



***n*-Butyllithium, 24% in Cyclohexane**

CAS No. 109-72-8

QS-PDS-034 Revision: 04

Date of Last Revision: May 31, 2022

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

Appearance: Clear, colorless to yellow solution

Application: *n*-Butyllithium is a very strong base, exceedingly useful in organic synthesis. NBL has found particular utility in deprotonation and metal–halogen exchange reactions. NBL is also a very effective initiator of anionic polymerization of styrene and conjugated dienes. The synthesis of solution SBR and of styrenic thermoplastic elastomers (TPEs), in particular, is facilitated by NBL. References: *The Chemistry of Organolithium Compounds*, ed. Zvi Rappoport and Ilan Marek, Wiley, **2004**, West Sussex, England.

Product Specifications:	<i>n</i> -Butyllithium, wt. %	24.5	Typical Value
	Carbon Bound Lithium, wt. %	99	Typical Value
	Residual Alkalinity, wt. %	0.24	Typical Value

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

Other Data: Solvent Cyclohexane
(contains <10% hexanes or heptane in inhibit freezing)

Physical Properties:	Molecular Weight	64.06
	Contained Butyllithium	183.7 g/L (1.53 lb/gal)
	Pyrophoricity	Pyrophoric
	Density @ 25°C	0.7653 g/mL (6.39 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 0.003 wt. % per day and 0.027 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, 1L

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.

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)