

Tetrahydrofuran (THF)



Tetrahydrofuran (THF) is a clear, colorless liquid with an ether-like odor. The principal end uses of THF include PTMEG, pharmaceutical solvent, adhesives, PVC cement and magnetic tape. Due to its' tendency to form peroxides during storage, THF is inhibited with BHT.

CAS number

109-99-9

Synonyms

1,4-epoxybutane; Cyclotetramethylene oxide; butane, alpha,delta-oxide

Typical Physical Properties of THF

Molecular Weight	72.11 g/mol
Empirical Formula	C ₄ H ₈ O
Appearance	Colorless
Freezing Point	-108°C (-164.4°F)
Flash Point – Closed Cup	-20°C (-4°F)
Boiling Point @ 760mmHg	66°C (150.8°F)
Autoignition Temperature	230°C (446°F)
Density @ 20°C	0.89 kg/l 7.43 lb/gal
Vapor Pressure @ 20°C	193 hPa
Evaporation Rate (nBuAc = 1)	8
Solubility @ 20°C (in Water)	Complete
Refractive Index @ 20°C	1.407
Viscosity @ 20°C	0.516 cP
Lower Flammability in Air	1.5% v/v
Upper Flammability in Air	12.4% v/v

Note: The properties reported above are typical physical properties. Monument Chemical in no way guarantees that the product from any particular lot will conform exactly to the given values.

Health and safety information

Under current U.S. OSHA's Hazardous Communication program THF is classified as a flammable liquid, can cause eye and respiratory irritation. Keep the material away from heat sources, hot surfaces, open flames, and sparks. Use only in a well-ventilated area.

Observe good industrial hygiene practices and use appropriate Personal Protective Equipment.

For full safety information please refer to the Safety Data Sheet.

Storage and Handling

General industry practice is to store THF in carbon steel vessels. Storage in properly lined steel or stainless steel to avoid slight discoloration from carbon steel is recommended. Product stored or delivered in unlined carbon steel vessels must be filtered due to technically unavoidable particles.

THF should be stored under a nitrogen blanket when available. Avoid contact with air when storing for long periods of time. This product may absorb water if exposed to air.

THF should be stored only in tightly closed, properly vented containers away from heat, sparks, open flame, or strong oxidizing agents. Use only non-sparking tools. Containers should be grounded before beginning transfer. Electrical equipment should conform to national electric code. Handle empty containers carefully. Flammable combustible residue remains after emptying.

Provided proper storage and handling precautions are taken, THF manufactured and delivered by Monument Chemical is stable for at least 12 months from the date of manufacture. THF that is subsequently repackaged, handled and/or delivered by third parties may have a different shelf life and may require third party shelf life studies. Product past the retest date should be evaluated to confirm that all specifications are within their limits before use.

Additional information

To learn more about Monument Chemical and the products and services we offer please visit our website at www.monumentchemical.com.

Effective Date: 10/29/2021

Revision: 3

Disclaimers

Please refer to the Safety Data Sheet (SDS) for complete information on Storage and Handling, Toxicological

Properties, Personal Protection, First Aid, Spill and Leak Procedures, and Waste Disposal. To order an SDS, email SDS@monumentchemical.com. Before using or handling this product, the SDS should be thoroughly reviewed.

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