28.15 - Sodium hydroxide (caustic soda); potassium hydroxide (caustic potash); peroxides of sodium or potassium.

- Sodium hydroxide (caustic soda) :

2815.11 - - Solid

2815.12 - - In aqueous solution (soda lye or liquid soda)

2815.20 - Potassium hydroxide (caustic potash)

2815.30 - Peroxides of sodium or potassium

(A) SODIUM HYDROXIDE (CAUSTIC SODA)

Sodium hydroxide (caustic soda) (NaOH) should not be confused with commercial soda, which is sodium carbonate (**heading 28.36**).

Sodium hydroxide is obtained, for example, by causticising sodium carbonate with milk of lime or by electrolysing sodium chloride. It may be presented as an aqueous solution or an anhydrous solid. Evaporation of the sodium hydroxide aqueous solution produces solid sodium hydroxide in the form of flakes or lumps. The pure product is presented in pellets or cubes in glass jars.

Solid sodium hydroxide attacks the skin and destroys the mucous membranes. It is deliquescent and very soluble in water; it must therefore be kept in well-sealed steel containers.

It is a powerful base with many industrial uses : preparation of certain chemical wood pulps by elimination of the lignin, manufacture of regenerated cellulose, mercerising of cotton, tantalum or niobium metallurgy, production of hard soaps, manufacture of many chemical products, including phenolic compounds (phenol, resorcinol, alizarin, etc.).

The heading **excludes** residual lyes (soda lyes) obtained as residual products from the manufacture of wood pulp by the alkali or sulphate processes (**heading 38.04**); from these lyes the tall oil of **heading 38.03** can be obtained and sodium hydroxide regenerated.

The heading also **excludes** the mixtures of sodium hydroxide and lime known as " soda lime " (**heading 38.24**).

(B) POTASSIUM HYDROXIDE (CAUSTIC POTASH)

Potassium hydroxide (caustic potash) (KOH) is very similar to the sodium hydroxide described above. It must be distinguished from potassium carbonate (**heading 28.36**) or commercial potash (a name applied loosely in certain countries to any potassium salt, particularly the chloride).

It is usually obtained by electrolysing solutions of natural potassium chloride (heading 31.04), but can also be obtained from potassium carbonate by causticising with milk of lime (giving " lime potash "). Pure potassium hydroxide is obtained by treatment with alcohol, or by double decomposition of barium hydroxide and potassium sulphate.

Potassium hydroxide may be presented as an aqueous solution (potash lye), more or less highly concentrated (usually around 50 %), or as a solid containing (amongst other impurities) potassium chloride. It is stored in the same way as sodium hydroxide and has similar properties.

It is used in the manufacture of soft soaps, for pickling of parts to be metallised or repainted, for bleaching, in the manufacture of potassium permanganate, etc. It is also used in medicine as a cauterising agent (in sticks), for this purpose it is sometimes mixed with lime and is then classified in **heading 30.03** or **30.04**.

(C) **SODIUM PEROXIDE**

Sodium peroxide (disodium dioxide) (Na_2O_2), obtained by combustion of sodium, is a very deliquescent white or yellowish powder, specific gravity about 2.8. It is decomposed by water, generating heat and forming hydrogen peroxide. It is also presented in the form of cakes packed in welded metal containers.

It is used in soap manufacture, for bleaching fabrics, as an oxidising agent in organic synthesis, or for purifying confined air (e.g., in submarines). When mixed with catalysts (traces of copper or nickel salts, etc.) for rapid production of hydrogen peroxide, it constitutes a preparation of **heading 38.24**.

(D) **POTASSIUM PEROXIDE**

Potassium peroxide (dipotassium dioxide) (K_2O_2) is very similar to sodium peroxide as regards manufacturing processes, properties and uses.