



MATERIAL SAFETY DATA SHEET

LITHIUM COMPLEX MOLY 3 or 5

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME Lithium Complex Moly 3 , Lithium Complex Moly 5

PART No. GW-LCM-1. GW-LCM-2, GW-LCM-3, GW-LCM-5

PRODUCT USE

SUPPLIER

Lubricating Grease

Grease Warehouse
2158 45th Ave. Suite 513
Highland, IN 46322
USA

EMERGENCY TELEPHONE

Tel: 1-866-573-8763
Fax: (219) 714-7958

CHEMTEL

U.S. and Canada – 1-800-255-3924

Outside the U.S. and Canada +01 813 248 0585

2. COMPOSITION, INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS No.	WEIGHT
PETROLEUM OILS, 150 BRIGHT STOCK (CAS NOS 64742-62-7 & 64742-65-0)	Mixture	30-50 %
DISTILLATES, PETROLEUM, HYDROTREATED HEAVY NAPHTHENIC	64742-52-5	10-40 %
*LITHIUM COMPLEX THICKENER	Proprietary	7-13 %
RESIDUAL OILS, PETROLEUM, SOLVENT DEASPHALTED	64741-95-3	5-10 %
*MOLYBDENUM SULFIDE (MoS ₂)	1317-33-5	2-6 %
CARBONIC ACID CALCIUM SALT (COMMON NAME: CALCIUM CARBONATE)	471-34-1	1-5 %
*PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS	68649-42-3	1-2 %
*ANTIMONY DIALKYLDITHIOCARBAMATE	Proprietary	<0.5 %

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

COMPOSITION COMMENTS

Refer to section eight for exposure limits on ingredients.
Chemical ingredients not regulated by OSHA, SARA, state or federal agencies are treated confidentially.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW	Exposure to vapors generated at high temperatures may cause respiratory irritation.
SENSITIZATION	No known information.
CARCINOGENICITY	IARC: Not listed as a Group 1, 2A, or 2B agent. OSHA: Not regulated. NTP: Not listed.
HEALTH WARNINGS	INHALATION. Heating can generate vapors that may cause respiratory irritation, nausea and headaches. Inhalation hazard at room temperature is unlikely due to the low volatility of this product. SKIN CONTACT. Repeated or prolonged contact can result in drying of the skin. EYE CONTACT. Slightly irritating. INGESTION. Can cause stomach ache and vomiting. Main hazard, if ingested, is aspiration into the lungs and subsequent pneumonitis.
ROUTE OF ENTRY	Inhalation. Skin and/or eye contact. Ingestion.
MEDICAL SYMPTOMS	MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not determined

4. FIRST AID MEASURES

INHALATION	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.
EYES	Rinse the eye with water immediately. Continue to rinse for at least 15 minutes. Contact physician if discomfort continues.
SKIN	Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.
INGESTION	DO NOT INDUCE VOMITING! Get medical attention immediately!

5. FIRE FIGHTING MEASURES

FLASH POINT (°C)	> 149 (300 °F) Cd OC (Cleveland open cup).
FLAMMABILITY LIMIT - LOWER(%)	N/D
FLAMMABILITY LIMIT - UPPER(%)	N/D
EXTINGUISHING MEDIA	Use: Carbon dioxide (CO ₂). Dry chemicals, sand, dolomite etc. Alcohol resistant foam. Water spray, fog or mist.
SPECIAL FIRE FIGHTING PROCEDURES	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.
UNUSUAL FIRE & EXPLOSION HAZARDS	Pressure will increase in over heated, closed containers.
HAZARDOUS COMBUSTION PRODUCTS	Acrid smoke/fumes. Oxides of: Carbon. Phosphorus. Sulfur.
PROTECTIVE MEASURES IN CASE OF FIRE	Self-contained breathing equipment and chemical resistant clothing recommended.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	Minimize skin contact.
PRECAUTIONS TO PROTECT THE ENVIRONMENT	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.
SPILL CLEAN-UP PROCEDURES	Keep all sources of ignition and hot metal surfaces away from spill. Avoid contact with eyes or skin. Place leaking containers in well ventilated area. If fire potential exists, blanket spill with foam or use water spray to disperse vapors. Contain spill to minimize contaminated area and facilitate salvage or disposal. To clean up spill, flush area sparingly with water or use absorbant material. Avoid discharge to natural water ways.

