controller, LIN (Local Interconnect Network)bus or APIX2 (Automotive Pixel Link) driver module and other active and passive components, - a 6 to 8 pin connector for power supply and a 2 to 4- pin connector for LVDS (Low-voltage differential signalling)/LIN signals or a APIX2 interface or a LVDS/LIN interface for signals and power supply - whether or not in a housing, for permanent incorporation or permanent mounting into motor vehicles of Chapter 87 |
| **8529 90 92 40** | - - - - - - - Assembly comprising prisms, digital micromirror device (DMD) chips and electronic control circuits, for the manufacture of television projection equipments or video projectors |
| **8529 90 92 41** | - - - - - - - Digital micromirror device (DMD)-chips, for use in the manufacture of video projectors |
| **8529 90 92 42** | - - - - - - - Aluminium heat sinks and cooling fins, for maintaining the operating temperature of transistors and integrated circuits, for use in the manufacture of products falling within heading 8527 or 8528 |
| **8529 90 92 43** | - - - - - - - Plasma display module incorporating only address and display electrodes, with or without driver and/or control electronics for pixel address only and with or without a power supply |
| **8529 90 92 45** | - - - - - - - Integrated circuit package with TV reception functionality containing a channel decoder die, tuner die, power management die, GSM filters and discrete as well as embedded passive circuit elements for reception of digitally broadcasting videosignals of DVB-T and DVB-H formats |
| **8529 90 92 47** | - - - - - - - Area image sensors ("progressive scan" Interline CCD-Sensor or CMOS-Sensor) for digital video cameras in the form of analogue or digital, monolithic integrated circuit with pixels of not more than 12 µm x 12 µm in monochromic version with microlenses applied to each individual pixel (microlens array) or in polychromic version with a colour filter, whether or not with a lenslet (micro lens) array with one lenslet mounted on each individual pixel |
| **8529 90 92 49** | - - - - - - - AC socket with a noise filter, composed of:   - AC socket (for power cord connection) of 230 V,   - integrated noise filter composed of capacitors and inductors,   - cable connector for connecting an AC socket with the PDP (Plasma display panel) power supply unit, whether or not equipped with a metal support, which joins the AC socket to the PDP TV set |
| **8529 90 92 53** | - - - - - - - Printed circuit board for distributing supply voltage and control signals directly to a control circuit on a TFT glass panel of a LCD module |
| **8529 90 92 55** | - - - - - - - OLED modules, consisting of - one or more TFT glass or plastic cells, containing organic material, - with or without combined touch screen facilities and - one or more printed circuit boards with control electronics for pixel addressing, for use in the manufacture of TV sets and monitors or for use in the manufacture of vehicles of Chapter 87 |
| **8529 90 92 57** | - - - - - - - Metal holder, metal fixing item or internal stiffener of metal, for use in the manufacture of televisions, monitors and video players |
| **8529 90 92 63** | - - - - - - - LCD module - with a diagonal measurement of the screen of 14,5 cm or more but not more than 38,5 cm, - with or without a touch screen, - with an LED backlight, - with a printed circuit board with EEPROM, microcontroller, LVDS receiver and other active and passive components, - with a plug for power supply and CAN and LVDS interfaces, - with or without electronic components for dynamic adjustments of colour, - in a housing, with or without mechanical, touch-sensitive or contactless control functions and with or without active cooling system, suitable for installation in motor vehicles of Chapter 87 |
| **8529 90 92 65** | - - - - - - - OLED display consisting of:   - the organic layer with organic LEDs,   - two conductive layers on electron transfer and electron holes,   - layers of transistors (TFT) with resolution of a 1920 x 1080   - anode and cathode for power supply of organic diodes,   - RGB filter,   - glass or plastic protective layer,   - without the electronics for pixel addressing, for use in the manufacture of goods of headings 8528 |
| **8529 90 92 67** | - - - - - - - Colour LCD display panel for LCD monitors of heading 8528: - with a diagonal measurement of the screen of 14,48 cm or more but not more than 31,24 cm, - with or without a touch screen, - with backlight, micro-controller, - with a CAN (Controller area network)-controller with one or more LVDS (Low-voltage differential signalling) interfaces and one or more CAN/power supply sockets or with an APIX (Automotive Pixel Link) controller with APIX interface, - in a housing with or without a heat sink at the back of the housing, - without a signal-processing module, - whether or not with haptic and acoustical feedback, for use in the manufacture of vehicles of Chapter 87 |
| **8529 90 92 70** | - - - - - - - Rectangular fastening and covering frame:   - of an aluminium alloy containing silicon and magnesium,   - with a length of 500 mm or more but not more than 2 200 mm,   - with a width of 300 mm or more but not more than 1 500 mm, of a kind used for the production of TV sets |
| **8529 90 92 75** | - - - - - - - Printed circuit board with LED diodes: - whether or not equipped with prisms/lens, and - whether or not fitted with connector(s) for the manufacture of backlight units for goods of heading 8528 |
| **8529 90 92 85** | - - - - - - - Colour LCD module in a housing:   - with a diagonal screen measurement of 14.48 cm or more but not more than 26 cm,   - without touch screen,   - with a backlight and micro-controller,   - with a CAN (Controller Area Network) controller, an LVDS (Low-Voltage Differential Signalling) interface and a CAN/power connector,   - without a signal processing module,   - with control electronics for pixel addressing only,   - with a motorised mechanism for moving the display screen, for permanent installation in vehicles of Chapter 87 |
| **8529 90 92 99** | - - - - - - - Other |
| **8529 90 97** | - - - - - - Other |
| **8529 90 97 10** | - - - - - - - Assemblies and sub-assemblies consisting of two or more parts or pieces fastened or joined together, for apparatus of heading 8526, for use in civil aircraft |
| **8529 90 97 20** | - - - - - - - Of other transmitter-receivers excluding VHF radio communication transmitter-receivers complying with standard ARINC 566 A, and on-board intercommunication systems complying with standard ARINC 306 or 412 - of receivers excluding radio-broadcasting or television apparatus and receivers for selective calling equipment (SELCAL) complying with standard ARINC 531 or 596 - Other, excluding receivers for OMEGA radio navigation systems complying with standard ARINC 580 or 599 |
| **8529 90 97 90** | - - - - - - - Other |
| **8530** | **Electrical signalling, safety or traffic control equipment for railways, tramways, roads, inland waterways, parking facilities, port installations or airfields (other than those of heading 8608)** |
| **8530 10 00** | **- Equipment for railways or tramways** |
| **8530 80 00** | **- Other equipment** |
| **8530 90 00** | **- Parts** |
| **8531** | **Electric sound or visual signalling apparatus (for example, bells, sirens, indicator panels, burglar or fire alarms), other than those of heading 8512 or 8530** |
| **8531 10** | **- Burglar or fire alarms and similar apparatus** |
| **8531 10 30** | - - Of a kind used for buildings |
| **8531 10 95** | - - Other |
| **8531 10 95 10** | - - - For use in civil aircraft |
| **8531 10 95 90** | - - - Other |
| **8531 20** | **- Indicator panels incorporating liquid crystal devices (LCD) or light-emitting diodes (LED)** |
| **8531 20 20** | - - Incorporating light-emitting diodes (LED) |
| **8531 20 20 10** | - - - For use in civil aircraft |
| **8531 20 20 90** | - - - Other |
|  | - - Incorporating liquid crystal devices (LCD) |
| **8531 20 40** | - - - Incorporating active matrix liquid crystal devices (LCD) |
| **8531 20 40 10** | - - - - For use in civil aircraft |
