MATERIAL SAFETY DATA SHEET

MSDS # G4

ARCTIC FIRE LITHOLINE MOLY D1 EP

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: **Litholine Moly D1 EP**

PRODUCT CODES:

SYNONYMS: Lubricating Grease

EMERGENCY PHONE: CHEMTREC – (800) 424-9300 or (703) 527-3887 (collect)

SUPPLIER: Sinclair Oil Corporation
P.O. Box 30825
Salt Lake City, Utah 84130

TELEPHONE / FAX: (888) 340-3466 / (801) 524-2740

2. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENTS	CAS#	Typical wt.%
Petroleum Residual Oils, Solvent Refined	64742-01-4	10-30
Severely Hydro-treated, Heavy Naphthenic, Petroleum Distillates	64742-52-5	70-100
Phosphorodithioic Acid O,O-DI-CI-14-Alkyl Esters Zinc Salts	68649-42-3	1-5
Molybdenum Sulfide	1317-33-5	1-5

3. HAZARDS IDENTIFICATION

APPEARANCE: Grey

PHYSICAL STATE: Grease

ODOR: Mild petroleum odor

EMERGENCY OVERVIEW: Exposure to vapors generated at high temperatures, may cause respiratory irritation.

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.

EYE CONTACT: Contact may result in slight eye irritation

SKIN CONTACT: Prolonged or repeated liquid contact can cause dermatitis, folliculitis.

INGESTION: Can cause stomachache and vomiting. Main hazard, if ingested, is aspiration into the lungs and subsequent pneumonitis.

CARCINOGENICITY: Not Listed in IARC, OSHA, or NTP

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.

EYE CONTACT: Flush immediately with water for at least 15 minutes. If symptoms or irritation persist seek medical attention promptly.

SKIN CONTACT: Wash contact areas with soap and water. Launder contaminated clothing before reuse. Get medical attention if irritation persists.

INGESTION: DO NOT INDUCE VOMITING get medical attention.

5. FIRE FIGHTING MEASURES

FLASH POINT: >435ºF COC (Cleveland Open cup)

FLAMMABLE LIMITS: Not Determined

AUTOIGNITION TEMPERATURE: Not Determined

FLAMMABILTY CLASSIFICATION: NFPA Flammability =1

FIRE FIGHTING INSTRUCTIONS: Special Fire Fighting Procedure: Use water spray to cool fire exposed surfaces and to protect personnel. Isolate "fuel" supply from fire. Avoid spraying water directly into storage containers due to danger of scattering and spreading the fire. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure NIOSH approved shelf-contained breathing apparatus.

UNUSUAL FIRE OR EXPLOSION HAZARD: Water may cause frothing. Containers exposed to intense heat from fires should be cooled with water to prevent vapor pressure buildup which could result in container rupture. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT , FLAME, SPARKS, STATIC ELECTRICITY, OROTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, properly bunged and promptly returned to a drum re-conditioner, or properly disposed of.

FIRE FIGHTING MEDIA: CO_2, dry chemical, foam, water fog, (water may cause frothing)

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon and sulfur

6. ACCIDENTAL RELEASE MEASURES

SPILL PROCEDURES:
-Remove sources of heat or ignition.
-Provide adequate ventilation

-Small Spills: Take up with noncombustible absorbent such as fullers earth or sand. Place into containers for later disposal.
-Large Spills: Contain spill in earthen dikes for later recover. Control ignition sources around spill area. Report spills as required to appropriate authorities. Report spill to Coast Guard toll free number (800) 424-8802 for spills that could reach any waterway including intermittent dry creeks. In case of accident or road spill notify Sinclair Oil Corporation at (888) 340-3466 or Chemtrec Emergency Spill (800) 365-7300

7. HANDLING AND STORAGE

STORAGE / HANDLING: Comply with all applicable OSHA, NFPA and consistent local requirements. Store in properly closed containers that are appropriately labeled and in a cool well-ventilated area. Do not cut, drill, grind or weld on empty containers since they may contain explosive residues. Do not pressurize or expose to heat or open flame, strong acids, strong oxidizers or other sources of ignition. Avoid repeated or prolonged skin contact or contact with your eyes. Exercise good personal hygiene including removal of soiled clothing and prompt washing with soap and water.

8. EXPOSURE CONTROLS, RESPIRATORY & PERSONAL PROTECTION

ENGINEERING CONTROLS: Local or general exhaust required when using at elevated temperatures that generate vapors or mists. Use in well-ventilated confined spaces, mechanical ventilation may be required to keep levels of certain components below mandated standards. Responsible individuals should evaluate the concentrations of specific regulated chemicals.

PERSONAL PROTECTION:

PROTECTIVE CLOTHING: Wear body-covering work clothes to avoid prolonged or repeated exposure. Launder soiled work clothes before reuse. Safety goggles, or chemical splash goggles if splashing is anticipated. Wear oil impervious gloves if frequent or prolonged contact is expected.

RESPIRATOR: Not normally required for routine operations. Approved organic vapor chemical cartridge or supplied air respirators should be worn when excessive vapors or mists are generated. Observe respirator protection factor criteria cited in ANSI Z88.2. Self-contained breathing apparatus should be used for fire fighting.

