

MATERIAL SAFETY DATA SHEET

MSDS FORMAT MEETS ANSI Z400.1-1993 AND OSHA 1910.1200



SENTINEL'S MOLY DRY FILM "S"

REVISION# 1

MSDS #

REVISION DATE: January 3, 2012

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sentinel's Moly Dry Film "S"

PRODUCT NUMBER (S): 01007

SYNONYM: Sentinel's Moly Dry Film "S".

COMPANY IDENTIFICATION

Sentinel Lubricants Corp.
15755 N.W. 15th Ave.
Miami, FL 33169

EMERGENCY TELEPHONE NUMBERS

HEALTH (24 hr) : (800) 842-6400 or (305) 625-6400
TRANSPORTATION (24 hr) : (800) 842-6400
or (305) 625-6400 Int'l collects calls accepted

PRODUCT INFORMATION:

MSDS Requests: (800) 842-6400
Environmental, Safety, & Health Info: (800) 842-6400
Product Information: (800) 842-6400

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT, TECHNICAL DESCRIPTION	CAS#	OSHA PEL	ACGIH TLV	%WT
1. Liquefied Petroleum Gas	68476-85-7	1000 ppm	1000 ppm	50-55
2. n-Hexane	110-54-3	500 ppm	50 ppm	30-35
3. Molybdenum Disulfide	1317-33-5	10 mg/m3	10 mg/m3	5-10
4. Toluene	108-88-3	100 ppm	100 ppm	5-10
5. Tetrabutyl Titanate	5593-70-4	N/E	N/E	< 5
6. Secondary Butyl Alcohol	78-92-2	150 ppm	100 ppm	< 5

N/E = NONE ESTABLISHED

3. HAZARD IDENTIFICATION AND EMERGENCY AND FIRST AID PROCEDURES

EMERGENCY OVERVIEW

CONTENTS EXTREMELY FLAMMABLE AND UNDER PRESSURE. STORE BELOW 120°F, OUT OF SUNLIGHT AND AWAY FROM HEAT SOURCES. DO NOT PUNCTURE OR INCINERATE. AVOID CONTACT WITH SKIN AND EYES. VAPOR HARMFUL. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

HMIS Ratings: Health-1 Fire-4 Reactivity-0 Protective Equipment-B

POTENTIAL HEALTH EFFECTS

EYE

Liquid or vapors may cause redness, burning, tearing, and swelling and/pain.

SKIN

Frequent or prolonged contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

INGESTION

Due to being an aerosol, product does not lend itself to ingestion. Should ingestion occur, it may cause irritation to membranes of the mouth, throat and gastrointestinal tract, resulting in vomiting and/or cramps.

INHALATION

Prolonged or repeated overexposure is anesthetic. May cause irritation of the respiratory tract, or acute nervous system depression characterized by headache, dizziness, staggering gait, or confusion.

MEDICAL CONDITIONS AGGRAVATED:

Skin contact may aggravate an existing dermatitis. Others unknown.

CARCINOGEN DATA

None of the ingredients in this product are listed with OSHA, IARC or NTP as being carcinogenic.

4. FIRST AID MEASURES

EYE:

Immediately flush with plenty of clear water for at least 15 minutes. Make sure to flush under the eyelids. Consult a physician for definitive treatment.

SKIN

Remove with soap and water. Continue flushing with water for several minutes. Use skin cream to counter resulting dryness. Consult a physician if irritation continues or if large skin area is affected.

INGESTION

Unlikely since product is in an aerosol form. Should actual ingestion occur, do not induce vomiting! Drink a glass of water or milk to dilute. Call physician or poison control center immediately. Never give anything by mouth to an unconscious person.

INHALATION

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if symptoms persist or if unconscious.

5. FIRE FIGHTING MEASURES

FLASH POINT:
Propellant < 0°F

FLAMMABLE LIMITS:
LEL: 1.8% UEL: 9.5%

EXTINGUISHING MEDIA:
For warehouse and storage conditions, use NFPA Class B extinguishers (CO₂, dry chemical or universal aqueous film forming foam).

SPECIAL FIRE FIGHTING PROCEDURES:
Use water spray to cool fire exposed aerosol containers for containers can rupture violently from heat developed pressure.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Contents extremely flammable and under pressure. In addition, when liquid or vapor comes into contact with flames or red hot metal, products of combustion will be created. Firemen should wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

CONTAINMENT PROCEDURES:
Product is an aerosol, therefore spills and leaks are unlikely. In case of rupture, released content should be contained as any other solvent spill.

SPILL CLEANUP:
Spills from aerosol cans are unlikely and are generally of small volume. Large spills are therefore not normally considered a problem. In case of actual rupture, avoid breathing vapors and ventilate area well. Remove all sources of ignition and use non-sparking equipment. Soak up material with inert absorbent and place in safety containers for proper disposal.

SPECIAL INSTRUCTIONS:
Aerosol products represent a limited hazard and will not spill or leak unless ruptured. In case of rupture contents are generally evacuated from the can rapidly. Area should be ventilated immediately and continuous ventilation provided until all fumes and vapors have been removed. Aerosol cans should never be incinerated or burned. See section 13 for disposal considerations.

REPORTING REQUIREMENTS:
Spills due to the rupture of a single aerosol can are generally below any regulatory reporting requirements. However, if larger spills somehow result, the reporting requirements of the EPA and other local, state and federal agencies should be observed.

