

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

**Appearance:** Clear, colorless to yellow 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.

|                                |                               |      |               |
|--------------------------------|-------------------------------|------|---------------|
| <b>Product Specifications:</b> | <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)

|                             |                        |                           |
|-----------------------------|------------------------|---------------------------|
| <b>Physical Properties:</b> | 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.*

|                             |                 |   |
|-----------------------------|-----------------|---|
| <b>Shipping Containers:</b> | 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) |