

**BEMOL Molybdenum Disulfide Powder****1****PRODUCT AND COMPANY IDENTIFICATION**

**Product Identifier:** BEMOL Molybdenum Disulfide Powder  
**Synonyms:** moly powder, molybdenum disulphide, moly sulfide, MIL/AMS-M-7866 (technical grade);  
**Common Name:** Molybdenum Disulfide  
**SDS Number:** bem-moly  
**Revision Date:** 1/10/2022  
**Version:** 1.4  
**CAS Number:** 1317-33-5  
**Chemical Family:** Inorganic Salt  
**Chemical Formula:** MoS<sub>2</sub>

Supplier:

Rose Mill Company  
100 Brook Street  
West Hartford, CT 06110

860-232-9990 (Phone)  
860-232-9995 (Fax)

www.RoseMill.com  
info@RoseMill.com

**2****HAZARDS IDENTIFICATION****Classification of Substance**

**GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):**  
None, None, None

**GHS Label Elements, Including Precautionary Statements**

**GHS Signal Word:** **NONE**

**GHS Hazard Pictograms:**

No GHS pictograms indicated for this product

**GHS Hazard Statements:**

H000 - None

**GHS Precautionary Statements:**

P302+350 - IF ON SKIN: Gently wash with soap and water.

P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

**Hazards not Otherwise Classified (HNOC) or not Covered by GHS**

**Inhalation:** Possible irritant  
**Skin Contact:** May cause irritation.  
**Eye Contact:** May cause irritation.

## 3

**COMPOSITION/INFORMATION ON INGREDIENTS**

CAS Number: 1317-33-5  
 RTECS Number: QA4697000  
 Percentage: >99%

Chemical Ingredients		
CAS#	%	Chemical Name
1317-33-5		Molybdenum sulfide (MoS <sub>2</sub> )

## 4

**FIRST AID MEASURES**

- Inhalation:** Remove from exposure area to fresh air immediately. Note: If breathing has stopped, perform artificial respiration. Keep Person warm and at rest. Get Medical attention.
- Skin Contact:** Remove contaminated clothing immediately. Wash affected area with soap or mild detergent and large amounts of water until no evidence of powder remains. (approx. 15-20 mins). Get medical attention if aggravation persists.
- Eye Contact:** Flush with large amounts of water or saline solution, occasionally lifting upper and lower lids, until no evidence of powder remains (approx 15-20mins). Get medical attention if aggravation persists.
- Ingestion:** If vomiting occurs, keep head lower than hips to prevent aspiration. Get medical attention if needed.

## 5

**FIRE FIGHTING MEASURES**

Firefighting Protective Equipment: Full firefighting turnout gear (bunker gear). Any supplied-air respirator with full face piece and operated in a pressure-demand or other positive pressure mode in combination with a separate escape supply. Any self contained breathing apparatus with a full face piece. Extinguishing media: Extinguishing using agent suitable for type of surrounding fire.

Firefighting: No acute hazard. Move container from fire area if possible. Avoid breathing in vapors or dusts; keep up wind.

## 6

**ACCIDENTAL RELEASE MEASURES**

Occupational Spill: For large spills, sweep up with a minimum of dusting and place into suitable clean, dry containers for reclamation or later disposal. Residue should be cleaned up using a high-efficiency particulate filter vacuum.

## 7

**HANDLING AND STORAGE**

**Storage Requirements:** Observe all federal, state and local regulations when storing or disposing of this substance. Store away from incompatible substances.

