# **MOLYPOWDER**

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### **SECTION 1. IDENTIFICATION**

Product Name:	Molypowder
Manufacturer or supplier's details	
Company name of supplier:	JIT Silicones Plus
Address:	5 Industrial Park Drive
	Oakdale, PA 15071
Telephone:	(855) 548-7587
Emergency Telephone:	24 Hour Emergency Telephone:
	CHEMTREC: (800) 424-9300
Recommended use of the chemical and r	restrictions on use
Recommended use:	Lubricants and lubricant additives

## **SECTION 2. HAZARDS IDENTIFICATION**

GHS Classification	GHS classification in accordance with 29 CFR 1910.1200
	Not a hazardous substance or mixture.
GHS Label Element	
Signal Word:	
Hazard Statements:	May form combustible dust concentrations in air.
Other Hazards	
	Dust contact with the eyes can lead to mechanical irritation.
	Contact with dust can cause mechanical irritation or drying of the skin.
Hazardous Ingredients	

# SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture:	Substance
Substance name:	Molybdenum disulfide
CAS-No.:	1317-33-5

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Hazardous Ingredients:				
Chemical Name	CAS-No.		Concentration (%)	
Moylbdenum sulfide	1217-33	-5	>= 90 - <= 100	

## **SECTION 4. FIRST AID MEASURES**

General advice:  If inhaled:	First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.  Move person to fresh air; if effects occur, consult a physician.
In case of skin contact:	Wash with water and soap. Get medical attention if symptoms occur.
In case of eye contact:	Move person to fresh air; if effects occur, consult a physician, preferably an ophthalmologist.
If swallowed:	If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.
Most important symptoms and effects, both acute and delayed:	Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.
Protection of first-aiders:	No special precautions are necessary for first aid responders.,
Notes to physician:	No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient

# **SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media:	Water spray Alcohol-resistant form Dry chemical Carbon dioxide (CO2)
Unsuitable extinguishing media:	None known.
Specific hazards during fire-fighting:	Exposure to combustion products may be a hazard to health.  Material will oxidize (burn) at high temperatures. Under

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	standard conditions of temperature and pressure, molybdenum disulfide is a slight hazard when exposed to heat or flame.
Hazardous combustion products:	Metal oxides Sulfur oxides
Specific extinguishing methods:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do se Evacuate area.
Special protective equipment for fire-fighters:	Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective	Follow safe handling advice and personal protective
equipment and emergency procedures:	equipment recommendations.
Environmental precautions:	Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaiminated wash water. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up:	Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.  See sections: 7, 8, 11, 12 and 13.

## **SECTION 7. HANDLING AND STORAGE**

Precautions for safe handling:	Precautions for safe handling: Avoid formation of dust cloud, airborne dust, inhalation and ingestion Do not
	breathe dust. Keep container closed when not in use.

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Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice.

Use only with adequate ventilation. This material can accumulate static charge due to its inherent physical properties and can therefore cause an electrical ignition source to vapors. In order to prevent a fire hazard, as bonding and grounding may be insufficient to remove static electricity, it is necessary to provide an inert gas purge before beginning transfer operations. Static electricity may accumulate and ignite suspended dust causing an explosion. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

Conditions for safe storage: Keep in properly labelled containers. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents. Unsuitable materials for containers: None known.

Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Ingredients with workplace control parameters

Ingredients	CAS-No.	Type of Listing	Value	Regulation
Molybdenum disulfide	1317-33-5	TWA (total dust)	15 mg/m3	OSHA Z-1
			(Molybdenum)	
		TWA (inhalable	10 mg/m3	ACGIH
		particulate matter)	(Molybdenum)	
		TWA (Respirable	3 mg/m3	ACGIH
		particulate matter)	(Molybdenum)	
		PEL total dust	10 mg/m3 ,	CAL PEL
			Molybdenum	
		PEL respirable dust	3 mg/m3 , Molybdenum	CAL PEL
		fraction		
			The concentration and percent	
		particulate used for this limit are determined from the fraction passing a size selector with the following characteristics: Aerodynamic Diameter		

