



Revision Number: 007.0

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	Moly Dry Film Lubricant	IDH number:	226675
Product type:	Lubricant	Item number:	39895
Restriction of Use:	None identified	Region:	United States
Company address:	Contact information:		
Henkel Corporation	Telephone: (860) 571-5100		
One Henkel Way	MEDICAL EMERGENCY Phone: Poison Control Center		
Rocky Hill, Connecticut 06067	1-877-671-4608 (toll free) or 1-303-592-1711		
	TRANSPORT EMERGENCY Phone: CHEMTREC		
	1-800-424-9300 (toll free) or 1-703-527-3887		
	Internet: www.henkelna.com		

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER: EXTREMELY FLAMMABLE AEROSOL.
CAUSES SKIN IRRITATION.
CAUSES SERIOUS EYE IRRITATION.
MAY CAUSE DROWSINESS OR DIZZINESS.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE AEROSOL.	1
SKIN IRRITATION	2
EYE IRRITATION	2A
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3

PICTOGRAM(S)



Precautionary Statements

Prevention:	Keep away from heat, sparks, open flames, hot surfaces - no smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Avoid breathing mist or spray. Wash affected area thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves, eye protection, and face protection.
Response:	IF ON SKIN: Wash with plenty of water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing.
Storage:	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
Disposal:	Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Acetone	67-64-1	30 - 60
Methyl ethyl ketone	78-93-3	10 - 30
Butane	106-97-8	10 - 30
Propane	74-98-6	10 - 30
Molybdenum disulphide	1317-33-5	1 - 5
1,2,4-Trimethylbenzene	95-63-6	1 - 5
Solvent naphtha (petroleum), light arom., <0.1% Benzene	64742-95-6	1 - 5
Graphite	7782-42-5	1 - 5
Toluene	108-88-3	0.1 - 1
Cumene	98-82-8	0.1 - 1

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Skin contact:	Remove contaminated clothing and footwear. Wash with soap and water. If symptoms develop and persist, get medical attention. Wash clothing before reuse.
Eye contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Ingestion:	Do not induce vomiting. Never give anything by mouth to an unconscious person. Get immediate medical attention.
Symptoms:	See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. In case of fire, keep containers cool with water spray.
Unusual fire or explosion hazards:	Closed containers may rupture (due to build up of pressure) when exposed to extreme heat. Vapors may travel considerable distance to source of ignition and flash back.
Hazardous combustion products:	Oxides of carbon. Toxic and irritating vapors.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Do not allow product to enter sewer or waterways.
Clean-up methods:	Ensure adequate ventilation. Remove all sources of ignition. For small spills wipe up with paper towel and place in container for disposal. For large spills absorb onto inert absorbent material and place in sealed container for disposal.

7. HANDLING AND STORAGE

Handling: Use only in well-ventilated areas. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Remove all sources of ignition. Keep away from heat, spark and flame. Refer to Section 8.

Storage: Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Acetone	250 ppm TWA 500 ppm STEL	1,000 ppm (2,400 mg/m ³) PEL	None	None
Methyl ethyl ketone	200 ppm TWA 300 ppm STEL	200 ppm (590 mg/m ³) PEL	None	None
Butane	1,000 ppm STEL	None	None	None
Propane	Included in the regulation but with no data values. See regulation for further details	1,000 ppm (1,800 mg/m ³) PEL	None	None
Molybdenum disulphide	10 mg/m ³ TWA (as Mo) Inhalable fraction. 3 mg/m ³ TWA (as Mo) Respirable fraction.	15 mg/m ³ PEL (as Mo) Total dust.	None	None
1,2,4-Trimethylbenzene	25 ppm TWA	None	None	None
Solvent naphtha (petroleum), light arom., <0.1% Benzene	None	100 ppm (400 mg/m ³) PEL	None	50 ppm
Graphite	2 mg/m ³ TWA Respirable fraction.	5 mg/m ³ PEL Respirable fraction. 15 mg/m ³ PEL Total dust. 15 MPPCF TWA	None	None
Toluene	20 ppm TWA	200 ppm TWA 300 ppm Ceiling 500 ppm MAX. CONC 10 minutes	None	None
Cumene	50 ppm TWA	50 ppm (245 mg/m ³) PEL (SKIN)	None	None

Engineering controls: Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection: Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists. Safety showers and eye wash stations should be available.

