81.03 - 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

Tantalum is mainly extracted from the ores tantalite and niobite (columbite) (heading 26.15), by reduction of the oxide or by electrolysis of fused tantalum-potassium fluoride.

It may be obtained as a compact metal, or as a powder for sintering like tungsten or molybdenum.

Tantalum powder is black. In other forms it is white when polished and steel blue when unpolished. It is very malleable and ductile when pure. It is unusually resistant to corrosion, including the action of most acids.

Tantalum is used in the manufacture of the carbide, and (as ferro-tantalum, see Chapter 72) in preparing alloy steels. It is also used to make grids and anodes for electronic valves, current rectifiers, crucibles, heat-exchangers and other chemical apparatus, spinnerets for extruding man-made fibres, dental instruments and surgical tools. It is also used for bone-fixation, etc., in surgery, and in the manufacture of getters (to remove the last traces of gas in radio valve manufacture).

Tantalum alloys which may be classified here in accordance with Note 5 to Section XV include tantalum-tungsten alloys with a high tantalum content used, for example, in electronic valve manufacture.

The heading covers tantalum in all its forms, viz. : powder, blocks, waste and scrap; bars, wire, filaments; sheets, strip, foil; profiles; tubes and other manufactures (e.g., springs and wire cloth) **not** more specifically **covered** elsewhere.

The classification of tantalum carbide follows that of tungsten carbide (see the Explanatory Note to heading 81.01).