28.52 - Inorganic or organic compounds of mercury, whether or not chemically defined, excluding amalgams.

2852.10 - Chemically defined

2852.90 - Other

This heading covers inorganic or organic compounds of mercury, whether or not chemically defined, other than amalgams. The most common compounds of mercury are listed below :

(1) **Mercury oxides**. Mercuric oxide (HgO) is the most important oxide of mercury. It can exist as a bright-red crystalline powder (**red oxide**) or as a denser orange-yellow amorphous powder (**yellow oxide**). These oxides are toxic and turn black on exposure to light. They are used in the preparation of marine paints or mercury salts, and as catalysts.

(2) **Mercury chlorides**.

(a) **Mercurous chloride** (calomel) (Hg_2Cl_2). Can exist as amorphous masses, as a powder or in white crystals; insoluble in water. Mercurous chloride is used also in pyrotechnics, in the porcelain industry, etc.

(b) **Mercuric chloride** (mercury dichloride, corrosive sublimate) ($HgCl_2$). Crystallises in prisms or long white needles. Soluble in water (especially when hot); a violent poison. It is used for "bronzing" iron, for impregnating wood to render it fire-proof, as an intensifier in photography, as a catalyst in organic chemistry and in the manufacture of mercuric oxide.

(3) **Mercury iodides**.

(a) **Mercurous iodide** (HgI or Hg_2I_2). Powder, usually amorphous but sometimes crystalline; usually yellow but sometimes greenish or reddish; sparingly soluble in water and very toxic. It is used in organic synthesis.

(b) **Mercuric iodide** (mercury di-iodide, red iodide) (HgI_2). Crystalline red powder, almost insoluble in water, very toxic. Used in photography (as an intensifier) and in analysis.

(4) **Mercury sulphides**. Artificial mercury sulphide (HgS) is black. When sublimed or heated with alkali polysulphides, black sulphide is transformed into a red powder (red mercury sulphide, artificial vermilion), used as a pigment for paints or sealing wax. The product obtained by the wet process is shinier but does not resist the action of light so well. This salt is toxic.

Natural mercury sulphide (cinnabar, natural vermilion) is **excluded** (**heading 26.17**).

(5) **Mercury sulphates**.

(a) **Mercurous sulphate** (Hg_2SO_4). White crystalline powder, decomposed by water into basic sulphate. Employed in the preparation of calomel and of standard electric cells.

(b) **Mercuric sulphate** ($HgSO_4$). White, anhydrous and crystalline masses, turning black in the light, or hydrated crystalline flakes (with 1 H_2O). Used for preparing mercuric chloride or other mercuric salts, in gold or silver metallurgy, etc.

(c) **Trimercury dioxide sulphate** ($HgSO_4.2HgO$) (basic mercury sulphate).

(6) **Mercury nitrates**.

(a) **Mercurous nitrate** ($HgNO_3.H_2O$). Poisonous. Colourlesscrystals. Used in gilding; in medicine; by hatters for the carroting of hair before the felting operation (hatters' *aqua fortis*); for preparing mercurous acetate, etc.

(b) **Mercuric nitrate** ($Hg(NO_3)_2$). Hydrated salt (generally with 2 H_2O). Colourless crystals, or white or yellowish slabs, deliquescent and toxic. Used in hat-making and gilding. Also used as a nitration aid, and as a catalyst in organic synthesis, in the preparation of mercury fulminate or mercuric oxide, etc.

(c) **Basic mercury nitrates**.

(7) **Mercury cyanides**.

(a) **Mercuric cyanide** ($Hg(CN)_2$).

(b) **Mercuric cyanide oxide** ($Hg(CN)_2.HgO$).

(8) **Cyanomercurates of inorganic bases**. Potassium cyanomercurate. Colourless crystals, soluble in water and toxic. Used for silvering mirrors.

(9) **Mercury fulminate** (presumably $Hg(ONC)_2$). White or yellowish crystals, needle-shaped, soluble in boiling water, poisonous. Gives off red fumes when exploding. Presented in non-metallic containers filled with water.

(10) **Mercuric thiocyanate** ($Hg(SCN)_2$). White crystalline powder, sparingly soluble in water. Poisonous salt used in photography to intensify negatives.

(11) **Mercury arsenates**. Mercuric orthoarsenate ($Hg_3(AsO_4)_2$). Pale yellow powder, insoluble in water. Used in anti-fouling paints.

(12) **Double or complex salts.**

(a) **Chloride of ammonium with mercury (ammonium mercuric chloride** or **ammonium chloromercurate**). White crystalline powder, relatively soluble in hot water; toxic. Used in pyrotechnics.

(b) **Copper mercury iodide**. A dark red powder, insoluble in water and toxic. Used in thermoscopics.

(13) **Aminomercuric chloride** ($HgNH_2Cl$). White powder, turning greyish or yellowish on exposure to light; insoluble in water; poisonous. Used in pyrotechnics.

(14) **Mercury lactate**, salt of lactic acid.

(15) **Organo-inorganic mercury compounds.** These may contain one or more mercury atoms, in particular the (–Hg.X) group in which X is an inorganic or organic acid residue.

(a) **Diethylmercury**.

(b) **Diphenylmercury**.

(c) **Phenylmercury acetate**.

(16) **Hydromercuridibromofluorescein**.

(17) **Mercury compounds, not chemically defined** (tannates of mercury, albuminates of mercury, nucleoproteids of mercury, etc.).

The heading **does not include** :

(a) Mercury (**heading 28.05** or **Chapter 30**).

(b) Amalgams of precious metals, amalgams containing both precious metals and base metals (**heading 28.43**) and amalgams wholly of base metal (**heading 28.53**).