**Personal Protective Equipment:**

Molybdenum sulfide (MoS<sub>2</sub>) (1317-33-5) []

Personal protective equipment

Respiratory protection: For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection: Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection: Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Molybdenum sulfide (MoS<sub>2</sub>) (1317-33-5) []

Components with workplace control parameters

TWA 15 mg/m<sup>3</sup> USA. Occupational Exposure Limits (OSHA) - Table Z- 1  
V) SULFIDE, Limits for Air Contaminants

TWA 10 mg/m<sup>3</sup> USA. OSHA - TABLE Z-1 Limits for Air Contaminants -  
1910.1000

TWA 3 mg/m<sup>3</sup> USA. ACGIH Threshold Limit Values (TLV)

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Limits for Air Contaminants

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TWA 10 mg/m<sup>3</sup> USA. OSHA - TABLE Z-1 Limits for Air Contaminants -  
1910.1000

**Appearance:** Odorless, Dark Gray to Black Powder.

**Vapor Pressure:** approx 0 @ 20C

**Molecular weight:** 160.06

**Molecular Formula:** MoS<sub>2</sub>

**Solubility:** Water Solubility: Insoluble Solvent  
Solubility: Soluble in hot sulfuric acid, aqua regia, nitric acid, insoluble in dilute acid

**Freezing or Melting Point:** Melting Point >599 F(>315 C) may oxidize

<b>Chemical Stability:</b>	Stable under normal temperatures and pressures.
<b>Conditions to Avoid:</b>	Prevent dispersion of dust in air.
<b>Materials to Avoid:</b>	Hydrogen peroxide= vigorous or violent reaction Oxidizers (Strong): Forms explosive mixture.
<b>Hazardous Decomposition:</b>	Thermal Decomposition may release toxic and/or hazardous gases.
<b>Hazardous Polymerization:</b>	Hazardous polymerization has not been reported to occur under normal temperatures and pressures.

Molybdenum sulfide (MoS<sub>2</sub>) (1317-33-5) []

**Information on toxicological effects**

**Acute toxicity:**

Oral LD50 Inhalation LC50 LC50 Inhalation - rat - 4 h - > 2,820 mg/m<sup>3</sup> Remarks: Lungs, Thorax, or Respiration:Other changes.

Dermal LD50 no data available

Other information on acute toxicity

**Skin corrosion/irritation: Serious eye damage/eye irritation:**

no data available

**Respiratory or skin sensitization: no data available**

**Germ cell mutagenicity: no data available**

**Carcinogenicity:**

**IARC:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**ACGIH:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

**NTP:** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity: no data available**

**Teratogenicity: no data available**

**Specific target organ toxicity - single exposure (Globally Harmonized System):**  
no data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System):**  
no data available

**Aspiration hazard: no data available**

**Potential health effects:** Inhalation Toxic if inhaled. May cause respiratory tract irritation. Ingestion May be harmful if swallowed. Skin May be harmful if absorbed through skin. May cause skin irritation. Eyes May cause eye irritation.

**Signs and Symptoms of Exposure:** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Synergistic effects: no data available**

**Additional Information:**

**RTECS: QA4697000**

Molybdenum sulfide (MoS<sub>2</sub>) (1317-33-5) []

Information on ecological effects

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

Molybdenum sulfide (MoS<sub>2</sub>) (1317-33-5) []

Waste treatment methods

Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging: Dispose of as unused product.

No classification currently assigned.

Component (CAS#) [%] - CODES

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Molybdenum sulfide (MoS<sub>2</sub>) (1317-33-5) [n/a%] TSCA

Regulatory CODE Descriptions

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TSCA = Toxic Substances Control Act

TSCA Inventory Status: Y

TSCA 12 (b) export notification: not listed

Cercla Section 103 (40 CFR 302.4):N

Sara Section 302 (40 CFR 355.30):N

Sara Section 304 (40 CFR 355.40):N

Sara Section 313 (40 CFR 372.65) N

OSHA Process Safety (29 CFR 1910.119):N

Sara Hazard Categories, Sarah Section 311/312 (40 CFR 370.21):

Acute Hazard:N

Chronic Hazard: N

Fire Hazard: N

Reactivity Hazard:N

Sudden Release Hazard : N

State Regulations :

California proposition 65 :N

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