Livent

_n_-Hexyllithium, 33% in Hexane **CAS No. 21369-64-2**

QS-PDS-019 Revision: 06 **Date of Last Revision: September 25, 2023**

Formula: $CH_3(CH_2)_5$-Li

Appearance: Clear, colourless to red solution.

Application: *n*-Hexyllithium is a non-pyrophoric strong base, primarily used in organic synthesis in deprotonation reactions and as a lithiation reagent. The advantage of this reagent is that the by-product of a deprotonation reaction is n-hexanes. *n*-Hexane is less volatile and has a higher flash point than the *n*-butane generated from a deprotonation with *n*-butyllithium. 1) *The Chemistry of Organolithium Compounds*; Pergamon: Oxford, **1974**; 2) *Organolithium Methods*; Academic Press: London, **1988**.

Product Specifications:

n-Hexyllithium, wt. %	32.0 min	34.0 max
Free Alkalinity, wt. %	1.0	max

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

Other Data:

Solvent	Commercial Hexanes

Physical Properties:

Molecular Weight	92.11
Contained Hexyllithium	232.7 g/L (1.94 lb/gal)
Pyrophoricity	Non-pyrophoric
Density @ 25°C	0.712 g/mL (0.594 lb/gal)

Solubility: *n*-Hexyllithium 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, the average decomposition rate is <0.002 wt. % per day. Recommended storage: 20°C or lower.

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 – 20,000 L
Cylinders	#5 – 420 L
Glass Bottles	125 mL 500 mL, and 1 L

Shipping Limitations: Shipments of NHL are described as "Corrosive Liquid, Flammable, N.O.S., (HEXYLLITHIUM IN HEXANES), 8 (3), UN2920, PG I." Shipments require "Corrosive" and "Flammable Liquid" labels.

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

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