7. HANDLING AND STORAGE

HANDLING PRECAUTIONS	Keep away from heat, sparks and open flame. 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.
STORAGE PRECAUTIONS	Store separate from strong acids and oxidizers. Keep away from heat, sparks and open flame.
STORAGE CRITERIA	Chemical storage.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

COMPONENT	STD	TWA	STEL	TWA	STEL
PETROLEUM OILS, 150 BRIGHT STOCK (CAS NOS OSHA 64742-62-7 & 64742-65-0)				5 mg/m3 (oil mist)	
	ACGIH			5 mg/m3 (oil mist)	10 mg/m3 (oil mist)
DISTILLATES, PETROLEUM, HYDROTREATED HEAVY NAPHTHENIC	OSHA			5 mg/m3 (oil mist)	
	ACGIH			5 mg/m3 (oil mist)	10 mg/m3 (oil mist)
RESIDUAL OILS, PETROLEUM, SOLVENT DEASPHALTED	OSHA			5 mg/m3 (oil mist)	
	ACGIH			5 mg/m3 (oil mist)	10 mg/m3 (oil mist)
MOLYBDENUM SULFIDE (MoS2)	OSHA			N/E	
	ACGIH	3 mg/m3 (resp) as Mo		10 mg/m3 (ihl) as Mo	
CARBONIC ACID CALCIUM SALT (COMMON NAME: CALCIUM CARBONATE)	OSHA	10 mg/m3 (total)		5 mg/m3 (resp)	
	ACGIH			10 mg/m3 **(e)	
ANTIMONY DIALKYL DITHIOCARBAMATE	OSHA			0.5 mg/m3 as Sb	
	ACGIH			0.5 mg/m3 as Sb	

INGREDIENT COMMENTS

**ACGIH (e): Total dust, containing no asbestos and <1% crystalline silica

PROTECTIVE EQUIPMENT**ENGINEERING CONTROLS**

Use engineering controls to reduce air contamination to permissible exposure level.

VENTILATION

No specific ventilation requirements noted, but forced ventilation may still be required if air contamination exceeds acceptable level.

RESPIRATORS

No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.

PROTECTIVE GLOVES

Chemical resistant gloves recommended to prevent prolonged or repeated contact.

EYE PROTECTION

Use eye protection.

PROTECTIVE CLOTHING

Wear appropriate clothing to prevent repeated or prolonged skin contact.

HYGIENIC WORK PRACTICES

Wash at the end of each work shift and before eating, smoking and using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES**APPEARANCE/PHYSICAL STATE**

Grease.

COLOR

Grey.

ODOR

Mild (or faint). Petroleum.

SOLUBILITY DESCRIPTION

Insoluble in water.

**SOLUBILITY VALUE (g/100g H₂O
20°C)**

< 0.1

DENSITY

0.90

Temperature (°C)

15.6 (60 °F)

VAPOR DENSITY (air=1)

> 5

VAPOR PRESSURE

< 0.01 mmHg

Temperature (°C)

20 (68 °F)

EVAPORATION RATE

< 1

Reference

BuAc=1

pH-VALUE, CONC. SOLUTION

N/A

10. STABILITY AND REACTIVITY**STABILITY**

Normally stable.

CONDITIONS TO AVOID

Avoid contact with acids and oxidizing substances.

HAZARDOUS POLYMERIZATION

Will not occur.

POLYMERIZATION DESCRIPTION

Not applicable

**HAZARDOUS DECOMPOSITION
PRODUCTS**

Oxides of: Carbon. Phosphorus. Sulfur.

11. TOXICOLOGICAL INFORMATION**TOXICOLOGICAL
INFORMATION**

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

COMPONENT**PETROLEUM OILS, 150 BRIGHT STOCK (CAS NOS 64742-62-7 & 64742-65-0)****TOXICOLOGICAL DATA**

Corrosive effects. Draize Eye. Rabbit. Draize: 6-15

TOXIC DOSE - LD 50

> 2000 mg/kg (oral rat)

TOXIC DOSE - LD 50 SKIN

> 2000 mg/kg (skn rbt)

TOXIC CONC. - LC 50

> 5 mg/l/4h (inh-rat)

CARCINOGENICITY

Base oils in this product contain < 3% DMSO Extractable total polycyclic aromatic compound (PAC) per IP 346.