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in Micrometers (unit density sphere) Percent Passing Selector 0
1
30 6

Exposure controls:	Use local exhaust ventilation, or other engineering controls to
Engineering controls:	maintain airborne levels below exposure limit requirements
	or guidelines. If there are no applicable exposure limit
	requirements or guidelines, general ventilation should be
	sufficient for most operations.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety
	practice. Use good personal hygiene. Do not consume or store
	food in the work area. Wash hands before smoking or eating.
Individual protection measures	
Eye/face protection:	Use safety glasses (with side shields).
Skin protection:	Use gloves chemically resistant to this material. NOTICE: The
	selection of a specific glove for a particular application and
Hand Protection:	duration of use in a workplace should also take into account
	all relevant workplace factors such as, but not limited to:
	Other chemicals which may be handled, physical
	requirements (cut/puncture protection, dexterity, thermal
	protection), potential body reactions to glove materials, as
	well as the instructions/specifications provided by the glove
	supplier.
Other protection:	Use protective clothing chemically resistant to this material.
	Selection of specific items such as face shield, boots, apron, or
	full body suit will depend on the task.
Respiratory protection:	Respiratory protection should be worn when there is a
	potential to exceed the exposure limit requirements or
	guidelines. If there are no applicable exposure limit
	requirements or guidelines, wear respiratory protection when
	adverse effects, such as respiratory irritation or discomfort
	have been experienced, or where indicated by your risk
	assessment process.

# **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance:	Fine powder
Color:	Dark gray

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Odor:	None
Odor Threshold:	No data available
рН:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	Not applicable
Flash point:	Not applicable
Evaporation rate:	Not applicable
Flammability (solid, gas):	Not classified as a flammability hazard
Upper explosion limit:	No data available
Lower explosion limit:	No data available
Vapor pressure:	Not applicable
Relative vapor density:	No data available
Relative density:	4.8
Solubility./(ies) Water solubility:	No data available
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Thermal decomposition:	No data available
Dynamic Viscosity	Not applicable
Kinematic Viscosity	Not applicable
Explosive properties:	Not explosive
Oxidizing properties:	The substance or mixture is not classified as oxidizing.
Molecular weight:	No data available
Particle Size:	No data available

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### **SECTION 10. STABILITY AND REACTIVITY**

:Reactivity:	Not classified as a reactivity hazard.
Chemical stability:	Stable under normal conditions.
Possibility of hazardous reactions:	Can react with strong oxidizing agents. Can react with strong oxidizing agents.
Conditions to avoid:	None known
Incompatible materials:	Oxidizing agents
Hazardous decomposition products:	No hazardous decomposition products are known.

## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure

Inhalaion

Skin contact

Ingestion

Eye contact

### **Acute toxicity**

Not classified based on available information.

Ingredients:			
Molybdenum sulfide:			
Acute oral toxicity:	Product test data not available. Refer to component data.		
Acute inhalation toxicity:	Product test data not available. Refer to component data.		
Acute dermal toxicity	Product test data not available. Refer to component data.		
Skin corrosion/irritation	Product test data not available. Refer to component data.		
Serious eye damage/eye irritation	Product test data not available. Refer to component data.		
Sensitization	Product test data not available. Refer to component data.		
Specific Target Organ Systemic	Product test data not available. Refer to component data.		
Toxicity (Single Exposure)			
Specific Target Organ Systemic	Product test data not available. Refer to component data.		
Toxicity (Repeated Exposure)			
Carcinogenicity	Product test data not available. Refer to component data.		
Teratogenicity	Product test data not available. Refer to component data.		
Reproductive toxicity	Product test data not available. Refer to component data.		
Mutagenicity	Product test data not available. Refer to component data.		
Aspiration Hazard	Product test data not available. Refer to component data.		
Teratogenicity Reproductive toxicity Mutagenicity	Product test data not available. Refer to component data.  Product test data not available. Refer to component data.  Product test data not available. Refer to component data.		

