



MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: Dry Moly Lube

Product Number (s): 03084, 73084

Product Use: Dry film lubricant

Manufacturer / Supplier Contact Information:

In United States:

CRC Industries, Inc.

885 Louis Drive

Warminster, PA 18974

www.crcindustries.com

1-215-674-4300(General)

(800) 521-3168 (Technical)

(800) 272-4620 (Customer Service)

In Canada:

CRC Canada Co.

2-1246 Lorimar Drive

Mississauga, Ontario L5S 1R2

www.crc-canada.ca

1-905-670-2291

In Mexico:

CRC Industries Mexico

Av. Benito Juárez 4055 G

Colonia Orquídea

San Luís Potosí, SLP CP 78394

www.crc-mexico.com

52-444-824-1666

24-Hr Emergency – CHEMTREC: (800) 424-9300 or (703) 527-3887

Section 2: Hazards Identification

Emergency Overview

DANGER: Extremely Flammable. Harmful or Fatal if Swallowed.
Eye and Skin Irritant. Contents Under Pressure.

As defined by OSHA's Hazard Communication Standard, this product is hazardous.

Appearance & Odor: Dark viscous liquid, solvent odor

Potential Health Effects:

ACUTE EFFECTS:

EYE: May cause eye irritation, including redness, itching or burning sensation.

SKIN: Prolonged or repeated exposure may cause irritation. Symptoms of overexposure include redness, itching and burning of skin.

INHALATION: May cause irritation of the upper respiratory system or nervous system depression (headache, dizziness, nausea and loss of coordination). Extreme overexposure may result in unconsciousness and possibly death.

INGESTION: Ingestion of aerosol product is not expected during normal use.

CHRONIC EFFECTS: Prolonged overexposure may cause adverse effects to the liver and urinary systems.

TARGET ORGANS: liver and urinary systems

Medical Conditions Aggravated by Exposure: Unknown

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Section 3: Composition/Information on Ingredients

| COMPONENT | CAS NUMBER | % by Wt. |
|----------------------|------------|----------|
| Propane | 74-98-6 | 5 - 15 |
| Butane | 106-97-8 | 15 - 25 |
| Heptane | 142-82-5 | 3 - 8 |
| Mineral Spirits | 64742-88-7 | 1 - 5 |
| 2-Propanol | 67-63-0 | 20 - 30 |
| Acetone | 67-64-1 | 30 - 40 |
| Molybdenum Disulfide | 1317-33-5 | 1 - 5 |

Section 4: First Aid Measures

- Eye Contact: Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.
- Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.
- Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.
- Ingestion: Do NOT induce vomiting. Get medical attention immediately.
- Note to Physicians:* Treat symptomatically.

Section 5: Fire-Fighting Measures

- Flammable Properties:** This product is extremely flammable in accordance with aerosol flammability definitions. (See 16 CFR 1500.3(c)(6)).
- | | |
|------------------------------|---------------------------|
| Flash Point: < 0°F | Upper Explosive Limit: ND |
| Autoignition Temperature: ND | Lower Explosive Limit: ND |

Fire and Explosion Data:

- Suitable Extinguishing Media: Carbon dioxide, dry chemical, foam
- Products of Combustion: Carbon dioxide and carbon monoxide
- Explosion Hazards: Aerosol containers, when exposed to heat from fire, may build pressure and explode. Vapors may accumulate in a confined space and create a flammable atmosphere.
- Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

Section 6: Accidental Release Measures

- Personal Precautions: Use personal protection recommended in Section 8.
- Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into

sewers or storm drains.

Methods for Containment & Clean-up: Remove all sources of ignition. Dike area to contain spill. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Section 7: Handling and Storage

Handling Procedures: Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively. During use and until all vapors are gone: Keep area ventilate. Do not smoke. Extinguish all flames, pilot lights, and heaters. Turn off stoves, electronic tools and other appliances, and any other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. For product use instructions, please see the product label.

Storage Procedures: Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120 F to prevent cans from rupturing. Store out of reach of children

Aerosol Storage Level: III

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

| COMPONENT | OSHA | | ACGIH | | OTHER | | UNIT |
|--|------|------|-------|------|-------|--------|-------------------|
| | TWA | STEL | TWA | STEL | TWA | SOURCE | |
| Propane | 1000 | NE | 1000 | NE | NE | | ppm |
| Butane | 800 | NE | 1000 | NE | NE | | ppm |
| Heptane | 500 | NE | 400 | 500 | NE | | ppm |
| Mineral Spirits | NE | NE | NE | NE | NE | | |
| 2-Propanol | 400 | NE | 200 | 400 | NE | | ppm |
| Acetone | 1000 | NE | 500 | 750 | NE | | ppm |
| Molybdenum Disulfide | NE | NE | 10 | NE | NE | | mg/m ³ |
| N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated | | | | | | | |

Controls and Protection:

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection: None required for normal work where adequate ventilation is provided. If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with organic vapor cartridge. Air monitoring is needed to determine actual employee exposure levels. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as nitrile or neoprene. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Physical State: liquid
 Color: charcoal color
 Odor: solvent odor
 Odor Threshold: ND
 Specific Gravity: 0.71
 Initial Boiling Point: ND
 Freezing Point: ND
 Vapor Pressure: ND
 Vapor Density: > 1 (air = 1)
 Evaporation Rate: fast
 Solubility: NA
 Coefficient of water/oil distribution: NA
 pH: ND
 Volatile Organic Compounds: wt %: 61.8 g/L: 438.78 lbs./gal: 3.66

Section 10: Stability and Reactivity

Stability: Stable
 Conditions to Avoid: Sources of ignition; temperature extremes
 Incompatible Materials: None known
 Hazardous Decomposition Products: Carbon dioxide and carbon monoxide
 Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

