81.13 - Cermets and articles thereof, including waste and scrap.

Cermets contain both a ceramic constituent (resistant to heat and with a high melting point) and a metallic constituent. The manufacturing processes used in the production of these products, and also their physical and chemical properties, are related both to their ceramic and metallic constituents, hence their name **cermets**.

The ceramic constituent usually consists of oxides, carbides, borides, etc.

The metal component consists of a metal such as iron, nickel, aluminium, chromium or cobalt.

Cermets are made by sintering, by dispersion or by other processes.

The most important cermets are obtained from :

(1) A metal and an oxide, e.g., iron-magnesium oxide; nickel-magnesium oxide; chromium-aluminium oxide; aluminium-aluminium oxide.

(2) Zirconium or chromium borides; these products are known as borolites.

(3) Zirconium, chromium, tungsten, etc. carbides with cobalt, nickel or niobium.

(4) Boron carbide and aluminium : aluminium-clad products known as boral cermets.

The heading covers cermets, whether unwrought or in the form of articles not elsewhere specified in the Nomenclature.

Cermets are used in the aircraft and nuclear industries and in missiles. They are also used in furnaces and metal foundries (e.g., as pots, spouts, tubes), in the manufacture of bearings, brake-linings, etc.

The heading **excludes** :

(a) Cermets containing fissile or radioactive substances (**heading 28.44**).

(b) Plates, sticks, tips and the like for tools, of cermets with a basis of metal carbides agglomerated by sintering (**heading 82.09**).
