



# Material Safety Data Sheet

## SECTION I: Product and Company Identity:

TRADE NAME (AS LABELED): **TS-001 Moly Powder (all grades)**  
 MANUFACTURER'S NAME: T.S. Moly-Lubricants, Inc.  
 MANUFACTURER'S ADDRESS: 6205 Brookhill No. 6  
 Houston TX 77087  
 EMERGENCY PHONE: 713/671-2676 Fax: 713/671-9417  
 BUSINESS PHONE: 713/671-2676 Fax: 713/671-9417  
 REVIEWED: July 26, 2005  
 REVIEWED BY: Jo Nell Salling

## SECTION II: Composition /Information on Ingredients

The criteria for listing components in the composition section are as follows: Carcinogens are listed when present at 0.1% or greater; components which are otherwise hazardous according to OSHA are listed when present at 1.0% or greater; nonhazardous components are not listed as being proprietary information. Refer to Section IX for regulatory information.

| Ingredient           | SARA | CAS No.   | OSHA PEL (mg/m <sup>3</sup> ) | ACGIH TLV (mg/m <sup>3</sup> ) | % Optional |
|----------------------|------|-----------|-------------------------------|--------------------------------|------------|
| molybdenum disulfide | no   | 1317-33-5 | 10 TWA total dust             | TWA: 10                        | 99.9       |

## SECTION III: Hazards Identification

Chemical itself is not a significant health risk except for being a dust. May cause irritation to skin and eyes as short term effect. For chronic effects, see Section XI.

SYMPTOMS OF OVEREXPOSURE BY ROUTE OF EXPOSURE:

INHALATION: Acute, No specific data available but insoluble molybdenum compounds are characterized by low toxicity..

SKIN: Dermatitis has not been reported in exposed workers.

EYES: No specific data available but some insoluble molybdenum compounds are irritating to the eyes.

INGESTION: No data available.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known or reported.

CARCINOGENICITY: NTP? No IARC Monographs? No OSHA regulated? No

In accordance with the current OSHA Hazard Communication Standard criteria, this product is not known or reported to be carcinogenic by reference sources including: IARC, NTP, and OSHA.

| HAZARDOUS MATERIAL INFORMATION SYSTEM |             |       |      |
|---------------------------------------|-------------|-------|------|
| HEALTH (BLUE)                         |             | 1     |      |
| FLAMMABILITY (RED)                    |             | 1     |      |
| REACTIVITY (YELLOW)                   |             | 0     |      |
| PROTECTIVE EQUIPMENT (WHITE)          |             | B     |      |
| EYES                                  | RESPIRATORY | HANDS | BODY |
| X                                     |             | X     |      |
| See Section 8                         |             |       |      |

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## **SECTION IV: First Aid Measures**

**EYES:** Flush eyes with plenty of water for several minutes. Get medical attention.

**SKIN:** Remove any contaminated clothing and wash skin with plenty of soap and water for several minutes. Get medical attention if skin irritation develops or persists. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

**INGESTION:** If vomiting occurs, keep head lower than hips to prevent aspiration. Get medical attention if needed. **DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.**

**INHALATION:** Remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep person warm and at rest. Get medical attention

## **SECTION V: Fire Fighting Measures**

Flash Point: NDA. Method: COC Flammable Limits: NDA

Fire and Explosion hazard: Slight fire hazard when exposed to heat or flame.

Extinguishing Media: Extinguish using agent suitable for type of surrounding fire.

Special Fire Fighting Procedures: Full firefighting turn-out gear (bunker gear). Any supplied-air respirator with full facepiece 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 facepiece.

Unusual Fire and Explosion Hazards: Avoid fumes of burning product.

## **SECTION VI: Accidental Release Measures**

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** 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.

## **SECTION VII: Handling and Storage**

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:** Store in cool dry area in original or equivalent container in accordance with all applicable regulations. Do not apply high heat or flame to container.

**OTHER PRECAUTIONS:** Good personal hygiene practices should always be followed.

## **SECTION VIII: Exposure Controls/Personal Protection**

**VENTILATION AND ENGINEERING CONTROLS:** Use with adequate ventilation. Use a mechanical fan or vent area to outside if necessary. Provide local exhaust ventilation and/or general dilution ventilation to meet published exposure limits.

**RESPIRATORY PROTECTION:** Any dust, mist, and fume respirator or better.

**EYE PROTECTION:** Safety goggles recommended.

**HAND PROTECTION:** Wear rubber gloves for routine industrial use.

**BODY PROTECTION:** Use body protection as needed for task.

## **SECTION IX: Physical and Chemical Properties**

Boiling Point: NDA

Specific Gravity: 4.80 @ 14 C

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Vapor Pressure: approx 0 @ 20 C                      Melting Point: >599 F (>315 C)(oxidizes)  
Vapor Density: NDA                                      Solubility in Water: Insoluble  
Solvent Solubility: Soluble in hot sulfuric acid, aqua regia, nitric acid; insoluble in dilute acid.  
Appearance and Odor: Odorless, dark gray to black powder.

### SECTION X: Stability and Reactivity

STABILITY: Stable under normal temperatures and pressures.

CONDITIONS TO AVOID: Prevent dispersion of dust in air.

INCOMPATIBILITY: (at high concentration and temperatures above 250 °F.

Hydrogen peroxide: vigorous or violent reaction.

Oxidizers (strong): Fire and explosion hazard.

Potassium nitrate: Forms explosive mixture

POLYMERIZATION: May occur: No            Will not occur: Yes

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: carbon monoxide, carbon dioxide, fumes and smoke.

### SECTION XI: Toxicological Information:

CHRONIC EFFECTS: Inhalation: 25 one-hour exposures to 490 mg/m<sup>3</sup> caused no effects in all the animals tested except one which died after the third exposure

Skin & Eye Contact: No data available.

Ingestion: Rats fed up to 500 mg daily for 44 days showed no toxic signs and all gained weight..

### SECTION XII: Ecological Information:

Acute Aquatic Toxicity: Tests conducted in 1990 at levels up to 750 mg/l powdered MoS<sup>2</sup>.resulted in 0 mortality to rainbow trout (*Salmo cairdneri*).

### SECTION XIII: Disposal Considerations

WASTE DISPOSAL METHODS: Dispose of waste according to all applicable regulations.

### SECTION XIV: Transport Information

This material is not regulated as a DOT hazardous material.

### SECTION XV: Regulatory Information

TOXIC SUBSTANCES CONTROL ACT (TSCA): All components are on the TSCA inventory or are not required to be listed on the TSCA inventory.

### SECTION XVI: Other Information

Disclaimer: Information given herein is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of this product for particular uses are beyond our control. Users should make their own investigation to determine the suitability of the information or products for their respective purposes.