| **8531 20 40 90** | - - - - Other |
| **8531 20 95** | - - - Other |
| **8531 20 95 10** | - - - - For use in civil aircraft |
| **8531 20 95 90** | - - - - Other |
| **8531 80** | **- Other apparatus** |
| **8531 80 40** | - - Bells, buzzers, door chimes and similar |
| **8531 80 40 10** | - - - For use in civil aircraft |
| **8531 80 40 90** | - - - Other |
| **8531 80 70** | - - Other |
| **8531 90 00** | **- Parts** |
| **8532** | **Electrical capacitors, fixed, variable or adjustable (pre-set)** |
| **8532 10 00** | **- Fixed capacitors designed for use in 50/60 Hz circuits and having a reactive power handling capacity of not less than 0,5 kvar (power capacitors)** |
|  | **- Other fixed capacitors** |
| **8532 21 00** | - - Tantalum |
| **8532 22 00** | - - Aluminium electrolytic |
| **8532 23 00** | - - Ceramic dielectric, single layer |
| **8532 24 00** | - - Ceramic dielectric, multilayer |
| **8532 25 00** | - - Dielectric of paper or plastics |
| **8532 29 00** | - - Other |
| **8532 30 00** | **- Variable or adjustable (pre-set) capacitors** |
| **8532 90 00** | **- Parts** |
| **8533** | **Electrical resistors (including rheostats and potentiometers), other than heating resistors** |
| **8533 10 00** | **- Fixed carbon resistors, composition or film types** |
|  | **- Other fixed resistors** |
| **8533 21 00** | - - For a power handling capacity not exceeding 20 W |
| **8533 29 00** | - - Other |
|  | **- Wirewound variable resistors, including rheostats and potentiometers** |
| **8533 31 00** | - - For a power handling capacity not exceeding 20 W |
| **8533 39 00** | - - Other |
| **8533 40** | **- Other variable resistors, including rheostats and potentiometers** |
| **8533 40 10** | - - For a power handling capacity not exceeding 20 W |
| **8533 40 90** | - - Other |
| **8533 90 00** | **- Parts** |
| **8534** | **Printed circuits** |
|  | **- Consisting only of conductor elements and contacts** |
| **8534 00 11** | - - Multilayer circuits |
| **8534 00 19** | - - Other |
| **8534 00 90** | **- With other passive elements** |
| **8535** | **Electrical apparatus for switching or protecting electrical circuits, or for making connections to or in electrical circuits (for example, switches, fuses, lightning arresters, voltage limiters, surge suppressors, plugs and other connectors, junction boxes), for a voltage exceeding 1 000 V** |
| **8535 10** | **- Fuses** |
| **8535 10 00 10** | - - For use in certain types of aircraft |
| **8535 10 00 90** | - - Other |
|  | **- Automatic circuit breakers** |
| **8535 21** | - - For a voltage of less than 72,5 kV |
| **8535 21 00 10** | - - - For use in certain types of aircraft |
| **8535 21 00 90** | - - - Other |
| **8535 29** | - - Other |
| **8535 29 00 10** | - - - For use in certain types of aircraft |
| **8535 29 00 90** | - - - Other |
| **8535 30** | **- Isolating switches and make-and-break switches** |
| **8535 30 10** | - - For a voltage of less than 72,5 kV |
| **8535 30 10 10** | - - - For use in certain types of aircraft |
| **8535 30 10 90** | - - - Other |
| **8535 30 90** | - - Other |
| **8535 30 90 10** | - - - For use in certain types of aircraft |
| **8535 30 90 90** | - - - Other |
| **8535 40** | **- Lightning arresters, voltage limiters and surge suppressors** |
| **8535 40 00 10** | - - For use in certain types of aircraft |
| **8535 40 00 90** | - - Other |
| **8535 90** | **- Other** |
| **8535 90 00 10** | - - For use in certain types of aircraft |
|  | - - Other |
| **8535 90 00 20** | - - - Printed circuit board in the form of plates consisting of isolating material with electrical connections and solder points, for use in the manufacture of back light units for LCD modules |
| **8535 90 00 30** | - - - Semiconductor module switch in a casing:  - consisting of an IGBT transistor chip and a diode chip on one or more lead frames,    - for a voltage of 1200 V |
| **8535 90 00 90** | - - - Other |
| **8536** | **Electrical apparatus for switching or protecting electrical circuits, or for making connections to or in electrical circuits (for example, switches, relays, fuses, surge suppressors, plugs, sockets, lamp holders and other connectors, junction boxes), for a voltage not exceeding 1 000 V; connectors for optical fibres, optical fibre bundles or cables** |
| **8536 10** | **- Fuses** |
| **8536 10 10** | - - For a current not exceeding 10 A |
| **8536 10 10 10** | - - - For use in certain types of aircraft |
| **8536 10 10 90** | - - - Other |
| **8536 10 50** | - - For a current exceeding 10 A but not exceeding 63 A |
| **8536 10 50 10** | - - - For use in certain types of aircraft |
| **8536 10 50 90** | - - - Other |
| **8536 10 90** | - - For a current exceeding 63 A |
| **8536 10 90 10** | - - - For use in certain types of aircraft |
| **8536 10 90 90** | - - - Other |
| **8536 20** | **- Automatic circuit breakers** |
| **8536 20 10** | - - For a current not exceeding 63 A |
| **8536 20 10 10** | - - - For use in certain types of aircraft |
| **8536 20 10 90** | - - - Other |
| **8536 20 90** | - - For a current exceeding 63 A |
| **8536 20 90 10** | - - - For use in certain types of aircraft |
| **8536 20 90 90** | - - - Other |
| **8536 30** | **- Other apparatus for protecting electrical circuits** |
| **8536 30 10** | - - For a current not exceeding 16 A |
| **8536 30 10 10** | - - - For use in certain types of aircraft |
| **8536 30 10 90** | - - - Other |
| **8536 30 30** | - - For a current exceeding 16 A but not exceeding 125 A |
| **8536 30 30 10** | - - - For use in certain types of aircraft |
|  | - - - Other |
| **8536 30 30 11** | - - - - Thermo-electric switch with a cut-off current of 50 A or more, comprising a snap action switch, for direct mounting on an electric motor coil, contained in a hermetically sealed housing |
| **8536 30 30 90** | - - - - Other |
| **8536 30 90** | - - For a current exceeding 125 A |
| **8536 30 90 10** | - - - For use in certain types of aircraft |
| **8536 30 90 90** | - - - Other |
|  | **- Relays** |
| **8536 41** | - - For a voltage not exceeding 60 V |
| **8536 41 10** | - - - For a current not exceeding 2 A |
| **8536 41 10 10** | - - - - For use in certain types of aircraft |
| **8536 41 10 20** | - - - - Photoelectric (so called photovoltaic) relay consisting of a GaAlAs light-emitting diode, a galvanically isolated input circuit with a photovoltaic generator and a power MOSFET output switch in a casing with connections for a voltage of 60 volts or less and a current of 2 amps or less |
| **8536 41 10 90** | - - - - Other |
| **8536 41 90** | - - - For a current exceeding 2 A |
| **8536 41 90 10** | - - - - For use in certain types of aircraft |
|  | - - - - Other |
| **8536 41 90 40** | - - - - - A power relay with:   - an electromechanical switching function,   - a load current of 3 amperes or more but not exceeding 16 amperes,   - a coil voltage of 5 volts or more but not exceeding 24 volts,   - a distance between the connector pins of the load circuit not more than 12,5 mm |
| **8536 41 90 50** | - - - - - Photoelectric (so called photovoltaic) relay consisting of a GaAlAs light-emitting diode, a galvanically isolated input circuit with one or two photovoltaic generators and two power MOSFET output switches in a casing with connections for a maximum voltage of 60 volts and a minimum current of 2 amps |
| **8536 41 90 89** | - - - - - Other |
| **8536 49** | - - Other |
| **8536 49 00 10** | - - - For use in certain types of aircraft |
|  | - - - Other |
| **8536 49 00 30** | - - - - Relays with:   - a nominal voltage of 12 V DC   - an allowable voltage of not more than 16 V DC   - a coil resistance at 20 °C of 26, 7 Ohm (± 10 %)   - a pick-up voltage at 60 °C of not more than 8,5 V   - a drop-out voltage at 20 °C of 1 V or more   - a nominal operating power at 20 °C of 5,4 Watts   - a switching voltage of not more than 400 V DC   - a permanent current-carrying capacity of not more than 120 A for use in the manufacture of batteries for electric vehicles |
