



MATERIAL SAFETY DATA SHEET

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

1. PRODUCT AND COMPANY IDENTIFICATION

| | |
|----------------------------|--|
| TRADE NAME | LUBRIMATIC MULTI-PURPOSE LITHIUM GREASE (11300-11302-11306-11315-11316-11328-11330-11332) |
| PRODUCT DESCRIPTION | LUBRICATING GREASE |
| PRODUCT NUMBER | 11300, 11302, 11306, 11315, 11316, 11328, 11330, 11332, MBK99000A0 |
| PRODUCT USE | Lubricating Grease |
| MANUFACTURER | Chemtool, Incorporated 801 West Rockton Rd. Rockton, IL 61072 U.S.A |
| DISTRIBUTOR | Plews/Edelmann 1550 Franklin Grove Road Dixon, IL 61021 U.S.A. Tel: +01(815) 288 - 3344 |
| EMERGENCY TELEPHONE | CHEMTREC +1 800 424 9300 - Outside the US +01 703 527 3887 [for Plews/Edelmann] |
| Date of last issue | 2010-01-27 |

2. COMPOSITION AND INFORMATION ON INGREDIENTS

| INGREDIENT NAME | CAS No. | WEIGHT |
|---|--------------|---------|
| LUBRICATING OILS, PETROLEUM, BASE OILS, HIGHLY REFINED (IP346 DMSO Extracts <3%) | Mixture**(2) | 70-90 % |
| *LITHIUM SOAP AND MIXED BASE THICKENERS | Proprietary | 5-15 % |
| *PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS | 68649-42-3 | <1 % |
| *BENZENESULFONIC ACID, DODECYL-, CALCIUM SALT | 26264-06-2 | <0.5 % |
| *CARBON BLACK | 1333-86-4 | <0.2 % |
| *ANTIMONY DIALKYL DITHIOCARBAMATE | Proprietary | <0.1 % |

* 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 or SARA 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 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.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

| | |
|--------------------------------|---|
| HEALTH HAZARDS, GENERAL | Exposure to vapors generated at high temperatures may cause respiratory irritation. |
| SENSITIZATION | No known information. |
| CARCINOGENICITY | See Section 11 for carcinogenicity data of ingredients. |
| 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. |
| ROUTE OF ENTRY | Inhalation. Skin and/or eye contact. Ingestion. |
| MEDICAL SYMPTOMS | MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: allergy, eczema and skin conditions. |

4. FIRST AID MEASURES

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| 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

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|--------------------------------------|---|
| FLASH POINT (°C) | 224 (435°F) Cd OC (Cleveland open cup). |
| FLAMMABILITY LIMIT - LOWER(%) | N/D |

| | |
|---|---|
| FLAMMABILITY LIMIT - UPPER(%) | N/D |
| EXTINGUISHING MEDIA | Use: Carbon dioxide (CO2). 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 | Oxides of: Carbon. |
| PROTECTIVE MEASURES IN CASE OF FIRE | Self-contained breathing equipment and chemical resistant clothing recommended. |

6. ACCIDENTAL RELEASE MEASURES

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| 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

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| 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 AND PERSONAL PROTECTION

| COMPONENT | STD | TWA | STEL | TWA | STEL |
|--|-------|-----------|------|---------------------|----------------------|
| LUBRICATING OILS, PETROLEUM, BASE OILS, HIGHLY REFINED (IP346 DMSO Extracts <3%) | OSHA | | | 5 mg/m3 as oil mist | |
| CARBON BLACK | ACGIH | | | 5 mg/m3 as oil mist | 10 mg/m3 as oil mist |
| | OSHA | | | 3.5 mg/m3 | |
| | ACGIH | | | 3.5 mg/m3 | **A4 |
| ANTIMONY DIALKYL DITHIOCARBAMATE | NIOSH | 3.5 mg/m3 | **Ca | | |
| | OSHA | | | 0.5 mg/m3 as Sb | |
| | ACGIH | | | 0.5 mg/m3 as Sb | |

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

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|---------------------------------|--|
| 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 **LUBRICATING OILS, PETROLEUM, BASE OILS, HIGHLY REFINED (IP346 DMSO Extracts <3%)**

TOXICOLOGICAL DATA WHMIS (Canada) = Not a controlled product.
Carcinogenicity. IP 346 = <3% DMSO Extracts.
TOXIC DOSE - LD 50 > 5000 mg/kg (oral rat)
TOXIC DOSE - LD 50 SKIN > 2000 mg/kg (skn rbt)
TOXIC CONC. - LC 50 No Information Available (NIA).
IRRITATION Prolonged skin contact may cause irritation.
SENSITIZATION Not known to be a sensitizer.

COMPONENT **LITHIUM SOAP AND MIXED BASE THICKENERS**

TOXIC DOSE - LD 50 No Information Available (NIA).
TOXIC CONC. - LC 50 No Information Available (NIA).

