

ACROS ORGANICS

Material Safety Data Sheet

Creation Date 06-Apr-2010

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Revision Number 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name n-Butyllithium, 2.5M solution in hexanes

Cat No. AC213350000; AC213350150; AC213351000; AC213351300;
AC213358000

Synonyms No information available.

Recommended Use Laboratory chemicals

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Entity / Business Name
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number
For information in the US, call: 800-ACROS-01
For information in Europe, call: +32 14 57 52
11

Emergency Number, Europe: +32 14 57 52 99
Emergency Number, US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-
9300
CHEMTREC Phone Number, Europe: 703-
527-3887

2. HAZARDS IDENTIFICATION

DANGER!

Emergency Overview

Extremely flammable liquid and vapor. Vapor may cause flash fire. Reacts violently with water. Contact with water liberates extremely flammable gases. Spontaneously flammable in air. Causes burns by all exposure routes. Vapors may cause drowsiness and dizziness. Aspiration hazard if swallowed - can enter lungs and cause damage. Danger of serious damage to health by prolonged exposure. Possible risk of impaired fertility. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Appearance Yellow

Physical State Liquid

odor Petroleum distillates

2. HAZARDS IDENTIFICATION

Target Organs Eyes, Respiratory system, Skin, Gastrointestinal tract (GI), Central nervous system (CNS), Liver

Potential Health Effects

Acute Effects

Principle Routes of Exposure

Eyes	Causes burns.
Skin	Causes burns. May be harmful in contact with skin.
Inhalation	Causes burns. May cause drowsiness and dizziness. May be harmful if inhaled.
Ingestion	Causes burns. Aspiration hazard. May be harmful if swallowed.

Chronic Effects Danger of serious damage to health by prolonged exposure. Tumorigenic effects have been reported in experimental animals.. Possible risk of impaired fertility. May cause adverse liver effects.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions Central nervous system disorders. Preexisting eye disorders. Skin disorders.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Haz/Non-haz

Component	CAS-No	Weight %
Hexane	110-54-3	77
Butyl lithium	109-72-8	23

4. FIRST AID MEASURES

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.

Ingestion Do not induce vomiting. Call a physician or Poison Control Center immediately.

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point -21°C / -5.8°F

Method No information available.

Autoignition Temperature 240°C / 464°F

Explosion Limits

Upper	7.40 vol %
Lower	1.20 vol %
Suitable Extinguishing Media	Dry chemical, soda ash, lime or sand. Cool closed containers exposed to fire with water spray.
Unsuitable Extinguishing Media	Carbon dioxide (CO2). DO NOT USE WATER!.
Hazardous Combustion Products	No information available.
Sensitivity to mechanical impact	No information available.
Sensitivity to static discharge	No information available.

Specific Hazards Arising from the Chemical

Extremely flammable. Spontaneously flammable in air.. Reacts violently with water. Contact with water liberates extremely flammable gases. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA **Health 3** **Flammability 3** **Instability 2** **Physical hazards W**

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Take precautionary measures against static discharges. Do not get in eyes, on skin, or on clothing.
Environmental Precautions	Should not be released into the environment.
Methods for Containment and Clean Up	Remove all sources of ignition. Do not expose spill to water. Soak up with inert absorbent material. Take precautionary measures against static discharges. Keep in suitable and closed containers for disposal.

7. HANDLING AND STORAGE

Handling	Use only under a chemical fume hood. Use explosion-proof equipment. Use only non-sparking tools. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Wear personal protective equipment. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Do not allow contact with water. Do not get water inside containers. Handle under an inert atmosphere.
Storage	Keep tightly closed in a dry and cool place. Keep away from heat and sources of ignition. Keep under nitrogen. Keep refrigerated. Flammables area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Measures

Use only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hexane	TWA: 50 ppm Skin	(Vacated) TWA: 180 mg/m ³ (Vacated) TWA: 50 ppm TWA: 500 ppm TWA: 1800 mg/m ³	IDLH: 1100 ppm TWA: 180 mg/m ³ TWA: 50 ppm

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Hexane	TWA: 176 mg/m ³ TWA: 50 ppm Skin	TWA: 176 mg/m ³ TWA: 50 ppm	TWA: 176 mg/m ³ TWA: 50 ppm

NIOSH IDLH: Immediately Dangerous to Life or Health

Personal Protective Equipment

Eyeface Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State

Liquid

Appearance

Yellow

odor

Petroleum distillates

Odor Threshold

No information available.

pH

No information available.