| **8536 49 00 40** | - - - - Photoelectric (so called photovoltaic) relay consisting of two GaAlAs light-emitting diodes, two galvanically isolated input circuits with photovoltaic generator(s) and four power MOSFET output switches in a casing with connections for a voltage of more than 60 volts |
| **8536 49 00 91** | - - - - Thermal relays contained in a hermetically sealed glass cartridge of not more than 35 mm in length excluding wires, with a maximum leakage rate of 10-6 cm3 He/sec at one bar in the temperature range 0 ºC to 160 °C, to be incorporated into compressors for refrigerating equipment |
| **8536 49 00 99** | - - - - Other |
| **8536 50** | **- Other switches** |
| **8536 50 03** | - - Electronic AC switches consisting of optically coupled input and output circuits (insulated thyristor AC switches) |
| **8536 50 05** | - - Electronic switches, including temperature protected electronic switches, consisting of a transistor and a logic chip (chip-on-chip technology) |
| **8536 50 07** | - - Electromechanical snap-action switches for a current not exceeding 11 A |
|  | - - Other |
|  | - - - For a voltage not exceeding 60 V |
| **8536 50 11** | - - - - Push-button switches |
| **8536 50 11 10** | - - - - - For use in certain types of aircraft |
|  | - - - - - Other |
| **8536 50 11 31** | - - - - - - Switch of the printed circuit mount type, operating at a force of 4,9 N (±0,9 N), contained in a housing |
| **8536 50 11 32** | - - - - - - Mechanical tact switch for connecting electronic circuits, operating at a voltage of not more than 60V and at a current strength of not more than 50mA, for use in the manufacture of products of headings 8521 or 8528 |
| **8536 50 11 35** | - - - - - - Mechanical switches for connecting electrical circuits, with:   - a voltage of 14,4 V or more but not more than 42 V,   - an amperage of 10 A or more but not more than 42 A, for use in the manufacture of machines falling within heading 8467 |
| **8536 50 11 40** | - - - - - - Push-button switch for keyless start for a voltage of 12 V in a plastic housing, comprising at least:   - printed circuit board,   - LED diode,   - connector,   - brackets for mounting for use in the manufacture of goods of Chapter 87 |
| **8536 50 11 99** | - - - - - - Other |
| **8536 50 15** | - - - - Rotary switches |
| **8536 50 15 10** | - - - - - For use in certain types of aircraft |
| **8536 50 15 90** | - - - - - Other |
| **8536 50 19** | - - - - Other |
| **8536 50 19 10** | - - - - - For use in certain types of aircraft |
|  | - - - - - Other |
| **8536 50 19 91** | - - - - - - Hall effect switch, comprising 1 magnet, 1 Hall effect sensor and 2 capacitors, contained in a housing with 3 connections |
| **8536 50 19 93** | - - - - - - Devices, having adjustable controller and switching functions, comprising one ore more monolithic integrated circuits whether or not combined with semiconductor elements, mounted together on a leadframe and contained in a plastic housing |
| **8536 50 19 99** | - - - - - - Other |
| **8536 50 80** | - - - Other |
| **8536 50 80 10** | - - - - For use in certain types of aircraft |
|  | - - - - Other |
| **8536 50 80 81** | - - - - - Mechanical speed governer switches for connecting electrical circuits, with:   - a voltage of 240 V or more but not more than 250 V,   - an amperage of 4 A or more but not more than 6 A, for use in the manufacture of machines falling within heading 8467 |
| **8536 50 80 82** | - - - - - Mechanical switches for connecting electrical circuits, with:   - a voltage of 240 V or more but not more than 300 V,   - an amperage of 3 A or more but not more than 15 A, for use in the manufacture of machines falling within heading 8467 |
| **8536 50 80 83** | - - - - - Semiconductor module switch in a casing:  - consisting of an IGBT transistor chip and a diode chip on one or more lead frames,    - for a voltage of 600 V |
| **8536 50 80 93** | - - - - - Switch unit for coaxial cable, comprising 3 electromagnetic switches, with a switching time of not more than 50 ms and an actuating current of not more than 500 mA at a voltage of 12 V |
| **8536 50 80 97** | - - - - - Devices, having adjustable controller and switching functions, comprising one ore more monolithic integrated circuits whether or not combined with semiconductor elements, mounted together on a leadframe and contained in a plastic housing |
| **8536 50 80 98** | - - - - - Mechanical push-button switch for connecting electronic circuits, operating at a voltage of 220 V or more but not more than 250 V and at a current strength of not more than 5 A, for use in the manufacture of products of headings 8521 or 8528 |
| **8536 50 80 99** | - - - - - Other |
|  | **- Lamp holders, plugs and sockets** |
| **8536 61** | - - Lamp holders |
| **8536 61 10** | - - - Edison lamp holders |
| **8536 61 10 10** | - - - - For use in certain types of aircraft |
| **8536 61 10 90** | - - - - Other |
| **8536 61 90** | - - - Other |
| **8536 61 90 10** | - - - - For use in certain types of aircraft |
| **8536 61 90 90** | - - - - Other |
| **8536 69** | - - Other |
| **8536 69 10** | - - - For coaxial cables |
| **8536 69 30** | - - - For printed circuits |
| **8536 69 90** | - - - Other |
| **8536 69 90 10** | - - - - For use in certain types of aircraft |
|  | - - - - Other |
| **8536 69 90 51** | - - - - - SCART type connectors, built into a plastic or metal housing, with 21 pins in 2 rows, for use in the manufacture of products falling within headings 8521 and 8528 |
| **8536 69 90 60** | - - - - - Electrical sockets and plugs with a length of not more than 12,7 mm or a diameter of not more than 10,8 mm, for use in the production of hearing aids and speech processors |
| **8536 69 90 82** | - - - - - Modular socket or plug for local area networks, whether or not combined with other sockets, integrating at least:   - a pulse transformer, including a wide-band ferrite core,   - a common mode coil,   - a resistor,   - a capacitor, for use in the manufacture of products falling within headings 8521 or 8528 |
| **8536 69 90 83** | - - - - - AC socket with a noise filter, composed of:   - AC socket (for power cord connection) of 230 V,   - integrated noise filter composed of capacitors and inductors,   - cable connector for connecting an AC socket with the PDP (Plasma display panel) power supply unit, whether or not equipped with a metal support, which joins the AC socket to the PDP TV set |
| **8536 69 90 84** | - - - - - Universal serial bus (USB) socket or plug in a single or multiple form for connecting with other USB devices, for use in the manufacture of goods falling within headings 8521 or 8528 |
| **8536 69 90 85** | - - - - - Socket or plug, built into a plastic or metal housing, with no more than 96 pins, for use in the manufacture of products falling within headings 8521 or 8528 |
| **8536 69 90 86** | - - - - - High-Definition Multimedia Interface (HDMI) type socket or plug, built into a plastic or metal housing, with 19 pins or 20 pins in 2 rows, for use in the manufacture of products falling within headings 8521 or 8528 |
| **8536 69 90 88** | - - - - - Secure Digital (SD), CompactFlash, "Smart Card" and "Common interface modules (cards)" female connectors and interfaces, of a kind used for soldering on printed circuit boards, for connecting electrical apparatus and circuits and switching or protecting electrical circuits with a voltage of not more than 1 000 V |
| **8536 69 90 99** | - - - - - Other |
| **8536 70** | **- Connectors for optical fibres, optical fibre bundles or cables** |
| **8536 70 00 10** | - - Optical socket, plug or connector, for use in the manufacture of goods falling within headings 8521 or 8528 |
|  | - - Other |
| **8536 70 00 93** | - - - Connectors of plastics for optical fibres, optical fibre bundles or cables, for use in certain types of aircraft |
| **8536 70 00 99** | - - - Other |
| **8536 90** | **- Other apparatus** |
| **8536 90 01** | - - Prefabricated elements for electrical circuits |
| **8536 90 01 10** | - - - For use in certain types of aircraft |
| **8536 90 01 90** | - - - Other |
| **8536 90 10** | - - Connections and contact elements for wire and cables |
| **8536 90 20** | - - Wafer probers |
| **8536 90 40** | - - Battery clamps of a kind used for motor vehicles of heading 8702, 8703, 8704, or 8711 |
| **8536 90 95** | - - Other |
| **8536 90 95 10** | - - - For use in certain types of aircraft |
|  | - - - Other |
| **8536 90 95 20** | - - - - Semiconductor chip housing in the form of a plastic frame containing a lead frame equipped with contact pads, for voltages of not more than 1 000 V |
| **8536 90 95 40** | - - - - Rivet contacts - of copper - plated with silver nickel alloy AgNi10 or with silver containing by weight 11,2 % (± 1,0 %) of tin oxide and of indium oxide taken together - with a thickness of the plating of 0,3 mm (- 0/+ 0,015 mm) - whether or not gilded |
| **8536 90 95 92** | - - - - Metallic stamped frame with connections |
| **8536 90 95 94** | - - - - Elastomeric connector, of rubber or silicone, consisting of one or more conductor elements |
| **8536 90 95 95** | - - - - Keypads of silicone or plastic,   - whether or not with parts of metal, plastic, glass fibre reinforced epoxide resin or wood,   - whether or not printed or surface treated,   - whether or not with electrical conducting elements   - whether or not with keypads foil glued on the keyboard   - whether or not with protective foil   - single or multilayer |
| **8536 90 95 99** | - - - - Other |
| **8537** | **Boards, panels, consoles, desks, cabinets and other bases, equipped with two or more apparatus of heading 8535 or 8536, for electric control or the distribution of electricity, including those incorporating instruments or apparatus of Chapter 90, and numerical control apparatus, other than switching apparatus of heading 8517** |
| **8537 10** | **- For a voltage not exceeding 1 000 V** |
| **8537 10 10** | - - Numerical control panels with built-in automatic data-processing machine |
| **8537 10 10 10** | - - - For use in certain types of aircraft |
| **8537 10 10 90** | - - - Other |
|  | - - Other |
| **8537 10 91** | - - - Programmable memory controllers |
| **8537 10 91 10** | - - - - For use in certain types of aircraft |
|  | - - - - Other |
| **8537 10 91 50** | - - - - - Fuse control module in a plastic housing with mounting brackets comprising:   - sockets with or without fuses,   - connecting ports,   - a printed circuit board with embedded microprocessor, micro switch and relay of a kind used in the manufacture of goods of chapter 87 |
| **8537 10 91 55** | - - - - - Electronic control unit of automatic parking system with the ability to evaluate the surroundings of the car and control automatic parking: - of a voltage of 5 V or more but not more than 16 V, - with programmable memory, - with at least one connector, - in a plastic housing, - whether or not with a metal holder for use in the manufacture of goods of Chapter 87 |
| **8537 10 91 60** | - - - - - Electronic control units, manufactured according to class 2 of IPC-A-610E standard, with at least:   - an AC power input of 208 V or more but not more than 400 V,   - a logic power input of 24 V DC,   - an automatic circuit breaker,   - a main power switch,   - internal or external electrical connectors and cables,   - in a housing with dimension of 281 mm x 180 mm x 75 mm or more, but not more than 630 mm x 420 mm x 230 mm, of a kind used for manufacturing recycling or sorting machines |
| **8537 10 91 65** | - - - - - Electronic control unit for optimal engine performance: - with a programmable memory, - with a voltage of 8 V or more but not more than 16 V, - with at least one composite connector, - in a metal housing, - whether or not with metal holders for use in the manufacture of motor vehicles |
| **8537 10 91 70** | - - - - - Programmable memory controller for a voltage not exceeding 1000 V, of a kind used for the operation of a combustion motor and/or various actuators working with a combustion motor, comprising at least - a printed circuit with active and passive components, - an aluminium housing, and - multiple connectors |
| **8537 10 91 99** | - - - - - Other |
| **8537 10 95** | - - - Touch-Sensitive Data Input Devices (so-called touch screens) without display capabilities, for incorporation into apparatus having a display, which function by detecting the presence and location of a touch within the display area |
| **8537 10 98** | - - - Other |
| **8537 10 98 10** | - - - - For use in certain types of aircraft |
|  | - - - - Other |
| **8537 10 98 30** | - - - - - Motor bridge ICs without programmable memory consisting of:   - one or more integrated circuits, not interconnected, on separate lead frames,   - also with discrete Metal Oxide Field Effect Transistors (MOSFET) for controlling DC motors in cars   - mounted in a plastic housing |
| **8537 10 98 35** | - - - - - Electronic control unit without memory, for a voltage of 12 V, for information exchange systems in vehicles (for connection of audio, telephony, navigation, camera and wireless car service) containing:   - 2 rotary knobs   - 27 or more pushbuttons   - LED lights   - 2 integrated circuits for receiving and sending of control signals via the LIN-bus |
| **8537 10 98 40** | - - - - - Electronic control unit for monitoring car vehicle tyre pressure comprising plastic box with printed circuit board inside and with or without metal holder, of:   - a length of 50 mm or more, but not more than 120 mm,   - a width of 20 mm or more but not more than 40 mm,   - a height of 30 mm or more, but not more than 120 mm of a kind used in the manufacture of goods of Chapter 87 |
| **8537 10 98 45** | - - - - - Electronic control units, manufactured according to class 2 of IPC-A-610E standard, with at least:   - an AC power input of 208 V or more but not more than 400 V,   - a logic power input of 24 V DC,   - an automatic circuit breaker,   - a main power switch,   - internal or external electrical connectors and cables,   - in a housing with dimension of 281 mm x 180 mm x 75 mm or more, but not more than 630 mm x 420 mm x 230 mm, of a kind used for manufacturing recycling or sorting machines |
| **8537 10 98 50** | - - - - - Electronic control unit BCM (Body Control Module) comprising   - plastic box with printed circuit board and metal holder,   - with voltage of 9V or more, but not more than 16V,   - able to control, evaluate and manage functions of assisting services in an automobile, at least wiper timing, window heating, interior lighting, seat belt reminder of a kind used in the manufacture of goods of Chapter 87 |
| **8537 10 98 60** | - - - - - Electronic assembly consisting of:   - a microprocessor,   - light-emitting diode (LED) or liquid crystal display (LCD) indicators,   - electronic components mounted on a printed circuit, for use in the manufacture of built-in products of headings 8514 2080, 8516 5000 and 8516 6080 |
| **8537 10 98 65** | - - - - - Lever for control module under the steering wheel: - with one or more single or multi-positional electrical switches (push-button, rotary or other), - whether or not equipped with printed circuit boards and electrical cables, - for a voltage of 9 V or more but not more than 16 V, of a kind used in the manufacture of motor vehicles of Chapter 87 |
| **8537 10 98 70** | - - - - - Keypads of silicone or plastic,   - whether or not with parts of metal, plastic, glass fibre reinforced epoxide resin or wood,   - whether or not printed or surface treated,   - whether or not with electrical conducting elements   - whether or not with keypads foil glued on the keyboard   - whether or not with protective foil   - single or multilayer |
| **8537 10 98 75** | - - - - - Control unit for keyless access to vehicle and vehicle starting, with electrical switching apparatus, in a plastic housing, for a voltage of 12 V, whether or not with: - an antenna, - a connector, - a metal holder, for use in the manufacture of goods of Chapter 87 |
| **8537 10 98 85** | - - - - - Electronic airbag control unit: - with an operating temperature of - 45 °C or more, but not more than 90 ° C, - with a voltage of 8 V or more but not more than 16 V, - with two connectors, - in a metal housing for use in the manufacture of motor vehicles |
