28.19 - Chromium oxides and hydroxides.

2819.10 - Chromium trioxide

2819.90 - Other

(A) CHROMIUM OXIDES

(1) **Chromium trioxide** (chromium (VI) oxide) or chromic anhydride (CrO_3) (wrongly known as " chromic acid ", because it can give the chromates of heading 28.41). Orange or red slabs or needles; deliquescent; very soluble in water; specific gravity about 2.8. When combined with alcohol it gives explosive mixtures. An oxidising agent in organic chemistry (manufacture of isatin, indigo dyes, etc.); also used in medicine and, when mixed with kieselguhr (" epurite "), for purifying acetylene.

(2) **Dichromium trioxide**, chromium (III) oxide (chromium sesquioxide) (Cr_2O_3). Obtained by calcining chromates with an ammonium salt or by reducing dichromates. A very hard, olive green product, in powder or in crystals; insoluble in water; specific gravity about 5. The pure oxide is used as a pigment known as " chromium oxide green ", not to be confused with mixtures of lead chromate and iron blues known as " chrome green ". It is also used for the preparation of paints and printing inks, and in the porcelain, glass (coloured optical glass) or rubber industries. Because of its hardness and its resistance to heat, it serves for the preparation of abrasive compounds and refractory bricks for metal furnaces. It is also used for obtaining anti-rust products, and in chromium metallurgy.

Chromite, natural chromium oxide containing iron (chrome iron ore, iron chromite) is **excluded** (**heading 26.10**).

(B) CHROMIUM HYDROXIDES

The term " chromium hydroxide " applies to the various hydrates of the oxides described above and, in particular, the green hydrate of chromic oxide ($Cr_2O_3.2H_2O$), obtained by treating potassium dichromate with boric acid; this is used as colouring matter under the name of " chrome green " or in the manufacture of Guignet's green. There is also a violet chromium hydroxide.