

# MATERIAL SAFETY DATA SHEET

## MC 2044

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### 1. PRODUCT AND COMPANY IDENTIFICATION

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TRADE NAME	MC 2044 Multi-Purpose Lithium Grease
PRODUCT DESCRIPTION	LUBRICATING GREASE
Product number	LX-1902
PRODUCT USE	Lubricating Grease
SUPPLIER	Lumax Lubrication Equipment 3705 Centre Circle Fort Mill, SC 29715 Tel: +01 (803) 548-3000 Tel: +01 (803) 547-0800
CONTACT PERSON	Lumax
EMERGENCY TELEPHONE	INFOTRAC U.S. and Canada - (800) 535-5053 Outside the U.S. and Canada - +01-352-323-3500
Date of last issue	2011-2-17

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### 2. COMPOSITION AND INFORMATION ON INGREDIENTS

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INGREDIENT NAME	CAS No.	WEIGHT
LUBRICATING OILS, PETROLEUM, BASE OILS, HIGHLY REFINED	Mixture**(2)	87-93 %
*LITHIUM STEARATE SOAP GREASE THICKENER	Mixture	5-10 %
*PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS	68649-42-3	0.5-1.5 %
*1-PROPENE-2-METHYL, SULFURIZED	68511-50-2	0.5-1.5 %
*1H-IMIDAZOLE-1-ETHANOL, 4,5-DIHYDRO-, 2-ALKYL DERIVS. (CAS# 95-38-5, 21652-27-7, OR 61791-39-7)	Varies	<0.5

\* This chemical(s) is hazardous according to OSHA/WHIMIS criteria

#### COMPOSITION COMMENTS

Refer to section eight (8) for exposure limits on ingredients.

Chemical ingredients not regulated by OSHA, SARA, state or federal agencies are treated confidentially.

\*\* (2) The base oil for this product can be a mixture of any of the following highly refined petroleum streams:

CAS 64741-88-4; CAS 64741-89-5; CAS 64741-95-3; CAS 64741-96-4; CAS 64741-97-5; CAS 64742-01-4; CAS 64742-52-5; CAS 64742-53-6; CAS 64742-54-7; CAS 64742-55-8; CAS 64742-56-9; CAS 64742-57-0; CAS 64742-62-7; CAS

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64742-63-8; CAS 64742-65-0; CAS 72623-83-7; CAS 72623-85-9; CAS 72623-86-0; CAS 72623-87-1. Carcinogenicity: The petroleum base oils contained in this product have been highly refined by a variety of processes including solvent extraction, solvent dewaxing and hydrotreating to remove aromatics and improve performance characteristics. All petroleum base oils contained in this product meet the IP 346 criteria of less than 3 percent DMSO extractable PAH's and are not considered carcinogens by IARC, NTP or OSHA.

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### 3. HAZARDS IDENTIFICATION

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#### EMERGENCY OVERVIEW

Irritating to eyes, respiratory system and skin. Repeated exposure may cause skin dryness or cracking.

<b>HEALTH HAZARDS, GENERAL</b>	Exposure to vapors generated at high temperatures may cause respiratory irritation.
<b>INHALATION</b>	May cause irritation to the respiratory system.
<b>INGESTION</b>	May cause stomach pain or vomiting.
<b>SKIN</b>	May cause skin irritation/eczema.
<b>EYES</b>	Irritating to eyes.
<b>SENSITIZATION</b>	No known information.
<b>CARCINOGENICITY</b>	IARC: Not listed as a Group 1, 2A, or 2B agent. OSHA: Not regulated. NTP: Not listed.
<b>TERATOGENICITY</b>	No data available to indicate product or any components contained at greater than 0.1% may cause birth defects.
<b>ROUTE OF ENTRY</b>	Inhalation. Skin and/or eye contact. Ingestion.
<b>MEDICAL SYMPTOMS</b>	MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

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### 4. FIRST AID MEASURES

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<b>INHALATION</b>	Vapor inhalation under ambient conditions is normally not a problem. If overcome by vapor of hot product, immediately remove from source of exposure. Move the exposed person to fresh air at once. For breathing difficulties oxygen may be necessary. Get medical attention if any discomfort continues.
<b>EYES</b>	Rinse the eye with water immediately. Continue to rinse for at least 15 minutes. Contact physician if discomfort continues.
<b>SKIN</b>	Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.
<b>INGESTION</b>	DO NOT INDUCE VOMITING! Get medical attention immediately! Do not give milk or oil. Drink large amounts of water. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

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### 5. FIRE FIGHTING MEASURES