| **8537 10 98 93** | - - - - - Electronic control units for a voltage of 12 V, for use in the manufacture of vehicle mounted temperature control systems |
| **8537 10 98 94** | - - - - - Unit consisting of two junction field effect transistors contained in a dual lead frame housing |
| **8537 10 98 96** | - - - - - Electronic circuit card without separate housing for actuating and controlling vacuum cleaner brushes powered by not more than 300 W |
| **8537 10 98 98** | - - - - - Electronic circuit cards that  - are connected by wire or radio frequency to each other and the motor controller card, and    - regulate the functioning (switching on or off and suction capacity) of vacuum cleaners according to a stored program,    - whether or not fitted with indicators that display the functioning of the vacuum cleaner (suction capacity and/or dust bag full and/or filter full) |
| **8537 10 98 99** | - - - - - Other |
| **8537 20** | **- For a voltage exceeding 1 000 V** |
| **8537 20 91** | - - For a voltage exceeding 1 000 V but not exceeding 72,5 kV |
| **8537 20 91 10** | - - - For use in certain types of aircraft |
| **8537 20 91 90** | - - - Other |
| **8537 20 99** | - - For a voltage exceeding 72,5 kV |
| **8537 20 99 10** | - - - For use in certain types of aircraft |
| **8537 20 99 90** | - - - Other |
| **8538** | **Parts suitable for use solely or principally with the apparatus of heading 8535, 8536 or 8537** |
| **8538 10** | **- Boards, panels, consoles, desks, cabinets and other bases for the goods of heading 8537, not equipped with their apparatus** |
| **8538 10 00 10** | - - For use in certain types of aircraft |
| **8538 10 00 90** | - - Other |
| **8538 90** | **- Other** |
|  | - - For wafer probers of subheading 8536 90 20 |
| **8538 90 11** | - - - Electronic assemblies |
| **8538 90 19** | - - - Other |
|  | - - Other |
| **8538 90 91** | - - - Electronic assemblies |
| **8538 90 91 10** | - - - - For use in certain types of aircraft |
|  | - - - - Other |
| **8538 90 91 20** | - - - - - Interior antenna for a car door locking system, comprising:   - an antenna module in a plastic housing,   - a connection cable with a plug,   - at least two mounting brackets   - whether or not PCB including integrated circuits, diodes and transistors of a kind used in the manufacture of goods of CN heading 8703 |
| **8538 90 91 89** | - - - - - Other |
| **8538 90 99** | - - - Other |
| **8538 90 99 10** | - - - - For use in certain types of aircraft |
|  | - - - - Other |
| **8538 90 99 30** | - - - - - Polycarbonate or acrylonitrile butadiene styrene covers and cases for steering pad switches whether or not coated on the outside with a scratch resistant paint |
| **8538 90 99 40** | - - - - - Polycarbonate control interface buttons for steering pad switches coated on the outside with scratch resistant paint |
| **8538 90 99 50** | - - - - - Interior antenna for a car door locking system, comprising:   - an antenna module in a plastic housing,   - a connection cable with a plug,   - at least two mounting brackets   - whether or not PCB including integrated circuits, diodes and transistors of a kind used in the manufacture of goods of CN heading 8703 |
| **8538 90 99 60** | - - - - - Front control panel, in the form of a plastic box, with light guides, rotary switches, pressure switches and buttons switches, or other type of switches, without any electrical component, of a kind used in the dashboard of motor vehicles of Chapter 87 |
| **8538 90 99 92** | - - - - - Part of an electrothermal fuse, consisting of a tin coated copper wire attached to a cylindrical casing, the exterior dimensions of which do not exceed 5 mm x 48 mm |
| **8538 90 99 95** | - - - - - Copper base plate, of a kind used as a heatsink in the manufacture of IGBT modules containing more components than IGBT chips and diodes with a voltage of 650 V or more but not more than 1200 V |
| **8538 90 99 99** | - - - - - Other |
| **8539** | **Electric filament or discharge lamps, including sealed beam lamp units and ultraviolet or infra-red lamps; arc-lamps; light-emitting diode (LED) lamps** |
| **8539 10** | **- Sealed beam lamp units** |
| **8539 10 00 10** | - - For use in civil aircraft |
| **8539 10 00 90** | - - Other |
|  | **- Other filament lamps, excluding ultraviolet or infra-red lamps** |
| **8539 21** | - - Tungsten halogen |
| **8539 21 30** | - - - Of a kind used for motorcycles or other motor vehicles |
|  | - - - Other, for a voltage |
| **8539 21 92** | - - - - Exceeding 100 V |
| **8539 21 92 10** | - - - - - Lamps for lighting, for use in certain types of aircraft |
| **8539 21 92 90** | - - - - - Other |
| **8539 21 98** | - - - - Not exceeding 100 V |
| **8539 21 98 10** | - - - - - Lamps for lighting, for use in certain types of aircraft |
| **8539 21 98 90** | - - - - - Other |
| **8539 22** | - - Other, of a power not exceeding 200 W and for a voltage exceeding 100 V |
| **8539 22 10** | - - - Reflector lamps |
| **8539 22 10 10** | - - - - Lamps for lighting, for use in certain types of aircraft |
| **8539 22 10 90** | - - - - Other |
| **8539 22 90** | - - - Other |
| **8539 22 90 10** | - - - - Lamps for lighting, for use in certain types of aircraft |
| **8539 22 90 90** | - - - - Other |
| **8539 29** | - - Other |
| **8539 29 30** | - - - Of a kind used for motorcycles or other motor vehicles |
|  | - - - Other, for a voltage |
| **8539 29 92** | - - - - Exceeding 100 V |
| **8539 29 92 10** | - - - - - Lamps for lighting, for use in certain types of aircraft |
| **8539 29 92 90** | - - - - - Other |
| **8539 29 98** | - - - - Not exceeding 100 V |
| **8539 29 98 10** | - - - - - Lamps for lighting, for use in certain types of aircraft |
| **8539 29 98 90** | - - - - - Other |
|  | **- Discharge lamps, other than ultraviolet lamps** |
| **8539 31** | - - Fluorescent, hot cathode |
| **8539 31 10** | - - - With double ended cap |
| **8539 31 10 10** | - - - - Lamps for lighting, for use in certain types of aircraft |
| **8539 31 10 90** | - - - - Other |
| **8539 31 90** | - - - Other |
| **8539 31 90 10** | - - - - Lamps for lighting, for use in certain types of aircraft |
| **8539 31 90 90** | - - - - Other |
| **8539 32** | - - Mercury or sodium vapour lamps; metal halide lamps |
| **8539 32 20** | - - - Mercury or sodium vapour lamps |
| **8539 32 90** | - - - Metal halide lamps |
| **8539 32 90 10** | - - - - Lamps for lighting, for use in certain types of aircraft |
| **8539 32 90 90** | - - - - Other |
| **8539 39** | - - Other |
| **8539 39 20** | - - - Cold-cathode fluorescent lamps (CCFLs) for backlighting of flat panel displays |
| **8539 39 80** | - - - Other |
| **8539 39 80 10** | - - - - Lamps for lighting, for use in certain types of aircraft |
| **8539 39 80 90** | - - - - Other |
|  | **- Ultraviolet or infra-red lamps; arc lamps** |
| **8539 41 00** | - - Arc lamps |
| **8539 49 00** | - - Other |
| **8539 50 00** | **- Light-emitting diode (LED) lamps** |
| **8539 90** | **- Parts** |
| **8539 90 10** | - - Lamp bases |
| **8539 90 90** | - - Other |
| **8540** | **Thermionic, cold cathode or photocathode valves and tubes (for example, vacuum or vapour or gas filled valves and tubes, mercury arc rectifying valves and tubes, cathode ray tubes, television camera tubes)** |
|  | **- Cathode ray television picture tubes, including video monitor cathode ray tubes** |
| **8540 11** | - - Colour |
| **8540 11 00 10** | - - - For use in certain types of aircraft |
| **8540 11 00 90** | - - - Other |
| **8540 12** | - - Monochrome |
| **8540 12 00 10** | - - - For use in certain types of aircraft |
| **8540 12 00 90** | - - - Other |
| **8540 20** | **- Television camera tubes; image converters and intensifiers; other photocathode tubes** |
| **8540 20 10** | - - Television camera tubes |
| **8540 20 10 10** | - - - For use in certain types of aircraft |
| **8540 20 10 90** | - - - Other |
| **8540 20 80** | - - Other |
| **8540 20 80 10** | - - - For use in certain types of aircraft |
|  | - - - Other |
| **8540 20 80 91** | - - - - Photomultiplier |
