



***n*-Butyllithium, 10.5% in Toluene**

CAS No. 109-72-8

QS-PDS-046 Revision: 03

Date of Last Revision: November 8, 2022

Formula: $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{-Li}$

Appearance: Clear, yellow to red solution

Application: Deprotonation and metal–halogen exchange reactions; synthesis of solution styrene butadiene rubber and of styrenic thermoplastic elastomers. Also used for synthesis of chemical intermediates.

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|--------------------------------|-------------------------------|----------|----------|
| Product Specifications: | <i>n</i> -Butyllithium, wt. % | 10.5 min | 11.0 max |
| | Carbon Bound Lithium, wt. % | 95.0 | min |
| | Free Alkalinity, wt. % | 0.5 | max |

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

Other Data: Solvent Toluene

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|-----------------------------|------------------------|-------------------------|
| Physical Properties: | Molecular Weight | 64.06 |
| | Contained Butyllithium | 178.5 g/L (1.49 lb/gal) |
| | Pyrophoricity | Pyrophoric |
| | Density @ 20°C | 0.85 g/mL (7.14 lb/gal) |

Solubility: *n*-Butyllithium is miscible in all proportions with aliphatic, aromatic, and ethereal solvents; however, there is some reactivity with the latter two solvent types.

Thermal Stability: At 20°C and 35°C, the average decomposition rates are 0.001 wt. % per day and 0.011 wt. % per day, respectively. Recommended storage: 20°C or lower and preferably at less than 10°C.

Toxicity / Safety Data / Handling / Storage / Disposal: *Information on toxicity, safety, handling, storage and disposal is contained in the Safety Data Sheet (SDS) for this product.*



Shipping Containers: Bulk Containers 2,000 – 22,000 L (35,000 also available in EU only)
Cylinders #20 – 440 L
Glass Bottles 125 mL, 500 mL, 1 L

Shipping Limitations: Shipments of NBL are described as "ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER-REACTIVE (N-BUTYLLITHIUM, HYDROCARBON SOLUTION), 4.2 (4.3), UN 3394, PG I". Shipments require "Spontaneously Combustible" and "Dangerous When Wet" labels.

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| Post, Parcel, Air | Not acceptable | |
| Sea | Class 4.2 (4.3) | (IMDG) |
| Road, Rail (USA) | Class 4.2 (4.3) | (DOT) |
| Road, Rail (EU) | Class 4.2 (4.3) | (RID/ADR) |