MATERIAL SAFETY DATA SHEET
LUBRIMATIC MULTI-PURPOSE LITHIUM GREASE
(11300-11302-11306-11315-11316-11328-11330-11332)

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: LUBRIMATIC MULTI-PURPOSE LITHIUM GREASE
PART No.: 329050
PRODUCT USE: Lubricating Grease
SUPPLIER: Chemtool Incorporated
P.O. Box 538
8200 Ridgefield Road
Crystal Lake, IL 60039-0538 USA
Tel: (815) 459-1250
Fax: (815) 459-1955

EMERGENCY TELEPHONE
Infotrac
U.S. and Canada - (800) 535-5053
Outside the U.S. and Canada - +01-352-323-3500

2. COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT NAME</th>
<th>CAS No.</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>LUBRICANT BASE OIL (PETROLEUM), HIGHLY REFINED**(2)</td>
<td>Mixture</td>
<td>70-90 %</td>
</tr>
<tr>
<td>LITHIUM SOAP AND MIXED BASE THICKENERS</td>
<td>Proprietary</td>
<td>5-15 %</td>
</tr>
<tr>
<td>PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS</td>
<td>68649-42-3</td>
<td>&lt;1 %</td>
</tr>
<tr>
<td>BENZENESULFONIC ACID, DODECYL-, CALCIUM SALT</td>
<td>26264-06-2</td>
<td>&lt;0.5 %</td>
</tr>
<tr>
<td>CARBON BLACK</td>
<td>1333-86-4</td>
<td>&lt;0.2 %</td>
</tr>
<tr>
<td>ANTIMONY DIALKYLDITHIOCARBAMATE (NJTSRN 800983-5015P OR CAS# 15890-25-2)</td>
<td>Proprietary</td>
<td>&lt;0.1 %</td>
</tr>
</tbody>
</table>

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

**(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 64741-96-4; 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 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. None of the oils used are listed as a carcinogen by NTP, IARC, or OSHA.

3. HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

3.1.1 HEALTH HAZARDS, GENERAL
Exposure to vapors generated at high temperatures may cause respiratory irritation.

3.1.2 SENSITIZATION
No known information.

3.1.3 CARCINOGENICITY
See Section 11 for carcinogenicity data of ingredients.

3.1.4 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. Irritating. INGESTION. Can cause stomach ache and vomiting. Main hazard, if ingested, is aspiration into the lungs and subsequent pneumonitis.

3.2 ROUTE OF ENTRY
Inhalation. Skin and/or eye contact. Ingestion.

3.3 MEDICAL SYMPTOMS
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not determined

4. FIRST AID MEASURES

4.1 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.

4.2 EYES
Rinse the eye with water immediately. Continue to rinse for at least 15 minutes. Contact physician if discomfort continues.

4.3 SKIN
Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.

4.4 INGESTION
DO NOT INDUCE VOMITING! Get medical attention immediately!

5. FIRE FIGHTING MEASURES

5.1 FLASH POINT (°C)
224 (435°F) Cd OC (Cleveland open cup).

5.2 FLAMMABILITY LIMIT - LOWER(%)
N/D

5.3 FLAMMABILITY LIMIT - UPPER(%)
N/D

5.4 EXTINGUISHING MEDIA
Use: Carbon dioxide (CO2). Dry chemicals, sand, dolomite etc. Alcohol resistant foam. Water spray, fog or mist.

5.5 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
Oxides of: Carbon.

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
Contain spill. Absorb small amounts. Collect and return large amounts to shipping container. Rinse area with water.

7. HANDLING AND STORAGE

HANDLING PRECAUTIONS
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

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>STD</th>
<th>TWA</th>
<th>STEL</th>
<th>TWA</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>LUBRICANT BASE OIL (PETROLEUM), HIGHLY Refined**(2)</td>
<td>OSHA</td>
<td></td>
<td></td>
<td>5 mg/m3 (oil mist)</td>
<td></td>
</tr>
<tr>
<td>CARBON BLACK</td>
<td>OSHA</td>
<td></td>
<td></td>
<td>3.5 mg/m3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ACGIH</td>
<td>3.5 mg/m3</td>
<td>**Ca</td>
<td>**A4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NIOSH</td>
<td>0.5 mg/m3 as Sb</td>
<td></td>
<td></td>
<td></td>
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<td>0.5 mg/m3 as Sb</td>
<td></td>
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</tr>
<tr>
<td>ANTIMONY DIALKYLTHIOCARBAMATE (NJTSRN 80093-501SP OR CAS# 15890-25-2)</td>
<td>OSHA</td>
<td></td>
<td></td>
<td>0.5 mg/m3 as Sb</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ACGIH</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

INGREDIENT COMMENTS
**ACGIH A4: Not Classifiable as a Human Carcinogen.
**NIOSH Ca: Potential Occupational Carcinogen.

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
Wear splash-proof eye goggles to prevent any possibility of eye contact.

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
Black.

ODOR
Mild (or faint). Petroleum.

SOLUBILITY DESCRIPTION
Insoluble in water.