| **8540 20 80 99** | - - - - Other |
| **8540 40** | **- Data/graphic display tubes, monochrome; data/graphic display tubes, colour, with a phosphor dot screen pitch smaller than 0,4 mm** |
| **8540 40 00 10** | - - For use in certain types of aircraft |
| **8540 40 00 90** | - - Other |
| **8540 60** | **- Other cathode ray tubes** |
| **8540 60 00 10** | - - For use in certain types of aircraft |
| **8540 60 00 80** | - - Other |
|  | **- Microwave tubes (for example, magnetrons, klystrons, travelling-wave tubes, carcinotrons), excluding grid-controlled tubes** |
| **8540 71** | - - Magnetrons |
| **8540 71 00 10** | - - - For use in certain types of aircraft |
| **8540 71 00 20** | - - - Continuous wave magnetron with a fixed frequency of 2 460 MHz, packaged magnet, probe output, for use in the manufacture of products falling within subheading 8516 50 00 |
| **8540 71 00 90** | - - - Other |
| **8540 79** | - - Other |
| **8540 79 00 10** | - - - For use in certain types of aircraft |
| **8540 79 00 90** | - - - Other |
|  | **- Other valves and tubes** |
| **8540 81** | - - Receiver or amplifier valves and tubes |
| **8540 81 00 10** | - - - For use in certain types of aircraft |
| **8540 81 00 90** | - - - Other |
| **8540 89** | - - Other |
| **8540 89 00 10** | - - - For use in certain types of aircraft |
|  | - - - Other |
| **8540 89 00 91** | - - - - Displays in the form of a tube consisting of a glass housing mounted on a board the dimensions of which do not exceed 300 mm x 350 mm excluding leads. The tube contains one or more rows of characters or lines arranged in rows, each character or line consisting of fluorescent or phosphorescent elements. These elements are mounted on a metallised base which is covered with fluorescent substances or phosphorescent salts which give off light when bombarded with electrons |
| **8540 89 00 92** | - - - - Vacuum fluorescent display tube |
| **8540 89 00 99** | - - - - Other |
|  | **- Parts** |
| **8540 91** | - - Of cathode ray tubes |
| **8540 91 00 10** | - - - For use in certain types of aircraft |
| **8540 91 00 20** | - - - Thermionic electron source (emitter point) of lanthanum hexaboride (CAS RN 12008-21-8) or cerium hexaboride (CAS RN 12008-02-5), in a metal housing with electric connectors having - a graphite carbon shield mounted in a mini-Vogel type system - separate pyrolytic carbon blocks used as heating elements and - a cathode temperature of less than 1800 K at a filament current of 1,26 A |
| **8540 91 00 90** | - - - Other |
| **8540 99** | - - Other |
| **8540 99 00 10** | - - - For use in certain types of aircraft |
| **8540 99 00 90** | - - - Other |
| **8541** | **Diodes, transistors and similar semiconductor devices; photosensitive semiconductor devices, including photovoltaic cells whether or not assembled in modules or made up into panels; light-emitting diodes (LED); mounted piezoelectric crystals** |
| **8541 10 00** | **- Diodes, other than photosensitive or light-emitting diodes (LED)** |
|  | **- Transistors, other than photosensitive transistors** |
| **8541 21 00** | - - With a dissipation rate of less than 1 W |
| **8541 29 00** | - - Other |
| **8541 30 00** | **- Thyristors, diacs and triacs, other than photosensitive devices** |
| **8541 40** | **- Photosensitive semiconductor devices, including photovoltaic cells whether or not assembled in modules or made up into panels; light-emitting diodes (LED)** |
| **8541 40 10** | - - Light-emitting diodes (LED), including laser diodes |
| **8541 40 90** | - - Other |
| **8541 50 00** | **- Other semiconductor devices** |
| **8541 60 00** | **- Mounted piezoelectric crystals** |
| **8541 90 00** | **- Parts** |
| **8542** | **Electronic integrated circuits** |
|  | **- Electronic integrated circuits** |
| **8542 31** | - - Processors and controllers, whether or not combined with memories, converters, logic circuits, amplifiers, clock and timing circuits, or other circuits |
|  | - - - Goods specified in note 9(b)(3 and 4) to this chapter |
| **8542 31 11** | - - - - Multi-component integrated circuits (MCOs) |
| **8542 31 19** | - - - - Other |
| **8542 31 90** | - - - Other |
| **8542 32** | - - Memories |
|  | - - - Goods specified in note 9(b)(3 and 4) to this chapter |
| **8542 32 11** | - - - - Multi-component integrated circuits (MCOs) |
| **8542 32 19** | - - - - Other |
|  | - - - Other |
|  | - - - - Dynamic random-access memories (D-RAMs) |
| **8542 32 31** | - - - - - With a storage capacity not exceeding 512 Mbits |
| **8542 32 39** | - - - - - With a storage capacity exceeding 512 Mbits |
| **8542 32 45** | - - - - Static random-access memories (S-RAMs), including cache random-access memories (cache-RAMs) |
| **8542 32 55** | - - - - UV erasable, programmable, read only memories (EPROMs) |
|  | - - - - Electrically erasable, programmable, read only memories (E2PROMs), including flash E2PROMs |
|  | - - - - - Flash E2PROMs |
| **8542 32 61** | - - - - - - With a storage capacity not exceeding 512 Mbits |
| **8542 32 69** | - - - - - - With a storage capacity exceeding 512 Mbits |
| **8542 32 75** | - - - - - Other |
| **8542 32 90** | - - - - Other memories |
| **8542 33** | - - Amplifiers |
| **8542 33 10** | - - - Multi-component integrated circuits (MCOs) |
| **8542 33 90** | - - - Other |
| **8542 39** | - - Other |
|  | - - - Goods specified in note 9(b)(3 and 4) to this chapter |
| **8542 39 11** | - - - - Multi-component integrated circuits (MCOs) |
| **8542 39 19** | - - - - Other |
| **8542 39 90** | - - - Other |
| **8542 90 00** | **- Parts** |
| **8543** | **Electrical machines and apparatus, having individual functions, not specified or included elsewhere in this chapter** |
| **8543 10 00** | **- Particle accelerators** |
| **8543 20 00** | **- Signal generators** |
| **8543 30** | **- Machines and apparatus for electroplating, electrolysis or electrophoresis** |
| **8543 30 40** | - - Electroplating and electrolysis machines of a kind used solely or principally for the manufacture of printed circuits |
| **8543 30 70** | - - Other |
| **8543 70** | **- Other machines and apparatus** |
| **8543 70 01** | - - Articles specifically designed for connection to telegraphic or telephonic apparatus or instruments or to telegraphic or telephonic networks |
| **8543 70 02** | - - Microwave amplifiers |
| **8543 70 03** | - - Cordless infrared remote control devices for video game consoles |
| **8543 70 04** | - - Digital flight-data recorders |
| **8543 70 04 10** | - - - For use in civil aircraft |
| **8543 70 04 90** | - - - Other |
| **8543 70 05** | - - Portable battery operated electronic readers for recording and reproducing text, still image or audio file |
| **8543 70 06** | - - Digital signal processing apparatus capable of connecting to a wired or wireless network for the mixing of sound |
| **8543 70 07** | - - Portable interactive electronic education devices primarily designed for children |
| **8543 70 08** | - - Plasma cleaner machines that remove organic contaminants from electron microscopy specimens and specimen holders |
| **8543 70 09** | - - Touch-Sensitive Data Input Devices (so-called touch screens) without display capabilities, for incorporation into apparatus having a display, which function by detecting the presence and location of a touch within the display area |
| **8543 70 10** | - - Electrical machines with translation or dictionary functions |
| **8543 70 30** | - - Aerial amplifiers |
| **8543 70 50** | - - Sunbeds, sunlamps and similar suntanning equipment |
| **8543 70 60** | - - Electric fence energisers |
| **8543 70 70** | - - Electronic cigarettes |
| **8543 70 90** | - - Other |
| **8543 70 90 05** | - - - Flight recorders, electric synchros and transducers, defrosters and demisters with electric resistors, for use in civil aircraft |
| **8543 70 90 10** | - - - Engine pressure indicators, for use in certain types of aircraft |
| **8543 70 90 15** | - - - Laminated electrochromic film consisting of: - two outer layers of polyester, - a middle layer of acrylic polymer and silicone, and - two electric connection terminals |
