

## LITHIUM METHOXIDE (LiOMe) 10% IN METHANOL

CAS No. 865-34-9

QS-PDS-014 Revision: 02

**Product Names** Lithium methoxide, LiOMe, LME

**Formula** Li-OCH<sub>3</sub>

**Appearance** Colorless to pale yellow solution

**Application** LiOMe is a mild base used mainly in organic synthesis, most often in transesterifications. This reagent is offered currently in methanol solution of LiOMe (2.2M) and therefore is very easy to transfer from shipping container to storage or reactor. On contact with moisture, it is converted to methanol and lithium hydroxide causing the solution to become cloudy. For leading references, consult *J. Mater. Res.* **1999**, *14*, 1510.

### Product Specification

Lithium methoxide, wt %	<u>Guaranteed*</u> 9.8 – 10.2
-------------------------	----------------------------------

*\*This product can be made to agreed upon customer specifications.*

### Physical Properties

Molecular weight	37.97
Density @20°C	0.85 g/cm <sup>3</sup> at 10 wt %
Contained LiOMe	85 g/L (0.71 lb/gal)
Pyrophoricity	Non-pyrophoric

**Solvent** Methanol

**Solubility** Methanol is the best solvent for LiOMe as it has very low solubility in many common solvents including THF (tetrahydrofuran).

**Thermal Stability** LiOMe in methanol is very stable at room temperature. At 40°C, solutions could very slowly become hazy because of desolvation of the LiOMe.

## LITHIUM METHOXIDE (LiOMe) 10% IN METHANOL

CAS No. 865-34-9

**Toxicity/Safety Data** Danger. Highly flammable liquid and vapour. Causes severe skin burns and eye damage. Toxic if swallowed, in contact with skin or if inhaled. Causes damage to organs. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Wear protective gloves/protective clothing/eye protection/ face protection. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower. If INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON Center or doctor/physician. In case of fire: Use dry chemical for extinction.

*COMPLETE INFORMATION ON TOXICITY AND SAFETY IS CONTAINED IN THE FMC SAFETY DATA SHEET (SDS) AVAILABLE FOR THIS PRODUCT.*

**Handling/Storage/Disposal** Use in a closed system under argon or nitrogen. Do not get in eyes, on skin or clothing. Do not breathe vapors or mist. Store in a cool place. Keep container closed. Keep away from sources of ignition, water, air, acids and oxidizing agents.

<b>Shipping Containers</b>	Bulk containers	17,500 – 24,000 L
	Cylinders	#20
	Drums	55 gallon
	Glass bottles	125 mL, 500 mL, and 1 L

**Shipping Limitations** Shipments of LiMeO are described as “UN3274, ALCOHOLATES, SOLUTION, N.O.S. (LITHIUM METHOXIDE IN METHANOL), 3, (8), PGI” . Shipments require “Flammable Liquid” and “Corrosive” Labels.

Post, Parcel	Not acceptable
Sea	Class 3 (8) (IMDG)
Road, Rail (USA)	Class 3 (8) (DOT)
Road, Rail (EU)	Class 3 (8) (RID/ADR)
Air	Class 3 (8) (IATA)

2.5 L maximum per inner glass container.  
5.0 L maximum per single/outer container.  
Cargo aircraft only.

Responsible Care® initiative dictates that all shipments of lithium chemicals must be transported in a DOT-approved vehicle in a responsible manner (i.e., no flat bed trucks).

**Additional Resources** Refer to Safe Handling Guide listed on [www.fmclithium.com/finechemicals](http://www.fmclithium.com/finechemicals).