

GELEST, INC.

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MATERIAL SAFETY DATA SHEET

EMERGENCY TELEPHONE
CHEMTREC: 1-800-424-9300

NAME USED ON LABEL: **n-BUTYLLITHIUM 2.5M in hexane - OMLI012**

CHEMICAL NAME: n-BUTYLLITHIUM 2.5M in hexane

SYNONYMS:

CHEMICAL FAMILY: METAL ALKYL

FORMULA: C₄H₉Li

HMIS CODES HEALTH: 4 FLAMMABILITY: 4 REACTIVITY: 2

INGREDIENTS

IDENTITY	CAS NO.	%	TLV	OSHA PEL
n-BUTYLLITHIUM	109-72-8	22-24	not established	not established
HEXANES	64742-49-0	76-78	50ppm	50ppm

PHYSICAL DATA

Boiling Point: not determined
Specific Gravity: 0.695
Vapor Density (air=1): 3.0-hexane
% volatiles: NA
Molecular Weight: 64.06
Appearance & Color: Clear yellow liquid, fumes and ignites in air

Freezing Point: <0°C
Vapor Pressure, 20°: 150mm-hexane
Solubility in water: reacts violently
Evaporation rate: NA
Other: NA

FIRE & EXPLOSION DATA

Can spontaneously ignite on contact with air. Pyrophoric liquid and gas.

Flash Point, COC: -22°C (-7°F) Autoignition Temp.: <100°C - PYROPHORIC
Flammability Limits (hexane)- LEL: 1.8% UEL: 11.6%

Extinguishing Media: Dry chemical powder followed by sand or dolomite. Do not use water.
Special Fire Fighting Procedures: If material is ignited, allow to burn. Concentrate containment efforts to adjacent combustibles. Avoid eye and skin contact. Do not breathe fumes or inhale vapors.
Unusual Fire and Explosion Hazards: Container explosion may occur during fire conditions.

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ENVIRONMENTAL INFORMATION

Spill response: Cover with dry chemical extinguishing powder, lime, sand or soda ash. Do not use water. Remove sources of ignition. Remove combustible materials in the vicinity of the spill. Allow time for decomposition or fire to burn out, then sweep material and transfer to a suitable container for disposal.

Recommended Disposal: Incinerate. Follow all chemical pollution control regulations. This is a RCRA hazardous waste: 40 CFR 261.21 (i.e. ignitable) 40 CFR 261.23 (i.e. reactive)

HEALTH HAZARD DATA

Eye Contact: Will cause immediate or delayed severe burns to the eyes.

Skin contact: Will cause irritation and burns.

Inhalation: Direct respiratory contact is usually not possible, but will cause burns. Inhalation of combustion products can cause irritation

Oral Toxicity: Not determined LITHIUM HYDROXIDE, the oxidation/hydrolysis product, is considered moderately toxic.

Chronic Toxicity-hexane: Overexposure to hexane may cause progressive and potentially irreversible damage to the peripheral nervous system, particularly in the arms and legs.

SUGGESTED FIRST AID

EYES: In case of contact, immediately flush eyes with flowing water for at least 15 minutes. Get medical attention.

SKIN: Flush with water, then wash with soap and water.

INHALATION: Move exposed individual to fresh air. Administer oxygen if needed. Call a physician.

INGESTION: Never give fluids or induce vomiting if patient is unconscious or having convulsions. To conscious individual give one full cup of water to dilute ingested material. Get medical attention.

REACTIVITY DATA

Stability: Stable in sealed containers under dry inert atmosphere. The product can generate small amounts of butane when exposed to alkalis and protic materials such as water and alcohol.

Decomposes at temperatures $>140^{\circ}\text{C}$.

Conditions to avoid: Store away from alkalis, oxidizers, metal salts, precious metals, chlorine, bromine.

Hazardous decomposition products: Hydrogen, formaldehyde, carbon monoxide, organic acid vapors and aluminum oxides, butane.

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SPECIAL PROTECTION INFORMATION

Ventilation: Glove box or sealed system under inert atmosphere is required. Local exhaust is required. Mechanical is recommended.

Respiratory Protection: If exposure exceeds TLV, NIOSH certified organic vapor respirator.

Eye and Face Protection: Full face shield with chemical workers goggles.

Other Clothing and Equipment: Rubber, neoprene or nitrile gloves. Fire resistant laboratory jacket or apron. An eyewash and emergency shower should be available. Launder clothing before reuse.

OTHER PRECAUTIONS

For research and industrial use only. Only personnel fully trained in the handling of pyrophoric materials should be permitted to work with this material.

Storage and Handling: Store in sealed containers.

Laboratory and production areas must be equipped with special fire-extinguishing media for pyrophorics. Flammable and combustible materials should not be stored in or near working areas for pyrophorics.

TRANSPORTATION

DOT SHIPPING NAME: ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER-REACTIVE (n-BUTYLLITHIUM, HYDROCARBON SOLUTON)

DOT HAZARD CLASS: 4.2

DOT LABEL: SPONTANEOUSLY COMBUSTIBLE, DANGEROUS WHEN WET

DOT ID No: UN3394

PG: I

Air transport and UPS forbidden.

Prepared by safety and environmental affairs

MSDS ISSUE DATE: OMLI012: 12/16/13

SUPERSEDES: none

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