Skin protection: Use impermeable gloves and protective clothing as necessary to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Aerosol, liquid
Color:	Dark grey
Odor:	Solvent
Odor threshold:	Not available.
pH:	Not available.
Vapor pressure:	Not available.
Boiling point/range:	Not available.
Melting point/ range:	Not available.
Vapor density:	Not available.
Flash point:	-42.00 °C (-43.6 °F) ; Estimated
Flashback:	This product exhibits flashback when tested for flame extension.
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Flammability:	Not applicable
Evaporation rate:	Not available.
Solubility in water:	Not available.
Partition coefficient (n-octanol/water):	Not available.
VOC content:	47.92 % (calculated)
Viscosity:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous reactions:	None under normal processing.
Hazardous decomposition products:	Oxides of carbon. Irritating organic vapours.
Incompatible materials:	Acids and bases. Oxidizing agents.
Reactivity:	Not available.
Conditions to avoid:	High temperatures. Heat, flames, sparks and other sources of ignition. Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure:	Skin, Inhalation, Eyes, Ingestion
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Potential Health Effects/Symptoms

Inhalation:	Inhalation of vapors or mists of the product may be irritating to the respiratory system. May cause central nervous system effects with nausea, dizziness and headache.
Skin contact:	Causes skin irritation. Solvent action can dry and defat the skin, causing the skin to crack, leading to dermatitis.
Eye contact:	Causes serious eye irritation.
Ingestion:	Not expected under normal conditions of use. May cause gastrointestinal tract irritation if swallowed.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Acetone	Oral LD50 (Mouse) = 5.2 g/kg Oral LD50 (Mouse) = 3,000 mg/kg Oral LD50 (Rabbit) = 5,340 mg/kg Oral LD50 (Rat) = 5,800 mg/kg Oral LD50 (Rat) = 9,800 mg/kg Dermal LD50 (Rabbit) = 20,000 mg/kg Inhalation LC50 (Rat, 4 h) = 76 mg/l	Central nervous system, Irritant
Methyl ethyl ketone	Oral LD50 (Mouse) = 670 mg/kg Oral LD50 (Rat) = 2,300 - 3,500 mg/kg Oral LD50 (Rat) = 4,500 - 6,800 mg/kg Dermal LD50 (Rabbit) = > 8,000 mg/kg Inhalation LC50 (Rat, 4 h) = 11700 ppm	Irritant, Central nervous system
Butane	Inhalation LC50 (Rat, 4 h) = 658 mg/l	Cardiac, Central nervous system, Irritant
Propane	None	Cardiac, Central nervous system, Irritant
Molybdenum disulphide	None	No Target Organs
1,2,4-Trimethylbenzene	Oral LD50 (Rat) = 6.0 g/kg Dermal LD50 (Rabbit) = > 3,160 mg/kg	Central nervous system, Irritant, Respiratory
Solvent naphtha (petroleum), light arom., <0.1% Benzene	None	Irritant
Graphite	None	Lung
Toluene	Oral LD50 (Rat) = 2.6 g/kg Oral LD50 (Rat) = 5,000 mg/kg Dermal LD50 (Rabbit) = 12,124 mg/kg Inhalation LC50 (Rat, 4 h) = 8000 ppm	Behavioral, Cardiac, Central nervous system, Developmental, Ear, Irritant
Cumene	Oral LD50 (Rat) = 2.91 g/kg Oral LD50 (Rat) = 1,400 mg/kg Inhalation LC50 (Rat, 4 h) = 8000 ppm	Central nervous system, Irritant, Lung

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Acetone	No	No	No
Methyl ethyl ketone	No	No	No
Butane	No	No	No
Propane	No	No	No
Molybdenum disulphide	No	No	No
1,2,4-Trimethylbenzene	No	No	No
Solvent naphtha (petroleum), light arom., <0.1% Benzene	No	No	No
Graphite	No	No	No
Toluene	No	No	No
Cumene	Reasonably Anticipated to be a Human Carcinogen.	Group 2B	No

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: D001: Ignitable. D035: Methyl Ethyl Ketone. This product may contain traces of: D018: Benzene (Check TCLP Level).

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Aerosols
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None
DOT Hazardous Substance(s): Acetone, Methyl ethyl ketone

International Air Transportation (ICAO/IATA)

Proper shipping name: Aerosols, flammable
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name: AEROSOLS
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

TSCA 12 (b) Export Notification: None above reporting de minimis

CERCLA/SARA Section 302 EHS: None above reporting de minimis.
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health, Fire, Pressure
CERCLA/SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Methyl ethyl ketone (CAS# 78-93-3). 1,2,4-Trimethylbenzene (CAS# 95-63-6).
CERCLA Reportable quantity: Acetone (CAS# 67-64-1) 5,000 lbs. (2,270 kg)
Methyl ethyl ketone (CAS# 78-93-3) 5,000 lbs. (2,270 kg)
Butane (CAS# 106-97-8) 100 lbs. (45.4 kg)
Propane (CAS# 74-98-6) 100 lbs. (45.4 kg)

California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

Prepared by: Timothy Pratt, Regulatory Affairs Specialist

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