

# TECHNICAL DATA SHEET

Date of Issue: 2017/08/08

## sec-Butyllithium, typ. 12 % solution in Cyclohexane

CAS-No.	598-30-1
EC-No.	209-927-7
REACH No.	01-2119913304-49
Molecular Formula	C <sub>4</sub> H <sub>9</sub> Li
Product Number	401811

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**APPLICATION** Initiator for olefin polymerization. Alkylating and metalating agent.

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### FURTHER INGREDIENTS

Cyclohexane

CAS-No.	110-82-7
EC-No.	203-806-2

Hexane

CAS-No.	64742-49-0
EC-No.	925-292-5

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### SPECIFICATION

Chemical analysis:

active base	typ. 11.5 - 12.5 % (1.4 M)
free base *)	typ. < 0.3 %
activity	typ. > 97.4 %
Cl (covalent)	typ. < 0.03 %

\*) mainly LiOC<sub>4</sub>H<sub>9</sub>

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### METHOD OF ANALYSIS

Total base: titration of base resulting from hydrolysis.

Free base: removal of butyllithium with benzyl chloride, hydrolysis and titration of residual base.

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Technical data sheets may change frequently. You can download the latest version from our website [www.albemarle-lithium.com](http://www.albemarle-lithium.com). Please contact us at [www.albemarle-lithium.com/contact](http://www.albemarle-lithium.com/contact) with questions.

## PHYSICAL PROPERTIES

Appearance	liquid
Color	clear to yellow
Flash point	-26 °C
Boiling point/boiling range	75 - 80 °C
Density	ca. 0.75 g/cm <sup>3</sup> at 20 °C
Water solubility	(Not applicable)
Molecular weight	64.06 g/mol
Additional Physical Properties	Composition of solvent: abt. 92 % cyclohexane abt. 8 % hexanes

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## HANDLING & STORAGE

Handling	Butyllithium should always be handled under inert gas like nitrogen although hydrocarbon solutions of sec-butyllithium in containers of LiR of approx. 12 % normally do not ignite spontaneously when coming in contact with air. Increase in concentration due to evaporation of solvent results in rising danger of self-ignition.
Storage	Under exclusion of air and humidity and when stored in a cool place, the solutions are fairly stable (decomposition rate at 5 °C: abt. 0.2 %; at 20 °C: abt. 1.4 %; at 35 °C: abt. 10 % of active material per month). Decomposition does not cause pressure build up in containers. However, after longer storage, LiH can precipitate as a finely dispersed white powder that will nearly always ignite when coming in contact with air. For quality reasons sec-Butyllithium should be stored between -15 °C and 20 °C. Pay attention to official safety regulations (see also: 'Transport regulations' and 'GHS Hazard Pictograms', especially fire-fighting). Please ask for our Butyllithium brochure.

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## TRANSPORT &amp; PACKAGING

UN number 3394

ADR	Class: 4.2	PG: I	Label: 4.2 (4.3)
RID	Class: 4.2	PG: I	Label: 4.2 (4.3)
IMDG	Class: 4.2	PG: I	Label: 4.2 (4.3)
IATA_C	Class: 4.2		
IATA_P	Class: 4.2		

Hazard pictograms



Signal Word

Danger

H&amp;P Phrases

See Safety Data Sheet

Labelling

The labelling is according to EU-GHS classification ((EG) 1272/2008) and may vary in other countries. Please refer to the respective Safety Data Sheet for your country.

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## Packaging

	nominal content	net content *)
Railway tank (insulated)	35 m3	30.4 m3
Isocontainer (insulated)	16.6 - 20.5 m3	14.4 - 17.8 m3
Steel container	2.5 m3	2.2 m3
Steel container	450 l	405 l
Steel container	127 l	114 l
Steel container	27 l	24 l
Steel container	7.4 l	6.5 l

\*) for safety reasons, max. 90 % or 87 % of nominal content

100, 250, 500 and 1,000 ml glass bottles with screw cap and with or without penetration disc-seal. Solutions are shipped under nitrogen blanket.

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**OTHER INFORMATION**

Further Related Documents	Safety Data Sheet
Our brochure(s)	Organolithium Compounds, Butyllithium

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