

MATERIAL SAFETY DATA SHEET

Product Name: Molybdenum Products

Revision: May 1, 2008

SECTION 1: MANUFACTURER

Manufacturer's Name and Address: Elmet Technologies, Inc.
1560 Lisbon Street
Lewiston, Maine 04240

Emergency Tel. No.: 1-800-343-8008
Other Information Calls: 1-800-343-8008

SECTION 2: HAZARDOUS INGREDIENTS

<u>Components(s)</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>PERCENTAGE</u>
Molybdenum CAS No. 7439-98-7	5mg/m ³ Soluble Compounds) 15mg/m ³ (Insoluble Compounds)	5mg/m ³ (Soluble Compounds) 10mg/m ³ (Insoluble Compounds)	99% to 100%
<u>Other possible ingredients</u>			
Lanthanum Oxide CAS No. 1312-81-8 (included in MoLa Products)	5 mg/m ³ (nuisance dust)	10 mg/m ³ (nuisance dust)	<1%
Silicon CAS No. 7440-21-3 (included in HCT products)	5 mg/m ³ (nuisance dust)	10 mg/m ³ (nuisance dust)	trace
Potassium CAS No. 7440-09-7 (included in HCT products)	5 mg/m ³ (nuisance dust)	Not Listed	trace

SECTION 3: PHYSICAL DATA

Generic Description: Specialty metal; may be powder, wire, or fabricated metal parts.
Appearance and Odor: Silver-grey to black with metallic luster. Odorless.
Boiling Point: 4325 °C (8717 °F)
Vapor Pressure (mmHg): NA
% Volatile (by volume): 0
Specific Gravity (H₂O=1): 10.2
Vapor Density (Air=1): Not volatile
Evaporation Rate: Not volatile. Sublimes in air at high temperature.
Solubility in Water: Will oxidize in water and become slightly soluble.

Comments: No special physical data available.

SECTION 4: FIRE AND EXPLOSION DATA

Flashpoint: Auto ignition temperature is 360 °C for 0-74 micron dusts
Flammable Limits: Not tested. Lower limit: Not tested.
Explosive Limits: Not tested. Lower Limit: Not tested.
Extinguishing Media: Dry chemical, foam, sand or granular limestone.

Special or unusual firefighting procedures or hazards: Wear self-contained breathing apparatus. After ignition source is removed, the metal may continue to glow until complete oxidation has occurred.

Comments: Molybdenum powder is a weak fire and explosion hazard depending on particulate size and dispersion in air.

SECTION 5: REACTIVITY DATA

Stability: Stable
Conditions to Avoid: Heat and steam.
Incompatibility (Materials to Avoid): Avoid strong oxidizers.
Hazardous Decomposition Products: Heat produces trioxide or hex carbonyl hydroxide.
Hazardous Polymerization: Will not occur.

SECTION 6: HEALTH HAZARDS AND FIRST AID PROCEDURES

Acute Health Effects: Molybdenum is considered to have a relatively low order of toxicity and is rapidly excreted from the body.
Inhalation: Molybdenum dust may irritate the mucous membranes.
Eyes: Molybdenum dust may irritate the eyes.
Chronic Health Effects: Excessive intake may cause iron or copper deficiency leading to anemia or skeletal ossification.

Components listed as Carcinogen or Potential Carcinogen: Not listed by NTP, IARC, Monographs or OSHA.

EMERGENCY AND FIRST AID PROCEDURES:

Inhalation: Remove to fresh air. If difficulty in breathing occurs, seek medical attention.
Eyes: Flush with water for at least fifteen minutes. If irritation persists, seek medical attention.
Skin: Wash with soap and water. If irritation persists, seek medical assistance.
Ingestion: Induce vomiting. Seek medical attention.

SECTION 7: SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Precautions to be taken in handling and storage: Avoid dust generation. Keep away from heat, ignition sources and physical damage.

Steps to be taken in Case Material is Released or Spilled: Vacuum or wet-sweep spilled powder. Wear respirator and avoid making dust.

Waste Disposal Methods: Consult Federal, State and Local regulations.

SECTION 8: SPECIAL PROTECTION INFORMATION/CONTROL MEASURES

Ventilation: General ventilation recommended where dust concentrations exceed TLV's. Local ventilation used when dust levels are high.

Personal Protective Equipment:

Respirators: Where appropriate, wear NIOSH-approved toxic dust respirator.

Goggles: Safety goggles/glasses are recommended.

Gloves: Impervious cloth/rubber gloves are recommended.

Handling/Storage: Avoid breathing dust. Protective clothing recommended. Coveralls may be worn for additional protection.

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