29.11 - Acetals and hemiacetals, whether or not with other oxygen function, and their halogenated, sulphonated, nitrated or nitrosated derivatives.

(A) ACETALS AND HEMIACETALS

Acetals may be regarded as di-ethers of (normally hypothetical) hydrates of aldehydes and ketones.

Hemiacetals are mono-ethers in which the carbon-atom adjacent to the ether-oxygen atom also bears a hydroxyl group.

" Acetals and hemiacetals with other oxygen function " are acetals and hemiacetals containing one or more of the oxygen functions (e.g., alcohol function) referred to in the previous headings of this Chapter.

(1) **Methylal** ($CH_2(OCH_3)_2$). Dimethyl ether of the hypothetical hydrate of formaldehyde. Colourless liquid with an ether-like odour; used as a solvent, as an anaesthetic and in organic synthesis.

(2) **Dimethylacetal** ($CH_3CH(OCH_3)_2$). Dimethyl ether of the hypothetical hydrate of acetaldehyde; used as an anaesthetic.

(3) **Diethylacetal** ($CH_3CH(OC_2H_5)_2$). Also derived from the hypothetical hydrate of acetaldehyde. A colourless liquid with an agreeable ether-like odour; used as a solvent and as an anaesthetic.

The heading **excludes** polyvinyl acetals (**heading 39.05**).

(B) HALOGENATED, SULPHONATED, NITRATED OR NITROSATED DERIVATIVES OF ACETALS AND HEMIACETALS

These are compounds obtained by wholly or partly replacing one or more of the hydrogen atoms in the acetal by halogens (e.g., chloral alcoholate, chloropropyl acetal), sulpho groups ($-SO_3H$), nitro groups ($-NO_2$) or nitroso groups ($-NO$).

This heading also covers any combinations of these derivatives (for example, nitrohalogenated, nitrosulphonated, sulphohalogenated and nitrosulphohalogenated derivatives).