## Chapter 81 Other Base Metals; Cermets; Articles Thereof

### Chapter Notes

1. Note 1 to Chapter 74, defining 'bars and rods', 'profiles', 'wire' and 'plates, sheets, strip and foil' applies,

"mutatis mutandis", to this chapter.

| Classification | Description |
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| **8101** | **Tungsten (wolfram) and articles thereof, including waste and scrap** |
| **8101 10** | **- Powders** |
|  | **- Other** |
| **8101 94** | - - Unwrought tungsten, including bars and rods obtained simply by sintering |
| **8101 96** | - - Wire |
| **8101 96 00 10** | - - - Tungsten wire containing by weight 99 % or more of tungsten with:   - a maximum cross-sectional dimension of not more than 50 µm   - a resistance of 40 Ohm or more but not more than 300 Ohm at length of 1 metre of a kind used in the production of heated car front windows |
| **8101 96 00 20** | - - - Tungsten wire - containing by weight 99,95 % or more of tungsten, and - with a maximum cross-sectional dimension of not more than 1,02 mm |
| **8101 96 00 90** | - - - Other |
| **8101 97** | - - Waste and scrap |
| **8101 99** | - - Other |
| **8101 99 10** | - - - Bars and rods, other than those obtained simply by sintering, profiles, plates, sheets, strip and foil |
| **8101 99 10 10** | - - - - Tungsten bars and rods for welding electrodes, containing 94 % or more by weight of tungsten, whether or not cut to length |
| **8101 99 10 90** | - - - - Other |
| **8101 99 90** | - - - Other |
| **8102** | **Molybdenum and articles thereof, including waste and scrap** |
| **8102 10** | **- Powders** |
| **8102 10 00 10** | - - Molybdenum powder with   - a purity by weight of 99 % or more and   - a particle size of 1,0 µm or more, but not more than 5,0 µm |
| **8102 10 00 90** | - - Other |
|  | **- Other** |
| **8102 94** | - - Unwrought molybdenum, including bars and rods obtained simply by sintering |
| **8102 95** | - - Bars and rods, other than those obtained simply by sintering, profiles, plates, sheets, strip and foil |
| **8102 96** | - - Wire |
|  | - - - Molybdenum wire, containing by weight at least 99,95 % of molybdenum, of which the maximum cross-sectional dimension exceeds 1,35 mm but does not exceed 4,0 mm |
| **8102 96 00 11** | - - - - Consigned from Malaysia |
| **8102 96 00 19** | - - - - Other |
| **8102 96 00 20** | - - - Molybdenum wire, containing by weight at least 99,95 % of molybdenum, of which the maximum cross-sectional dimension exceeds 4,0 mm but does not exceed 11,0 mm |
| **8102 96 00 30** | - - - Molybdenum wire, containing by weight 97 % or more but less than 99,95 % of molybdenum, of which the maximum cross-sectional dimension exceeds 1,35 mm but does not exceed 4,0 mm |
| **8102 96 00 40** | - - - Molybdenum wire, containing by weight 97 % or more but less than 99,95 % of molybdenum, of which the maximum cross-sectional dimension exceeds 4,0 mm but does not exceed 11,0 mm |
| **8102 96 00 98** | - - - Other |
| **8102 97** | - - Waste and scrap |
| **8102 99** | - - Other |
| **8103** | **Tantalum and articles thereof, including waste and scrap** |
| **8103 20** | **- Unwrought tantalum, including bars and rods obtained simply by sintering; powders** |
| **8103 30** | **- Waste and scrap** |
| **8103 90** | **- Other** |
| **8103 90 10** | - - Bars and rods, other than those obtained simply by sintering, profiles, wire, plates, sheets, strip and foil |
| **8103 90 90** | - - Other |
| **8103 90 90 10** | - - - Tantalum sputtering target with:   - a Copper-Chromium alloy backing plate,   - a diameter of 312 mm, and   - a thickness of 6,3 mm |