COMPONENT **CARBON BLACK**

TOXICOLOGICAL DATA WHMIS (Canada) D2A
Acute toxicity. TCl_o 6 hours. Inhalation. Rat. 7 mg/m³
Irritating effects. Skin. Slight Irritant (0.6/8)
Carcinogenicity. IARC = 2B
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 |
|--|----------|-----------|-----------|
| LUBRICATING OILS, PETROLEUM, BASE OILS, HIGHLY REFINED (IP346 DMSO Extracts <3%) | No | No | No |
| LITHIUM SOAP AND MIXED BASE THICKENERS | No | No | No |
| PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS | No | *** | N982 - Zn |
| BENZENESULFONIC ACID, DODECYL-, CALCIUM SALT | No | 1 000 lbs | No |
| CARBON BLACK | No | No | No |
| ANTIMONY DIALKYL DITHIOCARBAMATE | No | *** | N010 - Sb |

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 (IP346 DMSO Extracts <3%) | No |
| LITHIUM SOAP AND MIXED BASE THICKENERS | No |
| BENZENESULFONIC ACID, DODECYL-, CALCIUM SALT | No |
| CARBON BLACK | No |
| ANTIMONY DIALKYL DITHIOCARBAMATE | No |
| PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS | No |

SARA HAZARD CATEGORIES None

US STATE REGULATIONS

| COMPONENT | CA | MA | FL | MN | NJ | PA | RI |
|--|----|-----|-----|-----|-----|----|----|
| LUBRICATING OILS, PETROLEUM, BASE OILS, HIGHLY REFINED (IP346 DMSO Extracts <3%) | No | No | No | No | No | No | No |
| LITHIUM SOAP AND MIXED BASE THICKENERS | 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 |
| BENZENESULFONIC ACID, DODECYL-, CALCIUM SALT | No | Yes | No | No | Yes | EH | No |

| | | | | | | | |
|----------------------------------|----|-----|----|----|-----|----|----|
| CARBON BLACK | C | Yes | No | No | Yes | HS | No |
| ANTIMONY DIALKYL DITHIOCARBAMATE | No | No | No | No | No | No | No |

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 (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.

Zinc compounds regulated under CERCLA and SARA 313, Environmental Hazard
Antimony compounds regulated under CERCLA and SARA 313, Environmental Hazard

Benzenesulfonic 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.

CONTROLLED PRODUCT CLASSIFICATION

Not a controlled product.

GLOBAL INVENTORIES

| COMPONENT | CAN | US | EU | AUS | JAP | KOR | PHLP | CHN |
|--|------|-----|--------|-----|-----|-----|------|-----|
| CARBON BLACK | DSL | Yes | EINECS | Yes | Yes | Yes | Yes | Yes |
| ANTIMONY DIALKYL DITHIOCARBAMATE | NPRI | Yes | EINECS | Yes | Yes | Yes | Yes | Yes |
| BENZENESULFONIC ACID, DODECYL-, CALCIUM SALT | DSL | Yes | EINECS | Yes | Yes | Yes | Yes | Yes |
| LUBRICATING OILS, PETROLEUM, BASE OILS, HIGHLY REFINED (IP346 DMSO Extracts <3%) | DSL | Yes | EINECS | Yes | Yes | Yes | Yes | Yes |
| LITHIUM SOAP AND MIXED BASE THICKENERS | DSL | Yes | EINECS | No | Yes | Yes | No | No |
| PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS | DSL | Yes | EINECS | Yes | Yes | Yes | Yes | Yes |

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

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.

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|----------------------------|--|
| 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) | This product contains one or more components that are NOT LISTED on the Philippines Inventory of Chemicals and Chemical Substances (PICCS) and are NOT EXEMPT from PICCS requirements. |
| AUSTRALIA (AICS) | This product contains one or more components that are NOT LISTED on the Australian Inventory of Chemical Substances (AICS) and are NOT EXEMPT from AICS requirements. |
| KOREA (ECL) | All components in this product are listed on the Korea Existing Chemicals List (ECL) or are exempt from KECL requirements. |
| CHINA (IECS) | This product contains one or more components that are NOT LISTED on the China Inventory of Existing Chemical Substances (IECS) and are NOT EXEMPT from IECS requirements. |

16. OTHER INFORMATION

NFPA-HMIS HAZARD RATING

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|--|--|
| HEALTH | Irritation, minor residual injury (1) - HMIS/NFPA |
| FLAMMABILITY | Burns only if pre-heated (1) - HMIS/NFPA |
| REACTIVITY | Normally Stable (0) - HMIS/NFPA |
| NPCA HMIS HAZARD INDEX | Slight: Slightly Toxic - May cause slight irritation (1). |
| 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. |
| REVISION COMMENTS | Section 1: Product Number Section 1: Manufacturer Section 1: Distributor Section 1: Emergency Telephone |
| PREPARED BY | Chemtool, Incorporated |
| Replacement of MSDS generated | 2009-01-05 |
| MSDS No. | 12271 |
| DATE | 2010-01-27 |
| 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 SOURCES | Raw Material MSDS(s). |
| * Information revised since previous MSDS version | |
| PRINTING DATE: | 2010-01-27 |
