

n-Butanol

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Technical Data Sheet

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BASF
The Chemical Company

Formula C₄H₁₀O
Molecular Weight 74.1
PRD Number 30034729
CAS Registry Numbers 71-36-3

Description

n-Butanol is a clear, colorless, mobile and neutral liquid with a characteristic odor. It is miscible with all common solvents but is only sparingly soluble in water.

Packaging

Available only in bulk.

Product Specifications	Value	Test Method
Assay, wt. %, min.	99.8	GC
Isobutanol, wt. %, max.	0.1	GC
Di-n-butyl ether, wt. %, max.	0.02	GC
Butyraldehydes, wt. %, max.	0.05	GC
Water, wt. %, max.	0.05	ASTM D-1364
Color, Pt-Co Units, max.	5	ASTM D-5386
Acidity as acetic acid, wt. %, max.	0.003	ASTM D-1613

Typical and Physical Properties

Distillation range, °C, 1 atm	117 - 118
Specific gravity @ 20/20 °C	0.810 - 0.813
Non-volatiles, wt. %, max.	0.003
Appearance	Clear and colorless

Safety

n-Butanol may irritate the skin, eyes, and mucous membranes. Inhalation of vapors or mists may cause a narcotic effect. Harmful effects on the liver and kidneys have been observed in animal tests.

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

Storage and Handling

Tanks constructed from normal carbon steel are reliable for storing n-butanol. If severe demands are imposed on the quality of the product, the tanks should be constructed of stainless steel or aluminum.

Moisture in the atmosphere must be excluded by storing the product under a blanket of inert gas or by installing a dehumidifier.

n-Butanol can corrode aluminum above 60 °C; therefore, it is only possible to use aluminum or aluminum alloy tanks at lower temperatures.

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.

Applications

A large portion of the n-butanol produced is converted into derivatives for use as solvents in the coatings industry.

n-Butanol is an excellent solvent for acid-curable lacquers and baking finishes derived from urea, melamine, or phenolic resins.

The applications in which n-butanol can be used are as follows:

- Solvent for dyes in printing inks
- Extractant in the production of drugs and natural substances
- Additive in polishes and cleaners
- Solubilizer in the textile industry (additive in spinning baths or carrier for coloring plastics)
- Additive in deicing fluids
- Anti-icing additive in gasoline
- Humectant for cellulose nitrate
- Feedstock in the production of glycol ethers
- Feedstock for the production of solvents such as butyl acetate and butyl butyrate
- Feedstock in the production of flotation aids (butyl zanthate)
- Feedstock for the production of butyl acrylate

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