| **8103 90 90 90** | - - - Other |
| **8104** | **Magnesium and articles thereof, including waste and scrap** |
|  | **- Unwrought magnesium** |
| **8104 11** | - - Containing at least 99,8 % by weight of magnesium |
| **8104 19** | - - Other |
| **8104 20** | **- Waste and scrap** |
| **8104 30** | **- Raspings, turnings and granules, graded according to size; powders** |
|  | - - Magnesium powder with a particle size of 0,2 mm or more but not more than 0,8 mm |
| **8104 30 00 20** | - - - Of purity by weight of 98% or more, but not more than 99,5% |
| **8104 30 00 35** | - - - of purity by weight of more than 99,5 % |
| **8104 30 00 40** | - - - Other |
| **8104 30 00 90** | - - Other |
| **8104 90** | **- Other** |
| **8104 90 00 10** | - - Ground and polished magnesium sheets, of dimensions not more than 1500 mm x 2000 mm, coated on one side with an epoxy resin insensitive to light |
| **8104 90 00 90** | - - Other |
| **8105** | **Cobalt mattes and other intermediate products of cobalt metallurgy; cobalt and articles thereof, including waste and scrap** |
| **8105 20** | **- Cobalt mattes and other intermediate products of cobalt metallurgy; unwrought cobalt; powders** |
| **8105 30** | **- Waste and scrap** |
| **8105 90** | **- Other** |
| **8105 90 00 10** | - - Bars or wires made of cobalt alloy containing, by weight :   - 35 % (± 2 %) cobalt,   - 25 % (± 1 %) nickel,   - 19 % (± 1 %) chromium and   - 7 % (± 2 %) iron conforming to the material specifications AMS 5842, of a kind used in the aerospace industry |
| **8105 90 00 90** | - - Other |
| **8106** | **Bismuth and articles thereof, including waste and scrap** |
| **8106 00 10** | **- Unwrought bismuth; waste and scrap; powders** |
| **8106 00 90** | **- Other** |
| **8107** | **Cadmium and articles thereof, including waste and scrap** |
| **8107 20** | **- Unwrought cadmium; powders** |
| **8107 30** | **- Waste and scrap** |
| **8107 90** | **- Other** |
| **8108** | **Titanium and articles thereof, including waste and scrap** |
| **8108 20** | **- Unwrought titanium; powders** |
| **8108 20 00 10** | - - Titanium sponge |
| **8108 20 00 30** | - - Titanium powder of which 90 % by weight or more passes through a sieve with an aperture of 0,224 mm |
| **8108 20 00 40** | - - Titanium alloy ingot,   - with a height of 17,8 cm or more, a length of 180 cm or more and a width of 48,3cm or more,   - a weight of 680 kg or more, containing alloy elements by weight of::   - 3 % or more but not more than 6 % of aluminium   - 2,5 % or more but not more than 5 % of tin   - 2,5 % or more but not more than 4,5 % of zirconium   - 0,2 % or more but not more than 1 % of niobium   - 0,1 % or more but not more than 1 % of molybdenum 0,1 % or more but not more than 0,5 % of silicon |
| **8108 20 00 55** | - - Titanium alloy ingot, - with a height of 17,8 cm or more, a length of 180 cm or more, a width of 48,3 cm or more - a weight of 680 kg or more, containing alloy elements by weight of: - 3 % or more but not more than 7 % of aluminium, - 1 % or more but not more than 5 % of tin, - 3 % or more but not more than 5 % of zirconium, - 4 % or more but not more than 8 % of molybdenum |
| **8108 20 00 60** | - - Titanium alloy ingot,   - with a diameter of 63,5 cm or more and a length of 450 cm or more,   - a weight of 6350 kg or more, containing alloy elements by weight of:   - 5,5 % or more but not more than 6,7 % of aluminium,   - 3,7 % of more but not more than 4,9 % of vanadium |