DISTILLATES, PETROLEUM, HYDROTREATED HEAVY NAPHTHENIC**COMPONENT**

Carcinogenicity. IP 346 <3%

TOXICOLOGICAL DATA

> 5000 mg/kg (oral rat)

TOXIC DOSE - LD 50

> 2000 mg/kg (skn rbt)

TOXIC DOSE - LD 50 SKIN

N/A.

TOXIC CONC. - LC 50

The petroleum base oil contained in this product has been highly refined to remove aromatics and improve performance characteristics. The base oil is not listed as a carcinogen by NTP, IARC, or OSHA.

CARCINOGENICITY**LITHIUM COMPLEX THICKENER****COMPONENT**

N/A.

TOXIC DOSE - LD 50

N/A.

TOXIC CONC. - LC 50**12. ECOLOGICAL INFORMATION****ECOLOGICAL INFORMATION**

There is no ecological data on the product itself.

13. DISPOSAL CONSIDERATIONS**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.

IDENTIFICATION No.

N/A

U.S. DOT HAZARD LABEL	No DOT label requirement
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
LITHIUM COMPLEX THICKENER	No	No	No
RESIDUAL OILS, PETROLEUM, SOLVENT DEASPHALTED	No	No	No
MOLYBDENUM SULFIDE (MoS ₂)	No	No	No
CARBONIC ACID CALCIUM SALT (COMMON NAME: CALCIUM CARBONATE)	No	No	No
PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS	No	***	N982 - Zn
ANTIMONY DIALKYLDITHIOCARBAMATE	No	***	N010 - Sb
PETROLEUM OILS, 150 BRIGHT STOCK (CAS NOS 64742-62-7 & 64742-65-0)	No	No	No
DISTILLATES, PETROLEUM, HYDROTREATED HEAVY NAPHTHENIC	No	No	No

*** 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.

US STATE REGULATIONS: BY COMPONENT	CA	MA	FL	MN	NJ	PA	RI
PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS				Yes	Yes	EH	
ANTIMONY DIALKYLDITHIOCARBAMATE				Yes		EH	

INVENTORIES: COMPONENT	CAN	US	EU	AUS	JAP	KOR	PHLP	CHN
PETROLEUM OILS, 150 BRIGHT STOCK (CAS NOS DSL 64742-62-7 & 64742-65-0)		Yes	EINECS	Yes	Yes	Yes	Yes	Yes
DISTILLATES, PETROLEUM, HYDROTREATED HEAVY NAPHTHENIC	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
LITHIUM COMPLEX THICKENER	DSL	Yes	EINECS	No	Yes	Yes	No	No
MOLYBDENUM SULFIDE (MoS ₂)	DSL	Yes	EINECS	Yes	PRTR1	Yes	Yes	Yes
CARBONIC ACID CALCIUM SALT (COMMON NAME: CALCIUM CARBONATE)	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS	NPRI	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
ANTIMONY DIALKYLDITHIOCARBAMATE	NPRI	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
RESIDUAL OILS, PETROLEUM, SOLVENT DEASPHALTED	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes

The National Pollutant Release Inventory (NPRI) requires companies in Canada to report information on releases and transfers of pollutants to the Government of

Canada on an annual basis.

16. OTHER INFORMATION

NFPA-HMIS: HEALTH	Irritation, minor residual injury (1) - HMIS/NFPA
NFPA-HMIS: FLAMMABILITY	Burns only if pre-heated (1) - HMIS/NFPA
NFPA-HMIS: REACTIVITY	Normally Stable (0) - HMIS/NFPA
HMIS PERSONAL PROTECTION INDEX	B - Safety Eyewear and Gloves
REVISION COMMENTS	Section 15: Inventory Status * Information revised since previous MSDS version.
PREPARED BY	Garry Adams
Replacement MSDS of	2005-02-11
DATE	2007-08-25
PRINTING DATE:	2007-08-25
DISCLAIMER	While the information and recommendations set forth herein are believed to be accurate as of the date thereof, Grease Warehouse makes no warranty with respect thereto and disclaims all liability from reliance therein.