7. HANDLING AND STORAGE

Avoid prolonged or repeated skin contact. Avoid breathing vapors. Store in area below 120°F. Do not incinerate (burn) containers. Assure can is in a secure place to prevent knocking over and accidental rupture. Always replace overcap when not in use. For storage of pallet quantities, compliance with ANSI/NFPA 30B is recommended.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINE:

Since this product is a mixture, an OSHA or ACGIH exposure value is not available. In determination of any exposure procedures, protection or testing, use the lowest rated ingredient in Section 2.

SKIN PROTECTION:

For brief contact, no precautions other than clean body-covering clothing should be needed. When prolonged or repeated contact could occur, use protective clothing such as Sol-Vex gloves or other clothing impervious to the ingredients listed in section 2.

EYE PROTECTION:

Safety glasses with side shields are recommended as a minimum for any type of industrial chemical handling. Where eye contact could occur, chemical splash proof goggles are recommended.

RESPIRATORY PROTECTION:

Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required an appropriate NIOSH approved respirator for organic vapor should be worn. If respirators are needed, assure compliance with OSHA standard 29 CFR 1910.134.

ENGINEERING CONTROLS:

General ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Local exhaust ventilation or an enclosed handling system may be needed to control air contamination below that of the lowest TLV/PEL rated ingredient from Section 2.

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT.....:	Propellant<0°F
VAPOR PRESSURE.....:	No Data
VAPOR DENSITY (AIR = 1)..... :	Above 1.0
WATER SOLUBILITY..... :	Negligible
SPECIFIC GRAVITY(H ₂ O=1).....:	Below 1.0
PERCENT VOLATILE.....:	71.0% Wt Max
APPEARANCE AND ODOR.....:	Dark gray liquid with a solvent-like odor

10. STABILITY AND REACTIVITY

STABILITY.....:	Stable
HAZARDOUS POLYMERIZATION....:	Will not occur
CONDITIONS TO AVOID.....:	Heat, sparks, flame, red hot metal
INCOMPATIBILITIES.....:	Strong oxidizing materials
DECOMPOSITION PRODUCTS.....:	Oxides of Carbon

11. TOXICOLOGICAL INFORMATION

ACUTE ORAL LD50.....: Hexane >25ml/kg (rat), Molybdenum Disulfide > 15 g/kg (rat), Toluene > 5 g/kg (rat), Tetra butyl Titanate > 7 g/kg (rat), Sec-butanol > 2 g/kg (rabbit)

ACUTE DERMAL LD50..... :Hexane > 5 ml/kg (rabbit), Toluene > 14 ml/kg (rabbit), Sec-butanol > 2 g/kg (rabbit)

ACUTE INHALATION LC50.....: LPG 57.42% v/v (mice), Hexane 73680 ppm/6h (rat), Toluene 8000 ppm/4h (rat)

12. ECOLOGICAL INFORMATION

This product has not been tested for environmental effects.

13. DISPOSAL CONSIDERATIONS

An aerosol container that does not contain a significant amount of liquid would meet the definition of scrap metal (40 CFR 261.1(c)(6)), and would be exempt from RCRA under 40CFR 261.6 (a)(3)(iv) if it is to be recycled. If containers are not recycled they must be managed under all applicable RCRA and state regulations.

14. TRANSPORTATION AND OSHA RELATED LABEL INFORMATION

DOT HM-181 INFORMATION

Proper Shipping Name.... : Consumer Commodity
 Hazard Class or Division.. : ORM-D
 Identification Number.....: none
 Packaging Group.....: -
 Label(s) Required.....: none

INTERNATIONAL TRANSPORTATION REGULATIONS

Proper Shipping Name.....: Consumer Commodity
 Class or Division.....: 9
 Subsidiary Risk.....: -
 Hazard Label(s).....: Miscellaneous
 Packaging Group.....: -
 UN or ID Number.....: ID8000

NATIONAL MOTOR FREIGHT CLASSIFICATION

Item.....: 50303
 Article.....: Compounds, Lubricating
 Class.....: 55

15. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT:

All of the ingredients in this product are on the TSCA inventory.

SARA TITLE III, SECTION 313:

The following ingredients are 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 (CAA):

The following ingredients appear on the List of Hazardous Air Pollutants (HAP-42 USC 7412, Title I, Part A, p112): Toluene

CLEAN WATER ACT (CWA):

The following ingredients appear on the CWA List of Hazardous Substances (40 CFR 116.4): Toluene

CALIFORNIA PROPOSITION 65:

The following ingredients appear on the Proposition 65 list(s): Toluene

CANADIAN WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS):

The following ingredients are listed: LPG, Toluene, Hexane, Sec-Butanol

16. OTHER INFORMATION

HMIS RATINGS: Health 1; Flammability 4; Reactivity 0; PPE-B
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal
Protection Equipment Index recommendation (Chronic Effect Indicator).

These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (For HMIS ratings)

REVISION STATEMENT:

This is a new Material Safety Data Sheet.

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV	-	Threshold Limit Value	TWA	-	Time Weighted Average
STEL	-	Short-term Exposure Limit	TPQ	-	Threshold Planning Quantity
RQ	-	Reportable Quantity	PEL	-	Permissible Exposure Limit
C	-	Ceiling Limit	CAS	-	Chemical Abstract Service Number
A1-5	-	Appendix A Categories	()	-	Change Has Been Proposed
NDA	-	No Data Available	NA	-	Not Applicable

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1)

The above information is based on the data of which we are aware and is believed to be correct as of data hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date. Hereof may suggest modification of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.