

TECHNICAL DATA SHEET

Date of Issue: 2017/08/08

n-Butyllithium, typ. 90 % solution in Hexane (10.7 M)

CAS-No.	109-72-8
EC-No.	203-698-7
REACH No.	01-2119494906-21
Molecular Formula	C ₄ H ₉ Li
Product Number	401830

APPLICATION Initiator for olefin polymerization. Alkylating and metalating agent.

FURTHER INGREDIENTS

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

SPECIFICATION

Chemical analysis:

active base	90 - 92 % (10.7 M)
free base *)	max. 1.8 %
activity	min. 98 %

*) pure LiC₄H₉

METHOD OF ANALYSIS

Total base: titration of base resulting from hydrolysis. Free base: addition of dry hexane to produce a 15 - 20 % solution; removal of butyllithium with benzyl chloride, hydrolysis and titration of residual base.

The information presented herein is believed to be accurate and reliable, but is presented without guarantee or responsibility on the part of Albemarle Corporation and its subsidiaries and affiliates. It is the responsibility of the user to comply with all applicable laws and regulations and to provide for a safe workplace. The user should consider any health or safety hazards or information contained herein only as a guide, and should take those precautions which are necessary or prudent to instruct employees and to develop work practice procedures in order to promote a safe work environment. Further, nothing contained herein shall be taken as an inducement or recommendation to manufacture or use any of the herein materials or processes in violation of existing or future patent.

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



PHYSICAL PROPERTIES

Appearance	liquid
Color	yellowish slightly cloudy
Melting point/ range	< -76 °C
Viscosity, dynamic	13.1 mPa*s at 49.5 °C 101.3 mPa*s at 3 °C 235 mPa*s at -14.5 °C 1,327 mPa*s at -34 °C
Flash point	< -20 °C (Hexane)
Boiling point/boiling range	55 - 85 °C (Hexane)
Density	ca. 0.765 g/cm ³ at 20 °C
Bulk density	(Not applicable)
Water solubility	(Not applicable)
Molecular weight	64.06 g/mol
Additional Physical Properties	Vapor pressure °C mbar *) 60 5.8 • 10 ⁻⁴ 80 59 • 10 ⁻⁴ 95 260 • 10 ⁻⁴ Refractive index 1.4785 at 25 °C *)

HANDLING & STORAGE

Handling	Under exclusion of air and when stored in a cool place the product is fairly stable (decomposition rate at 20 °C: abt. 0.4 % per month). Contact with air can result in self-igniton. Butyllithium should be handled always under inert gas like nitrogen.
Storage	For quality reasons Butyllithium concentrated should be stored below 0 °C. After longer storage, solution of Butyllithium tend to form finely dispersed LiH which is very likely to ignite when in contact with air. Pay attention to official safety regulations (see also: "Transport regulations" and "Marking", especially fire fighting). Please ask for our Butyllithium brochure.

The information presented herein is believed to be accurate and reliable, but is presented without guarantee or responsibility on the part of Albemarle Corporation and its subsidiaries and affiliates. It is the responsibility of the user to comply with all applicable laws and regulations and to provide for a safe workplace. The user should consider any health or safety hazards or information contained herein only as a guide, and should take those precautions which are necessary or prudent to instruct employees and to develop work practice procedures in order to promote a safe work environment. Further, nothing contained herein shall be taken as an inducement or recommendation to manufacture or use any of the herein materials or processes in violation of existing or future patent.

TRANSPORT & 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&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.

Packaging

	nominal content	net content 1)
Isocontainer	16.6 - 20.5 m ³	14.4 - 17.8 m ³
Steel container	2.5 m ³	2.175 m ³
Steel container	450 l	390 l
Steel container	127 l	110 l
Steel container	27 l	23.5 l
Steel container	7.4 l	6.4 l

1) 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.

The information presented herein is believed to be accurate and reliable, but is presented without guarantee or responsibility on the part of Albemarle Corporation and its subsidiaries and affiliates. It is the responsibility of the user to comply with all applicable laws and regulations and to provide for a safe workplace. The user should consider any health or safety hazards or information contained herein only as a guide, and should take those precautions which are necessary or prudent to instruct employees and to develop work practice procedures in order to promote a safe work environment. Further, nothing contained herein shall be taken as an inducement or recommendation to manufacture or use any of the herein materials or processes in violation of existing or future patent.

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

OTHER INFORMATION

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

The information presented herein is believed to be accurate and reliable, but is presented without guarantee or responsibility on the part of Albemarle Corporation and its subsidiaries and affiliates. It is the responsibility of the user to comply with all applicable laws and regulations and to provide for a safe workplace. The user should consider any health or safety hazards or information contained herein only as a guide, and should take those precautions which are necessary or prudent to instruct employees and to develop work practice procedures in order to promote a safe work environment. Further, nothing contained herein shall be taken as an inducement or recommendation to manufacture or use any of the herein materials or processes in violation of existing or future patent.

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