DENSITY
0.89

Temperature (°C)
15.6 (60°F)

VAPOR DENSITY (air=1)
> 5

VAPOR PRESSURE
< 0.1 mmHg

Temperature (°C)
20 (68°F)

EVAPORATION RATE
< 0.01

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.
11. TOXICOLOGICAL INFORMATION

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

COMPONENT
LUBRICANT BASE OIL (PETROLEUM), HIGHLY Refined**(2)

TOXIC DATA
Carcinogenicity. IP 346 <3%

TOXIC DOSE - LD 50
> 5000 mg/kg (oral rat)

TOXIC DOSE - LD 50 SKIN
> 2000 mg/kg (skn rbt)

TOXIC CONC. - LC 50
N/A.

COMPONENT
CARBON BLACK

TOXIC DATA
Carcinogenicity. WHMIS (Canada) D2A
Acute toxicity. TCLo 6 hours. Inhalation. Rat. 7 mg/m3

TOXIC DOSE - LD 50
> 15400 mg/kg (oral rat)

TOXIC DOSE - LD 50 SKIN
> 3000 mg/kg (skn rbt)

CARCINOGENICITY
NTP: Not listed. MAK-3 designation: Substances which cause concern that they could be carcinogenic for man. IARC-2B: The agent is possibly carcinogenic to humans (limited evidence of carcinogenicity in humans).

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.

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
--- | --- | --- | ---
LUBRICANT BASE OIL (PETROLEUM), HIGHLY Refined**(2) | No | No | No
LITHIUM SOAP AND MIXED BASE THICKENERS | No | No | No
BENZENESULFONIC ACID, DOCECYL-, CALCIUM SALT | No | 1 000 lbs | No
CARBON BLACK | No | No | No
ANTIMONY DIALKYLDITHIOCARBAMATE (NJTSRN 800983-5015P OR CAS# 15890-25-2) | No | *** | N010 - Sb
PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS | No | *** | N982 - Zn

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

SARA HAZARD CATEGORIES

None

US STATE REGULATIONS

COMPONENT | CA | MA | FL | MN | NJ | PA | RI
--- | --- | --- | --- | --- | --- | --- | ---
LUBRICANT BASE OIL (PETROLEUM), HIGHLY Refined**(2) | Yes | Yes | | | | | 
PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS | Yes | Yes | EH | | | | 
BENZENESULFONIC ACID, DOCECYL-, CALCIUM SALT | | | | EH | | | 
CARBON BLACK | C | Yes | Yes | HS | | | 
ANTIMONY DIALKYLDITHIOCARBAMATE (NJTSRN 800983-5015P OR CAS# 15890-25-2) | Yes | EH | | | | | 

STATE REGULATORY STATUS

CALIFORNIA PROPOSITION 65: This product may contain the following chemical(s) 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:
Carbon black (airborne, unbound particles of respirable size), cancer hazard, CAS# 1333-86-4.

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 (ESH). 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.
Zinc compounds regulated under CERCLA and SARA 313, Environmental Hazard Antimony compounds regulated under CERCLA and SARA 313, Environmental Hazard Benznesulfonic acid, dodecyl-, sodium salt, Environmental Hazard, CAS# 25155-30-0

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.
12271 - LUBRIMATIC MULTI-PURPOSE LITHIUM GREASE (11300)

CONTROLLED PRODUCT CLASSIFICATION

Not a controlled product.

GLOBAL INVENTORIES

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAN</th>
<th>US</th>
<th>EU</th>
<th>AUS</th>
<th>JAP</th>
<th>KOR</th>
<th>PHLP</th>
<th>CHN</th>
</tr>
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<tbody>
<tr>
<td>BENZENESULFONIC ACID, DODECYL-, CALCIUM SALT</td>
<td>DSL</td>
<td>Yes</td>
<td>EINECS</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>CARBON BLACK</td>
<td>DSL</td>
<td>Yes</td>
<td>EINECS</td>
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</tr>
<tr>
<td>ANTIMONY DIALKYLDITHIOCARBAMATE (NJTSRN 800983-5015P OR CAS# 15890-25-2)</td>
<td>NPRI</td>
<td>Yes</td>
<td>EINECS</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>LUBRICANT BASE OIL (PETROLEUM), HIGHLY Refined**(2)</td>
<td>DSL</td>
<td>Yes</td>
<td>EINECS</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>LITHIUM SOAP AND MIXED BASE THICKENERS</td>
<td>DSL</td>
<td>Yes</td>
<td>EINECS</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS</td>
<td>NPRI</td>
<td>Yes</td>
<td>EINECS</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
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</table>

CANADA CEPA: All components of this product comply with new substance notification requirements under the Canadian Environmental Protection Act (CEPA).

16. OTHER INFORMATION

NFPA-HMIS HAZARD RATING

HEALTH
Irritation, minor residual injury (1) - HMIS/NFPA

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

REACTIVITY
Normally Stable (0) - HMIS/NFPA

PERSONAL PROTECTION INDEX
B - Safety Eyewear and Gloves

REVISION COMMENTS
Section 2: Ingredients
Section 8: Exposure Limits.
Section 11: Toxicological Information
Section 15: WHMIS

PREPARED BY
John Dingess
James W. Hermann

Replacement MSDS of
2003-09-03

DATE
2005-10-28

PRINTING DATE:
2006-01-03

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