



Revision Number: 002.1

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Moly Dry Film
Product type: Lubricant

IDH number: 233503
Item number: 39897
Region: United States

Company address:
 Henkel Corporation
 One Henkel Way
 Rocky Hill, Connecticut 06067

Contact information:
 Telephone: 860.571.5100
 Emergency telephone: 860.571.5100
 Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state:	Liquid	HEALTH:	1
Color:	Grey	FLAMMABILITY:	3
Odor:	Characteristic	PHYSICAL HAZARD:	0
		Personal Protection:	See MSDS Section 8
WARNING: MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION. MAY BE HARMFUL IF SWALLOWED OR INHALED. FLAMMABLE LIQUID AND VAPOR.			

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation:	Exposure to vapors above the established exposure limit results in respiratory irritation, which may lead to difficulty in breathing and tightness in the chest. Central nervous system depression, including dizziness, drowsiness, fatigue, nausea, headache, unconsciousness. May cause irritation to nose and throat.
Skin contact:	Skin absorption is possible, but harmful effects are not expected from this route of exposure under normal conditions of handling and use. Repeated or prolonged contact can result in drying of skin. Symptom of absorption are similar to those caused by inhalation. May cause skin irritation.
Eye contact:	Swelling. May cause irritation. Excess tearing. Redness.
Ingestion:	Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea. May cause an aspiration hazard if swallowed. Swallowing small amounts during normal handling is not likely to cause harmful effects; swallowing large amounts may be harmful.

Existing conditions aggravated by exposure: Not available

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Molybdenum disulphide	1317-33-5	10 - 30
1,2,4-Trimethylbenzene	95-63-6	10 - 30
Solvent naphtha (petroleum), light arom.	64742-95-6	10 - 30
Graphite	7782-42-5	10 - 30
Toluene	108-88-3	1 - 5
Mesitylene	108-67-8	1 - 5
Diethylbenzene	25340-17-4	1 - 5
Xylenes	1330-20-7	0.1 - 1
Cumene	98-82-8	0.1 - 1
Tristearate-Al	637-12-7	0.1 - 1
Ethylbenzene	100-41-4	0.1 - 1

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If symptoms persist, seek medical advice.
Skin contact:	Remove contaminated clothing and footwear. Wash clothing before reuse. Wash with soap and water. If symptoms develop and persist, get medical attention.
Eye contact:	Get medical attention. Immediately flush eyes with plenty of water for at least 15 minutes.
Ingestion:	Get medical attention. Aspiration may cause pulmonary edema and pneumonitis. Do not induce vomiting.

5. FIRE FIGHTING MEASURES

Flash point:	29 °C (84.2 °F)
Autoignition temperature:	Not determined
Flammable/Explosive limits - lower:	0.9 %
Flammable/Explosive limits - upper:	7 %
Extinguishing media:	Carbon dioxide. Dry chemical. Water spray or fog. Foam.
Special firefighting procedures:	Use water spray to keep fire exposed containers cool and disperse vapors.
Unusual fire or explosion hazards:	Containers exposed to fire should be cooled with water to prevent vapor pressure buildup which could result in container rupture. If a leak or spill has not ignited, use water spray to disperse vapors. The liquid is volatile and gives off invisible vapors. Vapors may accumulate in low or confined areas, travel considerable distance to source of ignition, and flash back. None
Hazardous combustion products:	Acrid smoke and fumes. Oxides of carbon.

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. Prevent further leakage or spillage if safe to do so. Ventilate area. Contain spill. Remove all sources of ignition.
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Clean-up methods:

Sweep up spilled material. Avoid creating dust. Store in a partly filled, closed container until disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

7. HANDLING AND STORAGE

Handling:

Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Make sure containers are properly grounded before use or transfer of material.

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 contact Henkel Customer Service at (800) 243-4874.

