

Tetrahydrofuran (THF)

Product Description

Tetrahydrofuran (THF) is an industrial solvent used in the plastics, pharmaceuticals, and specialty chemicals industries. INVISTA THF is at least 99.95% pure with a small (approximately 0.01%) amount of butylated hydroxytoluene (BHT) added as an antioxidant.

Precautions

THF is extremely flammable. Before using THF in any application, users should review and understand the Safety Data Sheet.

Major Industrial Uses

Resin Solvent:

- PVC and CPVC pipe cement
- Magnetic tape manufacture
- Polyurethane fabric coatings

Reaction Solvent:

- Pharmaceutical and specialty chemicals
- Alkali metals, alkyl alkali and aryl alkali metal compounds
- Alkali metal, aluminum hydrides, and borohydrides
- Organics with limited solubility in alcohols, ketones, ethers, and esters
- Steroids

Intermediates:

- Manufacture of natural gas odorants
- Production of polytetramethylether glycols for polyurethanes and polyesters

Specifications

THF Specifications	
Appearance	Clear, colorless liquid
Purity % by weight	99.95 min.
Color APHA	10 max.
Water ppm	300 max.
Peroxide (calculated THF-hydroperoxide) ppm	10 max.
Stabilizer (BHT)* ppm	75 min. – 150 max.

* THF product also offered with 250 – 400 ppm (THF High BHT).

Typical Properties

THF: Typical Properties	
Specific gravity @ 20°C	0.90
Boiling point	66°C
Freezing point	-108.5°C
Liquid density @ 20°C	7.41 lb/gal
Vapor density (air = 1)	2.49
Evaporation rate (n-butyl acetate = 1)	8.0
Viscosity @ 20°C	0.48 cP (mPa-s)
Heat of evaporation @ bp	195 btu/lb
Specific heat, liquid @ 20°C	0.42 btu/lb-F
Coefficient of thermal expansion @ 10 – 20° C	0.00126
Flash point, TCC	-20°C
Solubility in water	100%
Odor	ethereal
Vapor pressure @ 20°C	130 mmHg

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