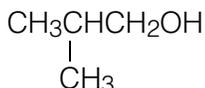


Isobutanol

Technical Data Sheet

March 1998

Formula:..... C₄H₁₀O
Molecular Weight 74.1
Product Number 526222
CAS Registry Number:..... 78-83-1



Description

Isobutanol is a clear, mobile, neutral liquid with a characteristic odor. It is miscible with all common solvents, e.g., alcohols, ketones, aldehydes, ethers, glycols, and aromatic and aliphatic hydrocarbons, but is only sparingly soluble in water.

Safety

Isobutanol may irritate the skin and eyes. Inhalation of vapors or mists may irritate the respiratory tract and may cause a narcotic effect.

Always refer to the Material Safety Data Sheet (MSDS) for detailed information on safety.

Applications

A large part of the isobutanol produced is converted into derivatives (primarily esters) for use as solvents in the coatings industry.

Isobutanol is an eminently suitable solvent for acid-curable lacquers and baking finishes derived from urea (Plastopal), melamine (Luwipal), or phenolic resins.

When added even in small proportions to alkyd resin paints, isobutanol reduces the viscosity, and thus improves the brushability and flow.

Customer Service:

EAST 1-800-426-8696
WEST 1-800-543-1740

| Product Specifications | Value | Test Method |
|------------------------------------|-------|-------------|
| Assay, wt. % minimum | 99.5 | GLC |
| Water, wt. % maximum | 0.05 | ASTM D 1364 |
| Acidity, as acetic acid, % maximum | 0.003 | ASTM D 1613 |
| Color, Pt-Co units, maximum | 5 | ASTM D 1209 |

Physical Properties

| | |
|--|---------------------|
| Specific gravity @ 20/20°C | 0.802 – 0.804 |
| Distillation Range @ 760 mm Hg, °C | 106 – 108 |
| Appearance | clear and colorless |

Diisobutyl phthalate (DIBP) is an established plasticizer for plastics, dispersions and rubber mixes. Other isobutyl esters of dicarboxylic acids, e.g., adipic, azelaic and sebacic acids, display good properties in this application, but economic considerations preclude their use.

The applications in which isobutanol can be used are as follows:

- solvent for printing inks
- extractant in the production of drugs and natural substances such as antibiotics, hormones, vitamins, alkaloids and camphor
- additive in polishes and cleaners, e.g., floor cleaners and stain removers
- solubilizer in the textile industry, e.g., additive in spinning baths or carrier for coloring plastics
- additive in deicing fluids
- antiicing additive in gasoline
- mobile phase in paper and thin-layer chromatography
- humectant for cellulose nitrate

- dehydrating agent (entrainer in azeotropic distillation)
- feedstock in the production of glycol ethers (in reactions with ethylene or propylene oxide)
- feedstock for the production of isobutyl acrylate, which is used in dispersions
- feedstock in the production of flotation aids, e.g., isobutyl xanthate
- starting material for the production of wear inhibitors and anticorrosion additives in engine oils, e.g., zinc diisobutyl dithiophosphate

Packaging

Available in bulk quantities only.

Storage & Handling

Isobutanol can be stored in tanks of normal carbon steel (e.g. A 283 grade). In this case, however, steps must be taken to exclude moisture from the atmosphere, as otherwise the product quality may be impaired (increase in moisture content; and discoloration by rust in steel tanks).

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Isobutanol can corrode aluminum at temperatures above 60°C. Consequently, it should never be stored, except at low temperatures, in tanks constructed from aluminum and its alloys.

If severe demands are imposed on the quality of the isobutanol, we recommend that it be stored in stainless steel (e.g. 18Cr 9Ni) tanks.

Drums containing the product should be kept tightly closed in a well-ventilated place.

Always refer to the Material Safety Data Sheet (MSDS) for detailed information on handling and disposal.

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