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<b>FLASH POINT (°C)</b>	> 200 C (392 F ) PM Closed cup.
<b>FLAMMABILITY LIMIT - LOWER(%)</b>	N/D

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<b>FLAMMABILITY LIMIT - UPPER(%)</b>	N/D
<b>EXTINGUISHING MEDIA</b>	Use: Carbon dioxide (CO2). Dry chemicals, sand, dolomite etc. Alcohol resistant foam. Water spray, fog or mist.
<b>SPECIAL FIRE FIGHTING PROCEDURES</b>	Use water to keep fire exposed containers cool and disperse vapors. Water spray may be used to flush spills away from exposures and dilute spills to non-flammable mixtures. Avoid water in straight hose stream; will scatter and spread fire. Keep run-off water out of sewers and water sources. Dike for water control.
<b>UNUSUAL FIRE &amp; EXPLOSION HAZARDS</b>	Pressure will increase in over heated, closed containers.
<b>HAZARDOUS COMBUSTION PRODUCTS</b>	Acrid smoke/fumes. Oxides of: Carbon. Phosphorus.
<b>PROTECTIVE MEASURES IN CASE OF FIRE</b>	Self-contained breathing equipment and chemical resistant clothing recommended.

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## 6. ACCIDENTAL RELEASE MEASURES

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<b>PERSONAL PRECAUTIONS</b>	Minimize skin contact. Avoid breathing vapors. Wear an appropriate respirator if exposure exceeds recommended guidelines. Remove sources of ignition. Wear suitable eye protection.
<b>PRECAUTIONS TO PROTECT THE ENVIRONMENT</b>	Keep product out of sewers and watercourses by diking or impounding. Advise authorities if product has entered or may enter sewers, watercourses or extensive land areas. Assure conformity with applicable government regulations.
<b>SPILL CLEAN-UP PROCEDURES</b>	Contain spill. Absorb small amounts. Collect and return large amounts to shipping container. Rinse area with water.

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## 7. HANDLING AND STORAGE

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<b>HANDLING PRECAUTIONS</b>	Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Do not reuse container. Keep lid closed when not in use. Do not store or mix with strong oxidizers. Avoid spilling, skin and eye contact. Eye wash and emergency shower must be available at the work place.
<b>HANDLING DESCRIPTION</b>	Prevent small spills and leakages to avoid slip hazard.
<b>STORAGE PRECAUTIONS</b>	Store separate from strong acids and oxidizers. Keep away from heat, sparks and open flame.
<b>STORAGE CRITERIA</b>	Chemical storage.

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## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

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COMPONENT	STD	TWA	STEL	TWA	STEL
LUBRICATING OILS, PETROLEUM, BASE OILS, HIGHLY REFINED	OSHA			5 mg/m3 as oil mist	
	ACGIH			5 mg/m3 as oil mist	10 mg/m3 as oil mist
<b>PROTECTIVE EQUIPMENT</b>					

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<b>ENGINEERING CONTROLS</b>	Use engineering controls to reduce air contamination to permissible exposure level.
<b>VENTILATION</b>	No specific ventilation requirements noted, but forced ventilation may still be required if air contamination exceeds acceptable level.
<b>RESPIRATORS</b>	No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.
<b>PROTECTIVE GLOVES</b>	Chemical resistant gloves recommended to prevent prolonged or repeated contact. Use protective gloves made of: Latex.
<b>EYE PROTECTION</b>	Wear splash-proof eye goggles to prevent any possibility of eye contact.
<b>PROTECTIVE CLOTHING</b>	Wear appropriate clothing to prevent repeated or prolonged skin contact.
<b>HYGIENIC WORK PRACTICES</b>	Wash at the end of each work shift and before eating, smoking and using the toilet.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>APPEARANCE/PHYSICAL STATE</b>	Grease.		
<b>COLOR</b>	Amber.		
<b>ODOR</b>	Mild (or faint). Petroleum.		
<b>SOLUBILITY DESCRIPTION</b>	Insoluble in water.		
<b>DENSITY</b>	0.90	<b>Temperature (°C)</b>	15.6 (60°F)
<b>VAPOR DENSITY (air=1)</b>	> 5		
<b>VAPOR PRESSURE</b>	< 0.1 mmHg	<b>Temperature (°C)</b>	20 (68°F)
<b>EVAPORATION RATE</b>	< 0.01	<b>Reference</b>	BuAc=1
<b>pH-VALUE, CONC. SOLUTION</b>	N/D		
<b>VISCOSITY (interval)</b>	11.5 - 14.5 cSt	<b>Temperature (°C)</b>	100 C

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## 10. STABILITY AND REACTIVITY

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<b>STABILITY</b>	Normally stable.
<b>CONDITIONS TO AVOID</b>	Avoid contact with acids and oxidizing substances.
<b>HAZARDOUS POLYMERIZATION</b>	Will not occur.
<b>POLYMERIZATION DESCRIPTION</b>	Not applicable
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b>	Oxides of: Carbon. Phosphorus. Sulfur.