COMPONENTS INFLUENCING TOXICOLOGY: Molybdenum disulfide:

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**Acute oral toxicity** - LD50, Rat, > 2,000 mg/kg No deaths occurred at this concentration.

**Acute dermal toxicity** - LD50, Rat, male and female, > 2,000 mg/kg No deaths occurred at this concentration.

**Acute inhalation toxicity** - LC50, Rat, 4 Hour, dust/mist, > 2.82 mg/l No deaths occurred at this concentration.

**Skin corrosion/irritation -** Brief contact is essentially nonirritating to skin. Prolonged contact may cause slight skin irritation with local redness.

**Serious eye damage/eye irritation** - May cause slight temporary eye irritation. Corneal injury is unlikely.

**Sensitization** -For skin sensitization: Did not cause allergic skin reactions when tested in guinea pigs. For respiratory sensitization: No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure) Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure) No relevant data found.

**Carcinogenicity** - No relevant data found.

**Teratogenicity** -No relevant data found.

**Reproductive toxicity -** No relevant data found.

**Mutagenicity** - For similar material(s): In vitro genetic toxicity studies were negative.

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**Aspiration Hazard** - Based on physical properties, not likely to be an aspiration hazard.

#### **SECTION 12. ECOLOGICAL INFORMATION**

Ecotoxicological information appears in this section when such data is available.

#### **Toxicity**

#### Molybdenum disulfide

**Acute toxicity to fish** - Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested). For similar material(s): LC50, Fish, 96 Hour, > 100 mg/l

**Acute toxicity to aquatic invertebrates** -Based on data from similar materials EC50, Daphnia magna (Water flea), 48 Hour, > 100 mg/l

**Acute toxicity to algae/aquatic plants** -Based on data from similar materials ErC50, algae, 72 Hour, Growth rate, > 100 mg/l

Toxicity to bacteria - EC50, 30 Hour, Respiration rates., > 100 mg/l

Chronic toxicity to fish - Based on data from similar materials NOEC, Fish, 34 d, > 10 mg/l

**Chronic toxicity to aquatic invertebrates** -Based on data from similar materials NOEC, Daphnia magna, 21 d, > 10 mg/l

#### Persistence and degradability

### Molybdenum disulfide

**Biodegradability:** Biodegradability is not applicable to inorganic substances.

### **Bioaccumulative potential**

#### Molybdenum disulfide

Bioaccumulation: Partitioning from water to n-octanol is not applicable.

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#### Mobility in soil

#### Molybdenum disulfide

No relevant data found.

#### **SECTION 13. DISPOSAL CONSIDERATIONS**

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN SDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, SDS Section 7 Stability & Reactivity Information, SDS Section 10 Regulatory Information, SDS Section 15

**Treatment and disposal methods of used packaging:** Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.

### **SECTION 14. TRANSPORT INFORMATION**

#### DOT

Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Not regulated for transport

Transport in bulk Consult IMO regulations before transporting ocean bulk

according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code

#### Classification for AIR transport (IATA/ICAO):

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an

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authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

#### SECTION15. REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

No SARA Hazards

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103 This material does not contain any components with a CERCLA RQ.

#### Pennsylvania Right To Know

The following chemicals are listed because of the additional requirements of Pennsylvania law:

<u>Casen</u>

Molybdenum disulfide 1317-33-5

#### California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### United States TSCA Inventory (TSCA)

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

### **SECTION 16. OTHER INFORMATION**

### **Hazard Rating System:**

#### **NFPA**

Health	Flammability	Instability
1	1	0

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#### **HMIS**

Health	Flammability	Physical Hazard
0	1	0

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#### Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
CAL PEL	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
PEL	Permissible exposure limit
TWA	8-hour time weighted average

#### Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA -International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD -Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN -United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

JIT Silicones Plus urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.