



Product Data Sheet

Triglyme (CAS# 112-49-2)

Triethylene glycol dimethyl Ether $\text{CH}_3\text{O}(\text{CH}_2\text{CH}_2\text{O})_3\text{CH}_3$

An aprotic glycol diether with active solvency and formulating versatility

Triglyme is unique among ethylene oxide based solvents in that it is aprotic (no hydroxyl functionality). As a result it is a relatively inert solvent with outstanding stability at high pH. The low boiling point allows for easy separation from reaction mixtures and recovery. Used as a solvent for Organometallic reactions involving reductions, alkylations, Grignard and in reactions involving alkali metals.

Physical Properties

Empirical Formula	$\text{C}_8\text{H}_{18}\text{O}_4$
Molecular Weight	178.22
Boiling Point (°C 760 mm Hg)	216
Freezing Point (°C)	-45
Specific Gravity (20°C)	0.9862
Vapor Pressure (mm Hg/ 20°C)	0.02
Volatility (n-butylacetate = 100)	<0.1
Viscosity (cp 20°C)	3.8
Surface Tension (dynes/cm 20°C)	29.4
Auto Ignition temp (°C)	195
Heat of Vaporization (kcal/mole)	14.3
Heat of Combustion (kcal/mole)	1191
Flash Point (°C, closed cup)	111
Refractive Index (20°C)	1.4224
Appearance	Clear
Odor	Ethereal
Solubility at 25°C	
in water	Complete
water in	Complete

Reaction solvent for:

- Organometallics for API synthesis
- Grignard reagents
- Synthesis and reaction of organolithium reagents
- The manufacture of protease inhibitors (anti-aids)
- Activator for metal borohydrides – often can use NaBH_4 at higher temperatures in place of LiAlH_4
- Solvent for Simmons-Smith reaction (addition of carbene to double bond)

Features

- Aprotic
- High boiling point
- Water soluble
- High solvency characteristics
- Excellent thermal and chemical stability
- Refer to MSDS for detailed handling and disposal information
- Use with proper PPE and engineering controls

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