| **8543 70 90 20** | - - - Unit consisting of two junction field effect transistors contained in a dual lead frame housing |
| **8543 70 90 30** | - - - Amplifier, consisting of active and passive elements mounted on a printed circuit, contained in a housing |
| **8543 70 90 33** | - - - High-frequency amplifier comprising one or more integrated circuits and one or more discrete capacitor chips, whether or not with IPD (integrated passive devices) on a metal flange in a housing |
| **8543 70 90 34** | - - - Gallium nitride (GaN) high-frequency amplifier consisting of one or more discrete transistors, one or more discrete capacitor chips, whether or not with IPD (integrated passive devices) on a metal flange in a housing |
| **8543 70 90 35** | - - - Radio frequency (RF) modulator, operating with a frequency range of 43 MHz or more but not more than 870 MHz, capable of switching VHF and UHF signals, consisting of active and passive elements mounted on a printed circuit, contained in a housing |
| **8543 70 90 45** | - - - Piezo-electric crystal oscillator with a fixed frequency, within a frequency range of 1,8 MHz to 67 MHz, contained in a housing |
| **8543 70 90 55** | - - - Opto-electronic circuit comprising one or more light-emitting diodes (LEDs), whether or not equipped with an integrated driving circuit, and one photodiode with amplifier circuit, whether or not with an integrated logic gate arrays circuit or one or more light-emitting diodes and at least 2 photodiodes with an amplifier circuit, whether or not with an integrated logic gate arrays circuit or other integrated circuits, contained in a housing |
| **8543 70 90 60** | - - - Oscillator, with a centre frequency of 20 GHz or more but not more than 42 GHz, consisting of active and passive elements not mounted on a substrate, contained in a housing |
| **8543 70 90 63** | - - - Voltage controlled frequency generator, consisting of active and passive elements mounted on a printed circuit, contained in a housing with dimensions of not more than 30 x 30 mm |
| **8543 70 90 65** | - - - Audio recording and reproducing circuit, capable of stereo audio data storage and simultaneous record and playback, comprising 2 or 3 monolithic integrated circuits mounted on a printed circuit or a lead frame, contained in a housing |
| **8543 70 90 80** | - - - Temperature compensated oscillator, comprising a printed circuit on which are mounted at least a piezo-electric crystal and an adjustable capacitor, contained in a housing |
| **8543 70 90 85** | - - - Voltage controlled oscillator (VCO), other than temperature compensated oscillators, consisting of active and passive elements mounted on a printed circuit, contained in a housing |
| **8543 70 90 95** | - - - Mobile telephone view and control module comprising of:  - a mains power/ CAN (Controller area network) output socket,    - a Universal Serial Bus (USB) and Audio IN/OUT ports and    - incorporating a video switching device for the interface of smart phone operating systems with the Media Orientated Systems Transport network (MOST),  for use in the manufacture of vehicles of chapter 87 |
| **8543 70 90 99** | - - - Other |
| **8543 90 00** | **- Parts** |
| **8544** | **Insulated (including enamelled or anodised) wire, cable (including coaxial cable) and other insulated electric conductors, whether or not fitted with connectors; optical fibre cables, made up of individually sheathed fibres, whether or not assembled with electric conductors or fitted with connectors** |
|  | **- Winding wire** |
| **8544 11** | - - Of copper |
| **8544 11 10** | - - - Lacquered or enamelled |
| **8544 11 90** | - - - Other |
| **8544 19 00** | - - Other |
| **8544 20** | **- Coaxial cable and other coaxial electric conductors** |
| **8544 20 00 10** | - - PET/PVC insulated flexible cable with:   - a voltage of not more than 60 V,   - a current of not more than 1 A,   - a heat resistance of not more than 105 °C,   - individual wires of a thickness of not more than 0,1 mm (± 0,01 mm) and a width of not more than 0,8 mm (± 0,03 mm),   - a distance between conductors of not more than 0,5 mm and   - a pitch (distance from centreline to centreline of conductors) of not more than 1,25 mm |
| **8544 20 00 30** | - - Antenna connecting cable for the transmission of radio (AM/FM) signal and whether or not GPS signal, containing: - a coaxial cable, - two or more connectors, and - 3 or more plastic clips for attachment to the dashboard of a kind used in the manufacture of goods of Chapter 87 |
| **8544 20 00 90** | - - Other |
| **8544 30** | **- Ignition wiring sets and other wiring sets of a kind used in vehicles, aircraft or ships** |
| **8544 30 00 10** | - - For use in civil aircraft |
|  | - - Other |
| **8544 30 00 30** | - - - Multi-measurement wire harness of a voltage of 5V or more but not more than 90 V capable of measuring some or all of the following;   - a travel speed of not more than 24 km/h   - a motor speed of not more than 4 500 rpm   - hydraulic pressure of not more than 25 Mpa   - mass of not more than 50 metric tonnes for use in the manufacture of vehicles of heading 8427 |
| **8544 30 00 35** | - - - Wire harness: - with an operation voltage of 12 V, - wrapped in tape or covered in plastic convoluted tubing, - with 16 or more strand, with all terminals to be tin plated or equipped with connectors, for use in the manufacture of all-terrain or utility task vehicles |
| **8544 30 00 40** | - - - Wire harness of the steering system with an operating voltage of 12 V, equipped with connectors on both sides, having at least 3 plastic anchor clamps for mounting on a motor vehicle steering box |
| **8544 30 00 60** | - - - Four-core connecting cable containing two female connectors for the transmission of digital signals from navigation and audio systems to a USB connector, of kind used in the manufacture of goods of Chapter 87 |
| **8544 30 00 70** | - - - Multi-measurement wire harness:   - of a voltage of 5 V or more but not more than 90 V,   - capable of transmitting information for use in the manufacture of vehicles of heading 8711 |
| **8544 30 00 85** | - - - Extension two-core cable with two connectors, containing at least: - a rubber grommet, - a metal attachment bracket of a kind used to connect vehicle speed sensors in the manufacture of vehicles of Chapter 87 |
| **8544 30 00 89** | - - - Other |
|  | **- Other electric conductors, for a voltage not exceeding 1 000 V** |
| **8544 42** | - - Fitted with connectors |
| **8544 42 10** | - - - Of a kind used for telecommunications |
| **8544 42 90** | - - - Other |
| **8544 42 90 10** | - - - - Data transmission cable capable of a bit rate transmission of 600 Mbit/s or more, with:   - a voltage of 1,25 V (± 0,25 V)   - connectors fitted at one or both ends, at least one of which contains pins with a pitch of 1 mm,   - outer screening shielding, used solely for communication between LCD, PDP or OLED panel and video processing electronic circuits |
| **8544 42 90 20** | - - - - PET/PVC insulated flexible cable with:   - a voltage of not more than 60 V,   - a current of not more than 1 A,   - a heat resistance of not more than 105 °C,   - individual wires of a thickness of not more than 0,1 mm (± 0,01 mm) and a width of not more than 0,8 mm (± 0,03 mm),   - a distance between conductors of not more than 0,5 mm and   - a pitch (distance from centreline to centreline of conductors) of not more than 1,25 mm |
| **8544 42 90 40** | - - - - Wire harness of the steering system with an operating voltage of 12 V, equipped with connectors on both sides, having at least 3 plastic anchor clamps for mounting on a motor vehicle steering box |
| **8544 42 90 50** | - - - - Four-core connecting cable containing two female connectors for the transmission of digital signals from navigation and audio systems to a USB connector, of kind used in the manufacture of goods of Chapter 87 |
| **8544 42 90 65** | - - - - Extension two-core cable with two connectors, containing at least: - a rubber grommet, - a metal attachment bracket of a kind used to connect vehicle speed sensors in the manufacture of vehicles of Chapter 87 |
