IS 517:2020 Methanol (Methyl alcohol) – Ensuring Safe and High Quality Methanol for Consumer Use

Methanol also known as Methyl alcohol is toxic, volatile, colourless, flammable liquid. The chemical formula is CH_3OH. It is used as a solvent, alternate fuel source, in the production of other compounds. Methanol has an odour that is similar to ethyl alcohol, but is a **dangerous poison**; many cases of **blindness or death** have been caused by drinking mixtures containing it.

Consumers expect methanol to meet certain quality standards for safe and effective use. High purity is important, as impurities can affect its performance and lead to unintended reactions. Low water content is also essential to maintain its potency, as excess moisture can dilute methanol's effectiveness as a solvent or fuel additive. Safety is a major concern due to its toxicity.. Additionally, methanol should be chemically stable to prevent changes in quality during storage, and it requires secure, leak-proof packaging to handle its flammability safely.

IS 517:2020 ensures that methanol meets these quality and safety expectations. The standard specifies purity requirements to enhance its effectiveness in industrial applications and minimizes harmful impurities. As per specification, there are two grades of the material, namely: (a) Methanol, pure; and (b) Methanol, technical. **High purity methanol** required for the **manufacture of antibiotics** was also taken care of by prescribing **additional requirements** like 'Acidity as acetic acid', 'Aldehydes and ketones as acetone' and 'Residue on evaporation'. It also defines acceptable 'water content' to preserve methanol's strength, and it includes **guidelines for handling and storage** to ensure stability. To **reduce health and safety risks**, the standard imposes strict limits on toxic contaminants and mandates secure packaging to prevent leaks.

By following standards, IS 517:2020 protects consumers and industrial users by addressing the toxic and flammable nature of methanol, ensuring that the product is as safe as possible when handled, stored, and used appropriately.