



SAFETY DATA SHEET

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SECTION 1 PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **Molybdenum (IV) oxide**
PRODUCT NUMBER: 2606
CAS NUMBER: 18868-43-4
SYNONYMS: Molybdenum dioxide, Molybdenous oxide

MANUFACTURER:

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IN CASE OF TRANSPORTATION EMERGENCY CONTACT CHEM-TREC: 1-800-424-9300

SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION OF SUBSTANCE OR MIXTURE

Pictogram None

Signal Word **Warning**

Hazard Statements

H313	May be harmful in contact with skin.
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Precautionary Phrases

None

HMIS CLASSIFICATION:

Health: 0 Flammability: 0 Reactivity: 0

NFPA RATING:

Health: 0 Fire: 0 Reactivity Hazard: 0

EYE CONTACT: May be a mild to severe irritant to the eyes.

SKIN CONTACT: May cause slight to mild irritation of the skin.

INHALATION: Do not breathe dust. Inhalation of powder may lead to irritation of the respiratory tract.

INGESTION: Ingestion may lead to vomiting and diarrhea.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Formula: MoO₂

Molecular Weight: 127.95

CHEMICAL NAME	CAS#	%	ACGIH (TWA)	OSHA (PEL)
Molybdenum (IV) oxide	18868-43-4	100	10 mg/m ³ (as Mo-insoluble)	15 mg/m ³ (as insoluble Mo)

SECTION 4 FIRST AID MEASURES

EYE EXPOSURE: Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.

SKIN EXPOSURE: Wash affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

INHALATION: Remove the victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases, seek immediate medical assistance.

INGESTION: Seek medical attention immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

SECTION 5 FIREFIGHTING MEASURES

FLASH POINT: Product is not flammable

AUTO IGNITION TEMPERATURE: Not applicable

EXPLOSION LIMITS: Not applicable

EXTINGUISHING MEDIUM: Use fire fighting measures that suit the surrounding fire.

SPECIAL FIRE FIGHTING PROCEDURES: If involved in a fire, fire fighters should be equipped with a NIOSH approved positive self-contained breathing apparatus, flame and chemical resistant clothing, hats, boots, and gloves.

HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS: Metal oxide fumes

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Wear approved personal protective equipment. Avoid dust formation. Avoid breathing dust, vapors, mist, or gas.

ENVIRONMENTAL PRECAUTIONS: Do not let enter drains or allow to be released into the environment.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Small spills can be mixed with vermiculite or sodium carbonate and swept up.

SECTION 7 HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Provide appropriate exhaust ventilation at places where dust is formed.

CONDITIONS FOR SAFE STORAGE: Store material in a tightly sealed container.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

EYE PROTECTION: Always wear approved safety glasses with side shields, safety goggles, or face shield when handling a chemical substance in the laboratory.

SKIN PROTECTION: Chemical resistant gloves.

VENTILATION: Handle in an efficient chemical fume hood.

RESPIRATOR: If in form of fine dust and ventilation is not available a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance with 29 CFR 19-10.134.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

COLOR AND FORM: Brown to black powder

MOLECULAR WEIGHT: 127.95

BOILING POINT: No data available

MELTING POINT: 1100° C (dec.)

SPECIFIC GRAVITY: 6.47 gm/ml

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES (Cont.)

VAPOR PRESSURE: No data available

SOLUBILITY: Insoluble

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Stable

HAZARDOUS POLYMERIZATION: No hazardous polymerization

CONDITIONS TO AVOID: None

INCOMPATIBILITY: Strong oxidizing agents and strong acids

DECOMPOSITION PRODUCTS: None

SECTION 11 TOXICOLOGICAL DATA

ACUTE TOXICITY: LD50 Oral – rat - > 5,000 mg/kg. LD50 Inhalation – rat – 4 h - > 5.84 mg/l. LD50 Dermal – rat - >2,000 mg/kg.

LD50 Subcutaneous – mouse – 318 mg/kg.

CARCINOGENIC EFFECTS: No components of this product present at levels greater than or equal to 0.1% is identified as a confirmed carcinogen by IARC, ACGIH, NTP, and OSHA.

MUTAGENIC EFFECTS: Not available

TETRATOGENIC EFFECTS: Not available

RTECS: QA4688000

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

SECTION 12 ECOLOGICAL DATA

No information available

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in according to local, state, and federal regulations.

SECTION 14 TRANSPORTATION DATA

Non-hazardous material

SECTION 15 REGULATORY INFORMATION

TSCA: Listed in the TSCA inventory

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

SARA 302 COMPONENTS: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 HAZARDS: No SARA Hazards

MASSACHUSETTS RIGHT TO KNOW COMPONENTS: No components are subject to the Massachusetts Right To Know Act.

PENNSYLVANIA RIGHT TO KNOW COMPONENTS: Molybdenum dioxide

NEW JERSEY RIGHT TO KNOW COMPONENTS: Molybdenum dioxide

CALIFORNIA PROP. 65 COMPONENTS: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16 OTHER INFORMATION

DISCLAIMER: The information herein is believed to be accurate and reliable as of the date compiled. However, Prochem, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.

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