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## 11. TOXICOLOGICAL INFORMATION

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**TOXICOLOGICAL INFORMATION** No experimental toxicological data on the preparation as such is available.

<b>COMPONENT</b>	<b>LUBRICATING OILS, PETROLEUM, BASE OILS, HIGHLY REFINED</b>
<b>TOXICOLOGICAL DATA</b>	WHMIS (Canada) = Not a controlled product.
<b>TOXIC DOSE - LD 50</b>	> 5000 mg/kg (oral rat)
<b>TOXIC DOSE - LD 50 SKIN</b>	> 2000 mg/kg (skn rbt)
<b>TOXIC CONC. - LC 50</b>	No Information Available (NIA).
<b>IRRITATION</b>	Prolonged skin contact may cause irritation.
<b>SENSITIZATION</b>	Not known to be a sensitizer.
<b>COMPONENT</b>	<b>LITHIUM STEARATE SOAP GREASE THICKENER</b>
<b>TOXICOLOGICAL DATA</b>	Irritating effects. Open irritation test 24 hours. Skin. Rabbit. Slight (4 Hr) to Moderate (24 Hr) Irritant
	Irritating effects. Eye irritation test. 72 hours. Eye. Rabbit. Practically Non-Irritating
	Sensitization. Skin. Guinea pig. Not Sensitizing
	Chronic toxicity. Oral. Rat. 1,000 mg/kg
	Chronic toxicity. Skin. Rat. 2,100 mg/kg
<b>TOXIC DOSE - LD 50</b>	> 5,000 mg/kg (oral rat)
<b>TOXIC DOSE - LD 50 SKIN</b>	> 3,000 mg/kg (skn rbt)
<b>COMPONENT</b>	<b>PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS</b>
<b>TOXIC DOSE - LD 50</b>	4739 mg/kg (oral rat)
<b>TOXIC DOSE - LD 50 SKIN</b>	> 2000 mg/kg (skn rbt)
<b>COMPONENT</b>	<b>1-PROPENE-2-METHYL, SULFURIZED</b>

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## 12. ECOLOGICAL INFORMATION

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<b>ECOLOGICAL INFORMATION</b>	There is no ecological data on the product itself.
<b>COMPONENT</b>	<b>LUBRICATING OILS, PETROLEUM, BASE OILS, HIGHLY REFINED</b>
<b>COMPONENT</b>	<b>LITHIUM STEARATE SOAP GREASE THICKENER</b>
<b>ECOTOXICOLOGICAL DATA</b>	WGK 1
<b>COMPONENT</b>	<b>PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS</b>
<b>ECOTOXICOLOGICAL DATA</b>	WGK 2
<b>COMPONENT</b>	<b>1-PROPENE-2-METHYL, SULFURIZED</b>

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## 13. DISPOSAL CONSIDERATIONS

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**DISPOSAL METHODS** Spilled material, unused contents and empty containers must be disposed of in accordance with local, state and federal regulations.

## 14. TRANSPORT INFORMATION

**DOT HAZARD CLASS** Not regulated.  
**TDGR CLASS** Not regulated.  
**SEA TRANSPORT NOTES** Not regulated per IMDG.  
**AIR TRANSPORT NOTES** Not regulated per IATA.

## 15. REGULATORY INFORMATION

### US FEDERAL REGULATIONS

COMPONENT	SARA 302	CERCLA	SARA 313
LUBRICATING OILS, PETROLEUM, BASE OILS, HIGHLY REFINED	No	No	No
LITHIUM STEARATE SOAP GREASE THICKENER	No	No	No
PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS	No	***	N982 - Zn
1-PROPENE-2-METHYL, SULFURIZED	No	No	No
1H-IMIDAZOLE-1-ETHANOL, 4,5-DIHYDRO-, 2-ALKYL DERIVS. (CAS# 95-38-5, 21652-27-7, OR 61791-39-7)	No	No	No

**REGULATORY STATUS** \*\*\* Indicates that no RQ is assigned to this generic or broad class, although the class is a CERCLA hazardous substance. See 50 Federal Register 13456 (April 4, 1985). Values in Section 313 column represent Category Codes for reporting under Section 313.