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 components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Molybdenum disulphide	10 mg/m ³ TWA (as Mo) Inhalable fraction. 3 mg/m ³ TWA (as Mo) Respirable fraction.	15 mg/m ³ TWA (as Mo) Total dust.	None	None
1,2,4-Trimethylbenzene	25 ppm TWA	None	None	None
Solvent naphtha (petroleum), light arom.	None	None	None	50 ppm
Graphite	2 mg/m ³ TWA Respirable fraction.	5 mg/m ³ TWA Respirable fraction. 15 mg/m ³ TWA 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
Mesitylene	25 ppm TWA	None	None	None
Diethylbenzene	None	None	5 ppm TWA	None
Xylenes	100 ppm TWA 150 ppm STEL	100 ppm (435 mg/m ³) TWA	None	None
Cumene	50 ppm TWA	50 ppm (245 mg/m ³) TWA (SKIN)	None	None
Tristearate-Al	10 mg/m ³ TWA 1 mg/m ³ TWA Respirable fraction.	None	None	None
Ethylbenzene	100 ppm TWA 125 ppm STEL	100 ppm (435 mg/m ³) TWA	None	None

Engineering controls:

Use only with adequate ventilation. Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

Respiratory protection:

Observe OSHA regulations for respiratory use (29 CFR 1910.134). Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection:

Safety glasses with side-shields. Goggles.

Skin protection:

Chemical resistant, impermeable gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Grey
Odor:	Characteristic
Odor threshold:	Not available
pH:	Not available
Vapor pressure:	Not available
Boiling point/range:	169 - 336 °F (76.1 - 168.9 °C) none
Melting point/ range:	Not available
Specific gravity:	1.5103
Vapor density:	Heavier than air.
Flash point:	29 °C (84.2 °F)
Flammable/Explosive limits - lower:	0.9 %
Flammable/Explosive limits - upper:	7 %
Autoignition temperature:	Not determined
Evaporation rate:	Slower than butyl acetate.
Solubility in water:	Not miscible
Partition coefficient (n-octanol/water):	Not available
VOC content:	48.79 %; 637 g/l

10. STABILITY AND REACTIVITY

Stability:	Stable at normal conditions.
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Hydrocarbons. Oxides of carbon.
Incompatible materials:	Oxidizing agents. Strong acids and strong bases.
Conditions to avoid:	Prolonged exposure to heat.

11. TOXICOLOGICAL INFORMATION

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Molybdenum disulphide	No	No	No
1,2,4-Trimethylbenzene	No	No	No
Solvent naphtha (petroleum), light arom.	No	No	No
Graphite	No	No	No
Toluene	No	No	No
Mesitylene	No	No	No
Diethylbenzene	No	No	No
Xylenes	No	No	No
Cumene	No	No	No
Tristearate-Al	No	No	No
Ethylbenzene	No	Group 2B	No

Hazardous components	Health Effects/Target Organs
Molybdenum disulphide	No Target Organs
1,2,4-Trimethylbenzene	Central nervous system, Irritant, Respiratory
Solvent naphtha (petroleum), light arom.	Irritant
Graphite	Lung
Toluene	Behavioral, Cardiac, Central nervous system, Developmental, Ear, Irritant
Mesitylene	Central nervous system, Irritant, Respiratory
Diethylbenzene	Irritant, Kidney, Liver, Nervous System
Xylenes	Cardiac, Central nervous system, Irritant, Kidney, Liver
Cumene	Central nervous system, Irritant, Lung
Tristearate-Al	Lung
Ethylbenzene	Irritant, Central nervous system

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.

14. TRANSPORT INFORMATION

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

Proper shipping name: Paint
Hazard class or division: 3
Identification number: UN 1263
Packing group: III
DOT Reportable quantity: Xylene (mixed), Toluene
Exceptions: ORM-D, (Not more than 5 L), Consumer Commodity

International Air Transportation (ICAO/IATA)

Proper shipping name: Paint
Hazard class or division: 3
Identification number: UN 1263
Packing group: III
Exceptions: ID8000, (Not more than 500 ml), May Qualify as Consumer Commodity

Water Transportation (IMO/IMDG)

Proper shipping name: PAINT (1,2,4-Trimethylbenzene, Solvent Naphtha (Petroleum), Light Aromatic)
Hazard class or division: 3
Identification number: UN 1263
Packing group: III
Marine pollutant: 1,2,4-Trimethylbenzene, Solvent Naphtha (Petroleum), Light Aromatic
Exceptions: Limited quantity (Not more than 5 kg).

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 minimus
CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: Fire, Immediate Health, Delayed Health
CERCLA/SARA 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). 1,2,4-Trimethylbenzene (CAS# 95-63-6). Toluene (CAS# 108-88-3). Ethylbenzene (CAS# 100-41-4).
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.
WHMIS hazard class: B.2, D.2.B, D.2.A

16. OTHER INFORMATION

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

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