

Butylglycol

Description

High-boiling, low-volatility liquid with a mild odor that is used as a solvent and starting material for syntheses. Excellent co-solvent in aqueous coating systems (water-based paints).

Properties

Colorless, neutral, slightly hygroscopic, mobile liquid with a mild odor. The product is miscible with water and common organic solvents in all proportions at room temperature.

Butylglycol shows the reactions typical of an alcohol, such as esterification, etherification, oxidation and the formation of acetates and alcoholates. Like most ethers, it forms peroxides in the presence of atmospheric oxygen.

As a low-volatility solvent, Butylglycol can be used to extend the drying time of coatings and improves their flow. It is especially recommended for paints for brush-application based on cellulose nitrate, chlorinated binders or cellulose ethers, because when it is applied to dry coatings, it only softens them very slowly.

Small proportions of Butylglycol improve the brushability of, for example, alkyd resin paints and reduce their viscosity. It is also an extremely efficient flow improver for urea, melamine or phenolic stoving finishes.

Butylglycol has proved to be the most effective of a large number of organic solvents tested in a very wide range of aqueous coating systems. In particular, it improves the properties of the paint by reducing the viscosity peak when oxidatively and physically drying water-based paints, including those for stove- enamelling, are diluted with water.

As a coalescing aid, Butylglycol can significantly lower the minimum film-forming temperature (MFFT) and improve flow in many physically drying paint systems.

Butylglycol improves the evaporation behaviour of the volatile constituents (e. g. in water-based stoving enamels) during hot-air or infrared drying.

Storage & Handling

Butylglycol should be stored under nitrogen. The storage temperature must not exceed 40 °C and moisture are excluded. Under these conditions, a storage stability of 12 months can be expected.

As soon as the original packaging is opened, the liquid comes into contact with ambient air and this will cause the formation of large quantities of peroxides and their degradation products. Opened containers should therefore be used up as quickly as possible.

It is recommended to use nitrogen blanketing for bulk storage tanks. Only dedicated storage and transportation tanks - stainless steel - and unloading facilities should be used.

Chemical Nature

Ethylene glycol mono-n-butyl ether, 2-Butoxyethanol, 1-Hydroxy-2-n-butosyethane

Molecular formula	C ₆ H ₁₄ O ₂
Molar mass	118,18 g/mol
CAS number	111-76-2
EC number	203-905-0

Specifications

Property	Test Method	Unit	Butylglycol
Density @ 20°C	DIN 51757	kg/l	0,900 – 0,902
Butylglycol		%	≥ 99,0
Water	DIN EN 51777, Part 1	%	≤ 0,1
Refractive index	DIN 51423	n _D 20	≤ 1.419 – 1.420
Boiling range	DIN 51751	°C	168 – 172
Solidification point	--	°C	70,4
Color Value (Hazen)	DIN EN ISO 6271	--	≤ 10

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