28.07 - Sulphuric acid; oleum.

(A) SULPHURIC ACID

Sulphuric acid (H_2SO_4) is mainly obtained by passing oxygen and sulphur dioxide over a catalyst (platinum, ferric oxide, vanadium pentoxide, etc.). It is freed from impurities (nitrogen compounds, arsenical or seleniferous products, lead sulphate) by treatment with hydrogen sulphide or ammonium sulphide.

Sulphuric acid is a very strong corrosive. It is a dense, oily liquid, colourless (if it does not contain impurities) or yellow or brown (in other cases). It reacts violently on contact with water and destroys the skin and most organic substances by carbonising them.

Commercial sulphuric acid contains between 77 and 100 % H_2SO_4. It is presented in containers or carboys of glass, in steel drums, tank trucks, railway tank wagons or tank ships.

This acid is used in a great number of industries : it is used in particular in the preparation of fertilisers, explosives and inorganic pigments and, *inter alia*, in the petroleum and steel industries.

(B) OLEUM

Oleum (fuming sulphuric acid) is sulphuric acid charged with an excess (up to 80 %) of sulphur trioxide. Oleums can be liquid or solid, very brown in colour; they react violently with water, attack the skin and clothing, give off dangerous fumes (in particular, free sulphur trioxide). They are presented in glass, earthenware or sheet iron containers.

Oleum is largely used in sulphonation reactions in organic chemistry (preparation of naphthalenesulphonic acid, hydroxyanthraquinone, thioindigo, alizarin derivatives, etc.).

The heading **does not include** :

(a) Chlorosulphuric acid (" sulphuric chlorohydrin ") and sulphonitric acid (**headings 28.06** and **28.08**, respectively).

(b) Sulphur trioxide, hydrogen sulphide, peroxosulphuric (persulphuric) acids, sulphamic acid and the mineral acids of the thionic series (polythionic acids) (**heading 28.11**).

(c) Thionyl or sulphuryl chlorides (**heading 28.12)**.