### CLEAN AIR ACT

COMPONENT	CAA Accidental Release Prevention
LUBRICATING OILS, PETROLEUM, BASE OILS, HIGHLY REFINED	No
LITHIUM STEARATE SOAP GREASE THICKENER	No
PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS	No

**SARA HAZARD CATEGORIES** Acute Chronic

### US STATE REGULATIONS

COMPONENT	CA	MA	FL	MN	NJ	PA	RI
LUBRICATING OILS, PETROLEUM, BASE OILS, HIGHLY REFINED	No	No	No	No	No	No	No
LITHIUM STEARATE SOAP GREASE THICKENER	No	No	No	No	No	No	No
PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS	No	No	Yes	Yes	Yes	EH	No

**STATE REGULATORY STATUS** CALIFORNIA PROPOSITION 65: This product \*\*\*DOES NOT\*\*\* contain chemicals considered by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 as causing cancer or reproductive toxicity, and for which warnings are now required.

PENNSYLVANIA RIGHT-TO-KNOW: This product contains the following chemicals that

the state of Pennsylvania has identified as Special Hazardous Substances (SHS), Environmental Hazards (EH), or both (ESHS). The PA regulations require that the MSDS identify all SHS or EH chemicals by chemical name, common name, and CAS Number if they comprise 0.01% or more. CAS#68649-42-3, see sec. #2.

### WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM - WHMIS

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

#### LABEL(S) FOR SUPPLY



#### CONTROLLED PRODUCT CLASSIFICATION

D2B - Irritating and/or Chronically Toxic Materials

#### Risk phrases

Risk Phrases Applicable in the European Union (EU):  
 Classification per manufacturer.  
 R-22 Harmful if swallowed.  
 R-38 Irritating to skin.  
 R-51/53 Toxic to aquatic organisms, may cause long-term adverse effect in the aquatic environment.  
 Xi  
 Xn

#### GLOBAL INVENTORIES

COMPONENT	CAN	US	EU	AUS	JAP	KOR	PHLP	CHN
LUBRICATING OILS, PETROLEUM, BASE OILS, HIGHLY REFINED	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
LITHIUM STEARATE SOAP GREASE THICKENER	Yes	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
1-PROPENE-2-METHYL, SULFURIZED	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
1H-IMIDAZOLE-1-ETHANOL, 4,5-DIHYDRO-, 2-ALKYL DERIVS. (CAS# 95-38-5, 21652-27-7, OR 61791-39-7)	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes

#### USA (TSCA)

All components in this product are listed on the US Toxic Substances Control Act (TSCA) Inventory or are exempt from TSCA Inventory requirements.

#### CANADA (DSL)

All components in this product are listed on the Canada Domestic Substances List (DSL) or are exempt from DSL requirements.

#### EUROPE (EINECS/ELINCS/NLP)

All components in this product are listed on the European Inventory of New and Existing Chemical Substances (EINECS), the European List of Notified Chemical Substances (ELINCS), or the No Longer Polymers (NLP) list, or are exempt from EU listing requirements.

#### JAPAN (ENCS)

All components in this product are listed on the Japan Inventory of Existing and New Chemical Substances (ENCS) or are exempt from ENCS requirements.

#### PHILIPPINES (PICCS)

All components in this product are listed on the Philippines Inventory of Chemicals and Chemical Substances (PICCS) or are exempt from PICCS requirements.

#### KOREA (ECL)

All components in this product are listed on the Korea Existing Chemicals List (ECL) or

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are exempt from KECL requirements.

**CHINA (IECS)**

All components in this product are listed on the China Inventory of Existing Chemical Substances (IECS) or are exempt from IECS requirements.

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**16. OTHER INFORMATION**

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## NFPA-HMIS HAZARD RATING

**HEALTH**

Temporary incapacitation, injury (2) - HMIS/NFPA

**FLAMMABILITY**

Burns only if pre-heated (1) - HMIS/NFPA

**REACTIVITY**

Normally Stable (0) - HMIS/NFPA

**NPCA HMIS HAZARD INDEX**

Moderate: Moderately Toxic - May be harmful if inhaled or absorbed (2).

**PERSONAL PROTECTION INDEX**

B - Safety Eyewear and Gloves

**NPCA HMIS FLAMMABILITY INDEX**

Burns only if pre-heated (1).

**NPCA HMIS REACTIVITY INDEX**

Normally stable (0).

**Tariff Code (Schedule B)**

2710.19.3750 Lubricating greases, with or without additives.

**PREPARED BY**

Lumax

**DATE**

2011-02-17

**DISCLAIMER**

While the information and recommendations set forth herein are believed to be accurate as of the date thereof, the company makes no warranty with respect thereto and disclaims all liability from reliance therein.

\* Information revised since previous MSDS version

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