| **8108 20 00 70** | - - Titanium alloy slab, with - a height of 20,3 cm or more, but not more than 23,3 cm, - a length of 246,1 cm or more, but not more than 289,6 cm, - a width of 40,6 cm or more, but not more than 46,7 cm, - a weight of 820 kg or more but not more than 965 kg, containing alloy elements by weight of: - 5,2 % or more but not more than 6,2 % of aluminium, - 2,5 % or more but not more than 4,8 % of vanadium |
| **8108 20 00 90** | - - Other |
| **8108 30** | **- Waste and scrap** |
| **8108 30 00 10** | - - Waste and scrap of titanium and titanium alloys, except those containing by weight 1 % or more but not more than 2 % of aluminium |
| **8108 30 00 90** | - - Other |
| **8108 90** | **- Other** |
| **8108 90 30** | - - Bars, rods, profiles and wire |
| **8108 90 30 10** | - - - Titanium alloy rods complying with standard EN 2002-1, EN 4267 or DIN 65040 |
| **8108 90 30 15** | - - - Rods and wire of an alloy of titanium with: - a uniform solid cross-section in the form of a cylinder, - with a diameter of 0,8 mm or more, but not more than 5 mm, - an aluminium content by weight of 0,3 % or more, but not more than 0,7 %, - a silicon content by weight of 0,3 % or more, but not more than 0,6 %, - a niobium content by weight of 0,1 or more, but not more than 0,3 %, and - an iron content by weight of not more than 0,2 % |
| **8108 90 30 25** | - - - Titanium-aluminium-vanadium alloy (TiAl6V4) bars, rods and wire, complying with AMS standards 4928, 4965 or 4967 |
| **8108 90 30 60** | - - - Forged cylindrical bars of titanium with:   - a purity of 99,995 % by weight or more,   - a diameter of 140 mm or more but not more than 200 mm,   - a weight of 5 kg or more but not more than 300 kg |
| **8108 90 30 70** | - - - Wire of an titanium alloy containing by weight:   - 22 % (± 1 %) of vanadium, and   - 4 % (± 0,5 %) of aluminium or   - 15 % (± 1 %) of vanadium,   - 3 % (± 0,5 %) of chromium,   - 3 % (± 0,5 % of tin and   - 3 % (± 0,5 %) of aluminium |
| **8108 90 30 90** | - - - Other |
| **8108 90 50** | - - Plates, sheets, strip and foil |
| **8108 90 50 45** | - - - Cold or hot rolled plates, sheets and strips of non-alloyed titanium with: - a thickness of 0,4 mm or more, but not more than 100 mm, - a length of not more than 14 m, and - a width of not more than 4 m |
| **8108 90 50 55** | - - - Plates, sheets, strip and foil of an alloy of titanium |
| **8108 90 50 80** | - - - Plates, sheets, strips and foil of non-alloyed titanium - of a width of more than 750 mm - of a thickness of not more than 3 mm |
| **8108 90 50 85** | - - - Strip or foil of non-alloyed titanium:   - containing more than 0,07 % by weight of oxygen (O@2),   - of a thickness of 0,4 mm or more but not more than 2,5 mm   - conforming to the Vickers hardness HV1 standard of not more than 170 of a kind used in the manufacture of welded tubes for nuclear power plant condensers |
| **8108 90 50 90** | - - - Other |
| **8108 90 60** | - - Tubes and pipes |
| **8108 90 60 10** | - - - Tubes and pipes, with attached fittings, suitable for conducting gases or liquids, for use in civil aircraft |
| **8108 90 60 20** | - - - Thin-walled tubes ready for use in ventilation and air-conditioning systems, for use in certain types of aircraft |
| **8108 90 60 30** | - - - Seamless tubes and pipes of a titanium or an alloy of titanium with: - a diameter of 19 mm or more but not more than 159 mm, - a wall thickness of 0,4 mm or more but not more than 8 mm, and - a maximum length of 18 m |
| **8108 90 60 90** | - - - Other |
| **8108 90 90** | - - Other |
| **8108 90 90 10** | - - - Self-locking bolts and nuts (of the type "Hi-lok") |
| **8108 90 90 30** | - - - Parts of spectacle frames and mountings, including   - temples,   - blanks of a kind used for the manufacture of spectacle parts and   - bolts of the kind used for spectacle frames and mountings, of a titanium alloy |
|  | - - - Other |
| **8108 90 90 91** | - - - - Bolts, nuts, screws, rivets and similar articles complying with US standards, for use in certain types of aircraft |
| **8108 90 90 99** | - - - - Other |
| **8109** | **Zirconium and articles thereof, including waste and scrap** |
| **8109 20** | **- Unwrought zirconium; powders** |
| **8109 20 00 10** | - - Non-alloy zirconium sponges or ingots, containing by weight more than 0,01 % of hafnium for use in the manufacture of tubes, bars or ingots enlarged by remelting for the chemical industry |
| **8109 20 00 90** | - - Other |
| **8109 30** | **- Waste and scrap** |
| **8109 90** | **- Other** |
| **8110** | **Antimony and articles thereof, including waste and scrap** |
| **8110 10** | **- Unwrought antimony; powders** |
| **8110 10 00 10** | - - Antimony in the form of ingots |
| **8110 10 00 90** | - - Other |
| **8110 20** | **- Waste and scrap** |
| **8110 90** | **- Other** |
| **8111** | **Manganese and articles thereof, including waste and scrap** |
|  | **- Unwrought manganese; waste and scrap; powders** |
| **8111 00 11** | - - Unwrought manganese; powders |
| **8111 00 19** | - - Waste and scrap |
| **8111 00 90** | **- Other** |
| **8112** | **Beryllium, chromium, germanium, vanadium, gallium, hafnium, indium, niobium (columbium), rhenium and thallium, and articles of these metals, including waste and scrap** |
|  | **- Beryllium** |
| **8112 12** | - - Unwrought; powders |
| **8112 13** | - - Waste and scrap |
| **8112 19** | - - Other |
|  | **- Chromium** |
| **8112 21** | - - Unwrought; powders |
| **8112 21 10** | - - - Alloys containing more than 10 % by weight of nickel |
| **8112 21 90** | - - - Other |
| **8112 22** | - - Waste and scrap |
| **8112 29** | - - Other |
|  | **- Thallium** |
| **8112 51** | - - Unwrought; powders |
| **8112 52** | - - Waste and scrap |
| **8112 59** | - - Other |
|  | **- Other** |
| **8112 92** | - - Unwrought; waste and scrap; powders |
| **8112 92 10** | - - - Hafnium (celtium) |
|  | - - - Niobium (columbium); rhenium; gallium; indium; vanadium; germanium |
| **8112 92 21** | - - - - Waste and scrap |
|  | - - - - Other |
| **8112 92 31** | - - - - - Niobium (columbium); rhenium |
| **8112 92 81** | - - - - - Indium |
| **8112 92 89** | - - - - - Gallium |
| **8112 92 91** | - - - - - Vanadium |
| **8112 92 95** | - - - - - Germanium |
| **8112 99** | - - Other |
| **8112 99 20** | - - - Hafnium (celtium); germanium |
| **8112 99 20 10** | - - - - Hafnium (celtium) |
| **8112 99 20 90** | - - - - Germanium |
| **8112 99 30** | - - - Niobium (columbium); rhenium |
| **8112 99 30 10** | - - - - Alloy of niobium (columbium) and titanium, in the form of bars and rods |
| **8112 99 30 90** | - - - - Other |
| **8112 99 70** | - - - Gallium; indium; vanadium |
| **8113** | **Cermets and articles thereof, including waste and scrap** |
| **8113 00 20** | **- Unwrought** |
| **8113 00 40** | **- Waste and scrap** |
| **8113 00 90** | **- Other** |
| **8113 00 90 10** | - - Carrier plate of aluminium silicon carbide (AlSiC-9) for electronic circuits |
| **8113 00 90 20** | - - Cuboid spacer made of aluminium silicon carbide (AlSiC) composite used for packaging in IGBT-modules |
| **8113 00 90 90** | - - Other |