Vapor Pressure

160 mbar @ 20 °C

Vapor Density

No information available.

Viscosity

No information available.

Boiling Point/Range

60 - 80°C / 140 - 176°F @ 760 mmHg

Melting Point/Range

-95°C / -139°F

Decomposition temperature °C

No information available.

Flash Point

-21°C / -5.8°F

Evaporation Rate

No information available.

Specific Gravity

0.690

Solubility

Insoluble in water

log Pow

No data available

Molecular Weight

64.06

Molecular Formula

C4 H9 Li

10. STABILITY AND REACTIVITY

10. STABILITY AND REACTIVITY

Stability	Pyrophoric: Spontaneously flammable in air. Reacts violently with water. Air sensitive. Moisture sensitive.
Conditions to Avoid	Incompatible products. Heat, flames and sparks. Exposure to moist air or water. Exposure to air.
Incompatible Materials	Strong oxidizing agents, Halogens
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO ₂), Thermal decomposition can lead to release of irritating gases and vapors
Hazardous Polymerization	Hazardous polymerization does not occur
Hazardous Reactions .	Contact with water liberates extremely flammable gases.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information No acute toxicity information is available for this product

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hexane	25 g/kg (Rat)	3000 mg/kg (Rabbit)	48000 ppm (Rat) 4 h

Irritation Causes burns by all exposure routes

Toxicologically Synergistic Products No information available.

Chronic Toxicity

Carcinogenicity There are no known carcinogenic chemicals in this product

Sensitization No information available.

Mutagenic Effects Mutagenic effects have occurred in experimental animals.

Reproductive Effects Experiments have shown reproductive toxicity effects on laboratory animals.

Developmental Effects Developmental effects have occurred in experimental animals.

Teratogenicity Teratogenic effects have occurred in experimental animals..

Other Adverse Effects Tumorigenic effects have been reported in experimental animals.. See actual entry in RTECS for complete information.

Endocrine Disruptor Information No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Hexane	Not listed	Not listed	Not listed	EC50: 3.87 mg/L/48h

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available

Mobility .

Component	log Pow
Hexane	4.11

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification

14. TRANSPORT INFORMATION

DOT

UN-No UN3394
Proper Shipping Name ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER-REACTIVE
Hazard Class 4.2
Subsidiary Hazard Class 4.3, 3
Packing Group I

TDG

UN-No UN3394
Proper Shipping Name ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER-REACTIVE
Hazard Class 4.2
Subsidiary Hazard Class 4.3, 3
Packing Group I

IATA

UN-No UN3394
Proper Shipping Name ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER-REACTIVE
Hazard Class 4.2
Subsidiary Hazard Class 4.3, 3
Packing Group I

14. TRANSPORT INFORMATION

IMDG/IMO

UN-No UN3394
 Proper Shipping Name ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER-REACTIVE
 Hazard Class 4.2
 Subsidiary Hazard Class 4.3, 3
 Packing Group I

15. REGULATORY INFORMATION

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Hexane	X	X	-	203-777-6	-		X	X	X	X	KE-18626 X
Butyl lithium	X	X	-	203-698-7	-		X	X	X	X	KE-04320 X

Legend:

- X - Listed
- E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
- F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
- N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
- P - Indicates a commenced PMN substance
- R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
- S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
- T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
- XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).
- Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
- Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Hexane	110-54-3	77	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard Yes
 Chronic Health Hazard Yes
 Fire Hazard Yes

Sudden Release of Pressure Hazard
Reactive Hazard

No
 Yes

Clean Water Act
 Not applicable

Clean Air Act

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Hexane	X		-

OSHA
 Not applicable

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Hexane	5000 lb	-

California Proposition 65

This product does not contain any Proposition 65 chemicals.

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Hexane	X	X	X	X	X
Butyl lithium	-	X	X	-	-

U.S. Department of Transportation

Reportable Quantity (RQ): Y
 DOT Marine Pollutant N
 DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade Serious risk, Grade 3

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

B2 Flammable liquid
 B6 Reactive flammable material
 D2A Very toxic materials
 E Corrosive material



16. OTHER INFORMATION

Prepared By Regulatory Affairs
Thermo Fisher Scientific
Tel: (412) 490-8929

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Revision Summary "****", and red text indicates revision

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS