



LITHIUM *t*-BUTOXIDE (LTB) SOLID

CAS No. 1907-33-1

QS-PDS-059 Revision: 00

Product Name Lithium *t*-butoxide, Lithium *tert*-butoxide, Lithium *tertiary*-butoxide, LTB

Formula C₄H₉OLi

Appearance Off white to brown solid

Application LTB is a mild base used principally in organic synthesis. The pKa is 17. It can also be used in conjunction with organometallic reagents/catalysts to modify their reactivity and selectivity. For a brief review of this reagent, please consult *Handbook of Reagents for Organic Synthesis, Acidic and Basic Reagents, 1999* John Wiley & Sons, p. 208.

Product Specification

Lithium <i>t</i> -butoxide, wt%	<u>Guaranteed*</u> min. 98%
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** This product can be made to agreed upon customer specifications*

Physical Properties

Molecular weight	80.05
Bulk Density @20°C	0.5 g/mL
Melting Point	Decomposes above 250°C

Solubility

Toluene	4 wt%
Hexanes	15 wt%
THF	22 wt%
MTBE	11 wt%

Thermal Stability

LTB is very stable at room temperature, with exclusion of air and moisture.



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Toxicity/Safety Data Keep away from water, air and oxidizing materials. Avoid breathing dust. Wear full face protection and gloves. Corrosive to skin, eyes, (may cause blindness), nose and throat.

COMPLETE INFORMATION ON TOXICITY AND SAFETY IS CONTAINED IN THE OPTIMA MATERIAL SAFETY DATA SHEET (MSDS) AVAILABLE FOR THIS PRODUCT.

Handling/Storage/Disposal Use in a closed system under inert atmosphere of argon or nitrogen. Keep away from heat, sparks, and flame. Protect storage container against leaks and physical damage.

Shipping Containers Drums 50 kg net polyethylene bags in steel drum
Glass bottles 125 mL, 500 mL and 1 L

Shipping Limitations Shipments of LTB solid are described as "Alkali metal alcoholates, self-heating, corrosive, N.O.S. (LITHIUM *T*-BUTOXIDE), 4.2 (8), UN3206, PG II." Shipments require "Spontaneously Combustible" and "Corrosive" labels.

Post, Parcel	Not acceptable
Sea	Class 4.2 (8) (IMDG)
Road, Rail (USA)	Class 4.2 (8) (DOT)
Road, Rail (EU)	Class 4.2 (8) (RID/ADR)
Air	Class 4.2 (8) (IATA)
	50 kg maximum per container.
	Cargo aircraft only.

For shipments within Europe, labeling for supply requirements are:

F	Highly Flammable
C	Corrosive
R&S Phrases	See Material Safety Data Sheet

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 the Organometallics and Reactive Specialty Organics Safe Handling Guide available on-line at www.optimachem.com.