OCUPATIONAL EXPOSURE LIMITS

COMPONENT	*LIMIT*	*TWA*	*STEL*	*CEILING*	*NOTATION*	*OTHER*
Oil mist	OSHA PEL	5mg/M^3				
Oil mist	ACGIH TLV	5mg/M^3	10mg/M^3			
Molybdenum Sulfide	OSHA PEL	15mg/M^3				
Molybdenum Sulfide	ACGIH TLV	10mg/M^3				Lung, CNS

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: Grease

COLOR: Grey

DENSITY/SPECIFIC GRAVITY (g/ml): 0.90

VAPOR DENSITY (air=1): >5

VAPOR PRESSURE: <0.01mmHg

BOILING POINT/RANGE: NA

SOLUBILITY IN WATER: insoluble

pH : Neutral

EVAPORATION RATE (Butyl Acetate=1): <0.01

10. STABILITY AND REACTIVITY

GENERAL: This product is stable.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID: Heat and open flames. Strong oxidants, strong acids

HAZARDOUS DECOMPOSITION: Oxides of carbon and sulfur

11. TOXICOLOGICAL INFORMATION

No experimental toxicological data on the preparation as such is available

12. DISPOSAL INFORMATION

WASTE DISPOSAL: This product as supplied and by itself, when discarded or disposed of, is not a RCRA hazardous waste This material could also become a hazardous waste if mixed or contaminated with a listed hazardous waste. It is the responsibility of the user to determine if disposal material is hazardous according to federal, state and local regulations
-Check before disposing to be sure you are in compliance with all applicable laws and regulations.
-Treat used oil or oil products according to current rules and regulations.

Protective Measures During Repair and Maintenance of Contaminated Equipment:
-Wash exposed skin thoroughly with soap and water.
-Use polymer gloves if extended, direct contact is expected.
-Avoid prolonged contact with used oil or oil products.
- Supplied air respiratory protection should be used for cleaning large spills or upon entry into tanks, vessels, or other confined spaces

After draining oil or oil product, wash skin thoroughly with soap and water. Empty containers may contain product residue, which could include flammable or explosive vapors. Consult appropriate Federal, State and Local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.
EPA Hazard Class: NA

Dispose of in accordance with Federal, State, and Local regulations.

13. TRANSPORT INFORMATION

DOT (Department of Transportation):

PROPER SHIPPING NAME: Non-regulated

HAZARD CLASS: Non-Hazardous (Not regulated by US DOT)

IDENTIFICATION NUMBER: None

14. REGULATORY INFORMATION

REGULATORY STATUS OF INGREDIENTS' NAME: Sinclair Litholine Moly D1 EP	CAS#	TSCA	CERCLA	SARA 302	SARA 313
Petroleum Distillates, Severley Hydrotreated Heavy Nap	64742-52-5	Yes	NA	NA	NA
Hydrotreated Heavy Naphthenic Phos Acid	68649-42-3	Yes	NA	NA	Yes
Molybdenum Sulfide	1317-33-5	Yes	NA	NA	NA
Petroleum Residual Oils, Solvent Refined	64742-01-4	Yes	NA	NA	NA

US FEDERAL REGULATIONS:

REGULATORY STATUS:

This product or its components, if a mixture, is subject to following regulations (Not meant to be all inclusive - selected regulations represented): TSCA; the ingredients of this product are on the TSCA Inventory. SECTION 313: This product does not contain toxic chemical subject to the reporting requirements of Section 313 of Tide III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372, SARA 3 11 Categories,

Zinc Compounds 1-5%

STATE REGULATIONS: This product or its components, if a mixture, is subject to following regulations; (Not meant to be all inclusive - selected regulations represented): PROPOSITION 65; This Product does not contain chemicals considered by the State of California Safe Drinking Water and Toxic Enforcement Act of 1986 as causing cancer or reproductive toxicity, and for which warnings are now required.

CANADIAN REGULATIONS REGULATORY STATUS: Canadian WENUS classification; Not a controlled product

15. OTHER INFORMATION

NFPA 704/HMIS:

Health – 1 Flammability – 1 Reactivity – 0
(0 = insignificant, 1 = slight, 2 = moderate, 3 = high, 4 = extreme)

REVISION SUMMARY:
Complete review of MSDS, December 2005.

THIS PRODUCT MATERIAL SAFETY DATA SHEET PROVIDES HEALTH AND SAFETY INFORMATION. THE PRODUCT SHOULD BE USED IN APPLICATIONS CONSISTENT WITH THIS PRODUCT LITERATURE. FOR ANY OTHER USES, EXPOSURES SHOULD BE EVALUATED SO THAT APPROPRIATE HADLING PRACTICES AND TRAINING PROGRAMS CAN BE ESTABLISHED TO ENSURE SAFE WORKPLACE OPERATIONS.

THIS MATERIAL SAFETY DATA SHEET IS PROVIDED IN GOOD FAITH AND MEETS THE REQUIREMENTS OF THE HAZARDOUS COMMUNICATION PROVISIONS OF SARA TITLE III AND 29CFR1910.1200(g) OF THE OSHA REGULATIONS. THE ABOVE INFORMATION IS BASED ON REVIEW OF AVAILABLE INFORMATION SINCLAIR BELIEVES IS RELIABLE AND IS SUPPLIED FOR INFORMATIONAL PURPOSES ONLY. SINCLAIR DOES NOT GUARANTEE ITS COMPLETENESS OR ACCURACY. SINCE CONDITIONS OF USE ARE OUTSIDE THE CONTROL OF SINCLAIR, SINCLAIR DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, AND ANY LIABILITY FOR DAMAGE OR INJURY WHICH RESULTS FROM THE USE OF THE ABOVE DATA. NOTHING HEREIN IS INTENDED TO PERMIT INFRINGEMENT OF VALID PATENTS AND LICENSES.

DATE: December 2005