| **8544 42 90 70** | - - - - Electric conductors:   - of a voltage of not more than 80 V,   - with a length of not more than 120 cm,   - fitted with connectors, for use in the manufacture of hearing aids, accessory kits and speech processors |
| **8544 42 90 80** | - - - - 12-wire connecting cable containing two connectors - of a voltage of 5 V, - with a length of not more than 300 mm for use in the manufacture of goods of Chapter 87 |
| **8544 42 90 90** | - - - - Other |
| **8544 49** | - - Other |
| **8544 49 20** | - - - Of a kind used for telecommunications, for a voltage not exceeding 80 V |
|  | - - - Other |
| **8544 49 91** | - - - - Wire and cables, with individual conductor wires of a diameter exceeding 0,51 mm |
| **8544 49 91 10** | - - - - - Insulated copper electrical wires:   - with individual conductor wires of a diameter exceeding 0,51 mm.,   - for a voltage of not more than 1 000 V, for use in the manufacture of automotive cable harnesses |
| **8544 49 91 90** | - - - - - Other |
|  | - - - - Other |
| **8544 49 93** | - - - - - For a voltage not exceeding 80 V |
| **8544 49 93 10** | - - - - - - Elastomeric connector, of rubber or silicone, consisting of one or more conductor elements |
| **8544 49 93 20** | - - - - - - PET/PVC insulated flexible cable with:   - a voltage of not more than 60 V,   - a current of not more than 1 A,   - a heat resistance of not more than 105 °C,   - individual wires of a thickness of not more than 0,1 mm (± 0,01 mm) and a width of not more than 0,8 mm (± 0,03 mm),   - a distance between conductors of not more than 0,5 mm and   - a pitch (distance from centreline to centreline of conductors) of not more than 1,25 mm |
| **8544 49 93 30** | - - - - - - Electric conductors:   - of a voltage of not more than 80 V,   - of a platinum-iridium-alloy,   - coated with poly(tetrafluoroethylene),   - without connectors, for use in the manufacture of hearing aids, implants and speech processors |
| **8544 49 93 90** | - - - - - - Other |
| **8544 49 95** | - - - - - For a voltage exceeding 80 V but less than 1 000 V |
| **8544 49 99** | - - - - - For a voltage of 1 000 V |
| **8544 60** | **- Other electric conductors, for a voltage exceeding 1 000 V** |
| **8544 60 10** | - - With copper conductors |
| **8544 60 90** | - - With other conductors |
| **8544 70 00** | **- Optical fibre cables** |
| **8545** | **Carbon electrodes, carbon brushes, lamp carbons, battery carbons and other articles of graphite or other carbon, with or without metal, of a kind used for electrical purposes** |
|  | **- Electrodes** |
| **8545 11** | - - Of a kind used for furnaces |
| **8545 11 00 10** | - - - Graphite electrodes of a kind used for electric furnaces, with an apparent density of 1,65 g/cm³ or more and an electrical resistance of 6.0 μΩ.m or less |
| **8545 11 00 90** | - - - Other |
| **8545 19** | - - Other |
| **8545 19 00 20** | - - - Carbon electrodes, for use in the manufacture of zinc-carbon batteries |
| **8545 19 00 90** | - - - Other |
| **8545 20 00** | **- Brushes** |
| **8545 90** | **- Other** |
| **8545 90 10** | - - Heating resistors |
| **8545 90 90** | - - Other |
| **8545 90 90 10** | - - - Nipples used for graphite electrodes of a kind used for electric furnaces, with an apparent density of 1,65 g/cm³ or more and an electrical resistance of 6.0 μΩ.m or less |
| **8545 90 90 20** | - - - Carbon fibre paper of a kind used for gas diffusion layers in fuel cell electrodes |
| **8545 90 90 30** | - - - Roll of laminate foil of graphite and copper, with: - a width of 610 mm or more but not more than 620 mm, and - a diameter of 690 mm or more but not more than 710 mm, for use in the manufacture of lithium-ion electric rechargeable batteries |
| **8545 90 90 99** | - - - Other |
| **8546** | **Electrical insulators of any material** |
| **8546 10 00** | **- Of glass** |
| **8546 20 00** | **- Of ceramics** |
| **8546 90** | **- Other** |
| **8546 90 10** | - - Of plastics |
| **8546 90 90** | - - Other |
| **8547** | **Insulating fittings for electrical machines, appliances or equipment, being fittings wholly of insulating material apart from any minor components of metal (for example, threaded sockets) incorporated during moulding solely for purposes of assembly, other than insulators of heading 8546; electrical conduit tubing and joints therefor, of base metal lined with insulating material** |
| **8547 10** | **- Insulating fittings of ceramics** |
| **8547 10 00 10** | - - Insulated fitting of ceramics, containing by weight 90 % or more of aluminium oxide, metallised, in the form of a hollow cylindrical body of an external diameter of 20 mm or more but not more than 250 mm, for the manufacture of vacuum interrupters |
| **8547 10 00 90** | - - Other |
| **8547 20** | **- Insulating fittings of plastics** |
| **8547 20 00 10** | - - Polycarbonate or acrylonitrile butadiene styrene covers and cases for steering pad switches whether or not coated on the outside with a scratch resistant paint |
| **8547 20 00 90** | - - Other |
| **8547 90 00** | **- Other** |
| **8548** | **Waste and scrap of primary cells, primary batteries and electric accumulators; spent primary cells, spent primary batteries and spent electric accumulators; electrical parts of machinery or apparatus, not specified or included elsewhere in this chapter** |
| **8548 10** | **- Waste and scrap of primary cells, primary batteries and electric accumulators; spent primary cells, spent primary batteries and spent electric accumulators** |
| **8548 10 10** | - - Spent primary cells, spent primary batteries |
|  | - - Spent electric accumulators |
| **8548 10 21** | - - - Lead-acid accumulators |
| **8548 10 29** | - - - Other |
| **8548 10 29 10** | - - - - Spent lithium-ion or nickel metal hydride electric accumulators |
| **8548 10 29 90** | - - - - Other |
|  | - - Waste and scrap of primary cells, primary batteries and electric accumulators |
| **8548 10 91** | - - - Containing lead |
| **8548 10 99** | - - - Other |
| **8548 90** | **- Other** |
| **8548 90 20** | - - Memories in multicombinational forms such as stack D-RAMs and modules |
| **8548 90 30** | - - Light-emitting diode (LED) backlight modules, which are lighting sources that consist of one or more LEDs, and one or more connectors and are mounted on a printed circuit or other similar substrate, and other passive components, whether or not combined with optical components or protective diodes, and used as backlight illumination for liquid crystal displays (LCDs) |
| **8548 90 90** | - - Other |
| **8548 90 90 10** | - - - For use in certain types of aircraft |
|  | - - - Other |
| **8548 90 90 41** | - - - - Unit, consisting of a resonator operating within a frequency range of 1,8 MHz or more but not more than 40 MHz and a capacitor, contained in a housing |
| **8548 90 90 43** | - - - - Contact image sensor |
| **8548 90 90 44** | - - - - Parts of TV-apparatus, having micro-processor and video-processor functions, comprising at least a micro-controller and a video-processor, mounted on a leadframe and contained in a plastic housing |
| **8548 90 90 48** | - - - - Optical unit, containing at least - a laser diode and a photodiode operating at a typical wavelength of 635 nm or more but not more than 815 nm - an optical lens - a "Recording Photodetector Integrated Circuit" (PDIC) - a focussing and tracking actuator |
| **8548 90 90 60** | - - - - LCD modules,   - solely consisting of one or more TFT glass or plastic cells,   - not combined with touch screen facilities,   - with one or more printed circuits boards with control electronics for pixel addressing only,   - with or without backlight unit and   - with or without inverters |
| **8548 90 90 65** | - - - - LCD modules,   - solely consisting of one or more TFT glass or plastic cells,   - combined with touch screen facilities,   - with one or more printed circuits boards with control electronics for pixel addressing only,   - with or without backlight unit and   - with or without inverters |
| **8548 90 90 99** | - - - - Other |