29.10 - Epoxides, epoxyalcohols, epoxyphenols and epoxyethers, with a three-membered ring, and their halogenated, sulphonated, nitrated or nitrosated derivatives.

2910.10 - Oxirane (ethylene oxide)

2910.20 - Methyloxirane (propylene oxide)

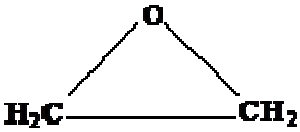
2910.30 - 1-Chloro-2,3-epoxypropane (epichlorohydrin)

2910.40 - Dieldrin (ISO, INN)

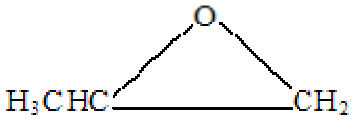
2910.90 - Other

If one molecule of water is removed from organic compounds (diols, glycols) having two hydroxyl groups in the molecule, stable internal ethers are formed.

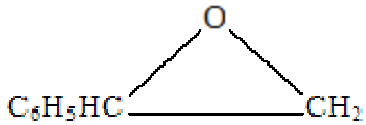
Thus ethylene glycol minus one molecule of water gives **oxirane (ethylene oxide or epoxyethane)** :



The epoxide derived from propylene glycol (i.e., ethylene glycol in which one atom of hydrogen has been replaced by a methyl radical ($-CH_3$) is known as **methyloxirane (1,2-epoxypropane or propylene oxide)** :



The epoxide derived from ethylene glycol in which one atom of hydrogen has been replaced by a phenyl radical ($-C_6H_5$) is known as **styrene oxide** (α- *β*-**epoxyethylbenzene**) :



This heading covers **only** compounds with three-membered epoxy rings, e.g. :

(1) **Oxirane** (ethylene oxide). Colourless gas at room temperature; liquid below 12 ºC. Obtained by catalytic oxidation of ethylene derived from cracking gases. An insecticide and fungicide; extensively used for preserving fruit and other foodstuffs. Also used in organic synthesis, and in the manufacture of plasticisers and surface-active products.

(2) **Methyloxirane** (propylene oxide). Colourless liquid with an ether-like odour; used as a solvent for cellulose nitrate, cellulose acetate, gums and resins, and as an insecticide; also employed in organic synthesis (plasticisers and surface-active products, etc.).

29.10

(3) **Styrene oxide**.

This heading also includes :

(A) **Epoxyalcohols, epoxyphenols** and **epoxyethers**. These contain alcohol, phenol and ether functions, respectively, in addition to the epoxide grouping.

(B) **Halogenated, sulphonated, nitrated or nitrosated derivatives of epoxides**, and any combinations of these derivatives (for example, nitrosulphonated, sulphohalogenated, nitrohalogenated and nitrosulphohalogenated derivatives).

These halogenated derivatives include : **1-chloro-2,3-epoxypropane** (epichlorohydrin), a highly volatile, unstable liquid.

This heading **excludes** epoxides with four-membered rings (**heading 29.32**).