

Tebol 99

Tertiary Butyl Alcohol
CAS No. 75-65-0

Description

High purity tertiary butyl alcohol (TEBOL® 99) is a colorless, noncorrosive liquid which exhibits unique physical and chemical properties. Excellent solvating and coupling capabilities, in conjunction with its stability and low reactivity, make Tebol 99 an ideal solvent. Tebol 99 can also be used in chemical syntheses as an ideal source for the tertiary butyl functionality.

Typical Properties

• Specific Gravity (20/20°C)	0.80
• Boiling Point (760 TORR)	82°C
• Freezing Point	24°C
• Flash Point (Tag Closed Cup)	11°C
• Non-Volatile Matter (g/100mL)	0.001
• Vapor Pressure (20°C)	31.0 mm Hg

Tebol 99 is a versatile solvent for use in numerous applications including industrial process solvent, reaction solvent, and chemical intermediate.

Lyondell Chemical produces Tebol 99 as a co-product in the production of propylene oxide.

Applications

Industrial Process Solvent. Its unique solubility characteristics make Tebol 99 an attractive cosolvent or non-surfactant compatibilizer for many immiscible solvent blends. Good miscibility, in conjunction with excellent solvating characteristics, makes Tebol 99 a unique solvent for industrial processing applications.

Reaction Solvent. Tebol 99 provides potent solvency for many non-polar or moderately polar fine chemicals and intermediates. Excellent oxidative stability and low reactivity make Tebol 99 an ideal solvent for many reaction processes including oxidation, reductions, and esterifications.

Aqueous Applications. Stability and compatibility can be gained in some aqueous-based products by using Tebol 99. Its addition can significantly reduce the surface tension of water, enabling formulators to dissolve marginally water soluble ingredients into an aqueous system without generating an emulsion or a highly foaming product.

Chemical Intermediate. Tebol 99 serves as a readily available source for tertiary butyl functionality. Alkylation of aromatics and nitrogen compounds occurs in good yield with high selectivity. Other known uses include:

- replacement of gaseous isobutylene
- blocking agent for polyurethane prepolymers
- preparation of peroxide initiators
- preparation of metal alkoxide salts

Pharmaceuticals. Tebol 99 exhibits excellent solvating and coupling capabilities, as well as stability and low reactivity making it an ideal solvent for various process applications including use as a process solvent, synthetic reagent, denaturant for ethanol, and solvent in diagnostic kit formulations.

Azeotropes. Tebol 99 forms azeotropes with many common solvents making it an ideal candidate for the removal of unwanted residual solvents including:

- cyclohexane
- ethyl acetate
- n-heptane
- n-hexane
- n-pentane
- water

Storage and Handling

Tebol 99 is hygroscopic but stable under normal conditions. Storage in a tightly closed, properly vented container away from sparks, other ignition sources, strong mineral acids, dehydrating and oxidizing agents is necessary. Store in properly lined steel or stainless steel to avoid discoloration from mild steel copper. Tebol 99 solidifies (as a crystalline form) at or just below room temperature (25°C). Storage tanks, pumps, and transfer lines should therefore be insulated and heated to a temperature above 25°C. Please review MSDS prior to handling.

Before using a product sold by a company of the LyondellBasell family of companies, users should make their own independent determination that the product is suitable for the intended use and can be used safely and legally.

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Users should review the applicable Safety Data Sheet before handling the product.

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