



Acetone (IS 170: 2020)

Acetone is an important commercial solvent and raw material with a wide usage in the pharmaceutical, chemical, explosives, paints and lacquer industry. It has a sweet, fruity odor and is highly flammable. It is commonly used as a solvent for cellulose acetate, nitrocellulose, celluloid, cellulose ether, chlorinated rubber, various resins, fats and oils, and as an absorbent for acetylene.

It is being increasingly used in the synthesis of number of chemicals, such as di acetone alcohol, methyl isobutyl ketone, phorone, isophorone, methyl methocrylate, isopropyl alcohol and certain resins, pharmaceuticals and perfumes.

The Indian Standard **IS 170:2020**, specifies the requirement, methods of sampling and test for acetone intended for **industrial purposes**.

Key specifications include a minimum **Purity** of 99.70%, **Relative density** 0.784 to 0.786, **Water content** restricted to 0.4% max with **Benzene content** 2.0 mg/Kg max and **Methanol content** 300mg/Kg max.

Acetone shall be clear and free from any suspended matter & consist essentially of 2-propanone or dimethyl ketone (CH_3COCH_3) and shall show no turbidity on mixing with distilled water in any proportion at 27 ± 2 °C.

Packaging clause mentions requirements for retail as well as bulk packing. The material shall be packed in amber coloured or dark blue glass or aluminum bottles equipped with tight fitting caps or airtight screw or screw caps or as agreed to between the purchaser and the supplier with mandatory labeling indicating Product name, Manufacturer, Net, gross and tare mass. Recognized trade-mark, if any; and Date of packing. etc. Each container shall also be marked with the minimum cautionary notice worded as 'FLAMMABLE'. It shall also bear the corresponding symbol for labelling of dangerous goods. The material shall be supplied in sound and clean containers according to the marking and delivery instructions given in IS 7445 or by the purchaser by abiding safety guidelines to ensure failsafe system.

Safety : Generally considered low toxicity, but can cause irritation to skin, eyes, and respiratory system at high concentrations.

Ministry of Chemicals and Fertilizers (Department of Chemicals and Petrochemicals) Quality Control Order mandates that Acetone sold, manufactured, or imported in India comply with IS 170.