Acute Toxicity:

| <u>Component</u> | <u>Oral LD50 (rat)</u> | <u>Dermal LD50 (rabbit)</u> | <u>Inhalation LC50 (rat)</u> |
|----------------------|------------------------|-----------------------------|-------------------------------|
| Propane | No data | No data | No data |
| Butane | No data | No data | 658,000 mg/m ³ /4H |
| Heptane | No data | No data | 103 g/m ³ /4H |
| Mineral Spirits | > 2000 mg/kg | > 2000 mg/kg | No data |
| 2-Propanol | 5000 mg/kg | 12,800 mg/kg | 16,000 ppm/8H |
| Acetone | 5800 mg/kg | No data | 50,100 mg/m ³ /8H |
| Molybdenum Disulfide | No data | No data | > 2820 mg/m ³ /4H |

Chronic Toxicity:

| <u>Component</u> | <u>OSHA Carcinogen</u> | <u>IARC Carcinogen</u> | <u>NTP Carcinogen</u> | <u>Irritant</u> | <u>Sensitizer</u> |
|------------------|------------------------|------------------------|-----------------------|--|-------------------|
| Propane | No | No | No | No | No |
| Butane | No | No | No | No | No |
| Heptane | No | No | No | E (mild) / S (moderate) / R (mild) | Unknown |

| | | | | | |
|----------------------|----|----|----|--|---------|
| Mineral Spirits | No | No | No | E (mild) / S (moderate) / R (mild) | Unknown |
| 2-Propanol | No | No | No | E (moderate) / S (mild) | No |
| Acetone | No | No | No | E (moderate) / S (moderate) / R (mild) | Yes |
| Molybdenum Disulfide | No | No | No | E (mild) / S (mild) / R (mild) | Unknown |

| | | |
|---------|----------|-----------------|
| E – Eye | S – Skin | R - Respiratory |
|---------|----------|-----------------|

Reproductive Toxicity: No information available
Teratogenicity: No information available
Mutagenicity: No information available
Synergistic Effects: No information available

Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Ecotoxicity: Acetone – 48H LC50 Daphnia: 10 mg/l
Persistence / Degradability: No information available
Bioaccumulation / Accumulation: No information available
Mobility in Environment: No information available

Section 13: Disposal Considerations

Waste Classification: The dispensed liquid product is a RCRA hazardous waste for the characteristic of ignitability with a waste code of D001. Pressurized containers are a D003 reactive waste. (See 40 CFR Part 261.20 – 261.33)
Empty aerosol containers may be recycled.

All disposal activities must comply with federal, state, provincial and local regulations. Local regulations may be more stringent than state, provincial or national requirements.

Section 14: Transport Information

US DOT (ground): Consumer Commodity, ORM-D
ICAO/IATA (air): Consumer Commodity, ID8000, 9
IMO/IMDG (water): Aerosols, UN1950, 2.1, Limited Quantity
Special Provisions: None

Section 15: Regulatory Information

U.S. Federal Regulations:

Toxic Substances Control Act (TSCA):

All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Reportable Quantities (RQ's) exist for the following ingredients: Acetone (5,000 lbs)

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:

Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:

| | |
|-----------------------|-----|
| Fire Hazard | Yes |
| Reactive Hazard | No |
| Release of Pressure | Yes |
| Acute Health Hazard | Yes |
| Chronic Health Hazard | No |

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
None

Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): None

U.S. State Regulations:

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):

This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: toluene (0.165%), benzene & acetaldehyde (trace)

Consumer Products VOC Regulations: This product is not regulated.

State Right to Know:

New Jersey: 74-98-6, 106-97-8, 142-82-5, 67-63-0, 67-64-1, 1317-33-5
Pennsylvania: 74-98-6, 106-97-8, 142-82-5, 67-63-0, 67-64-1
Massachusetts: 74-98-6, 106-97-8, 142-82-5, 67-63-0, 67-64-1
Rhode Island: 74-98-6, 106-97-8, 142-82-5, 67-63-0, 67-64-1

Canadian Regulations:

Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.

WHMIS Hazard Class: A, B5, D2B

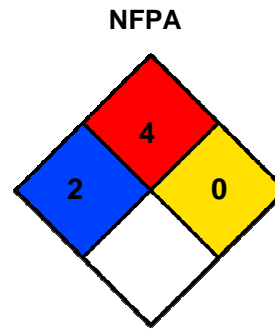
European Union Regulations:

RoHS Compliance: This product is compliant with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003. This product does not contain any of the restricted substances as listed in Article 4(1) of the RoHS Directive.

Additional Regulatory Information: None

Section 16: Other Information

| HMIS® (II) | |
|---------------|---|
| Health: | 2 |
| Flammability: | 4 |
| Reactivity: | 0 |
| PPE: | B |



Ratings range from 0 (no hazard) to 4 (severe hazard)

Prepared By: Michelle Rudnick
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Changes since last revision: MSDS reformatted to meet the requirements of the Canadian Controlled Products Regulations.

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this MSDS consult your supervisor, a health & safety professional, or CRC Industries.

ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Service
CFR: Code of Federal Regulations
DOT: Department of Transportation
DSL: Domestic Substance List
g/L: grams per Liter
HMIS: Hazardous Materials Identification System
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods
IMO: International Maritime Organization
lbs./gal: pounds per gallon
LC: Lethal Concentration
LD: Lethal Dose

NA: Not Applicable
ND: Not Determined
NIOSH: National Institute of Occupational Safety & Health
NFPA: National Fire Protection Association
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PMCC: Pensky-Martens Closed Cup
PPE: Personal Protection Equipment
ppm: Parts per Million
RoHS: Restriction of Hazardous Substances
STEL: Short Term Exposure Limit
TCC: Tag Closed Cup
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Information System