



## MATERIAL SAFETY DATA SHEET

**Identity:** Molybdc Oxide  
**Common Name:** Molybdenum Oxide  
**Distributor's Name:** Miller and Company LLC  
**Address:** 9700 W. Higgins Road  
Suite 1000  
Rosemont, IL 60018  
**Phone:** 874-696-2400  
**Emergency Phone:** Chemtrec 800-262-8200  
**Prepared by:** H. F. Linebarger  
**Date:** March 15, 2010

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### SECTION I - COMPONENTS/IDENTITY INFORMATION

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<u>NAME</u>	<u>CAS NO.</u>	<u>% by Wt.</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Molybdc oxide	01313-275	81 - 98	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>
Silica	14808-60-7	0 - 19	0.05 mg/m <sup>3</sup> *	0.025 mg/m <sup>3</sup> *
Copper	7440-50-8	0 - 1	0.1 mg/m <sup>3</sup> *	0.2 mg/m <sup>3</sup> *

\* Respirable dust

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### SECTION II - PHYSICAL/CHEMICAL CHARACTERISTICS

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**Boiling Point\*:** 1150 C  
**Melting Point \*:** 795 C  
**Vapor Pressure\*:** Essentially 0 at 20 C  
**Solubility in Water\*:** 1.6 - 6.9 gm/l at 25 C  
**Specific Gravity\*:** 4.69 (Water = 1.0)  
**Appearance:** Yellow green to white

\*Molybdc oxide

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### SECTION III - FIRE AND EXPLOSION DATA

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Flash Point:	N/A
Auto Ignition:	N/A
Flammable Limits:	N/A
Fire Extinguishing Media:	Use media appropriate for surrounding fire
Unusual Fire and Explosion Hazards:	Dust explosion hazard

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### SECTION IV - REACTIVITY

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Stability:	Stable
Hazardous Polymerization:	Will not occur
Incompatibles:	Strong acids, alkali metals. Explodes on contact with molten Mg. Violent reaction with inter halogens.
Conditions to Avoid:	Incompatibles
Decomposition:	Toxic metal fumes on decomposition.

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### SECTION V - HEALTH HAZARD

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Skin Contact:	May cause skin irritation
Eye Contact:	May be irritating to the eyes
Ingestion:	Harmful if swallowed. Ingestion may cause vomiting and gastrointestinal irritation, severe distress, cramping, and hypertension.
Inhalation:	Harmful if inhaled. Irritating to the upper respiratory tract and mucous membranes. May be absorbed into the blood- stream with symptoms similar to indigestion.
Chronic Overexposure Effects:	None identified. Molybdenum is rapidly excreted. Long-term overexposure can lead to anemia.
Toxicity:	LC50 (rat) > 5840 mg/m <sup>3</sup> LD50 (oral, rat) 2689 mg/kg
Target Organs:	None identified
Reproductive Effects:	None identified
Carcinogenicity:	None identified

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### SECTION VI - HANDLING AND USE

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Store in cool, dry area  
 Keep away from incompatibles  
 Protect containers from physical damage use exhaust ventilation to meet PEL and TLV requirements.

Wearing a dust mask or respirator is recommend  
Wear safety goggles, gloves and protective clothing  
In case of spill, wear full protective and respiratory protection. Sweep or scoop into a suitable container. Reclaim or dispose of in accordance with local, state, and federal regulations.

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**SECTION VII - TRANSPORTATION INFORMATION**

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Molybdenum trioxide:                   TSCA Inventory  
  SARA Hazard:        Acute, SARA  
  313 Toxic Release

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H. F. Linebarger  
*March 15, 2010*