

# Material Safety Data Sheet

## Molybdenum, powder, 99.99%, - 200 mesh

ACC# 00944

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Molybdenum, powder, 99.99%, - 200 mesh

**Catalog Numbers:** AC193540000, AC193541000

**Synonyms:**

**Company Identification:**

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

**For information in North America, call:** 800-ACROS-01

**For emergencies in the US, call CHEMTREC:** 800-424-9300

### Section 2 - Composition, Information on Ingredients

| CAS#      | Chemical Name      | Percent | EINECS/ELINCS |
|-----------|--------------------|---------|---------------|
| 7439-98-7 | Molybdenum, powder | 99.99%  | 231-107-2     |

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: gray or dark gray powder.

**Warning!** Flammable solid. May cause eye and skin irritation. May cause respiratory and digestive tract irritation. May cause central nervous system effects. May cause blood abnormalities.

**Target Organs:** Blood, central nervous system, lungs.

#### Potential Health Effects

**Eye:** May cause lacrimation (tearing), blurred vision, and photophobia. May cause chemical conjunctivitis and corneal damage.

**Skin:** May cause skin irritation and possible burns.

**Ingestion:** May cause anemia, leukopenia (reduction in the number of white blood cells in the blood), and thrombocytopenia. May cause headache, fever, nausea, abdominal pain, muscle pain and bloody urine.

**Inhalation:** Olfactory fatigue may occur. When inhaled as a dust or fume, may cause benign pneumoconiosis. Can produce delayed pulmonary edema.

**Chronic:** No information found.

### Section 4 - First Aid Measures

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:** Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

**Ingestion:** Never give anything by mouth to an unconscious person. Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

**Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

**Notes to Physician:** Treat symptomatically and supportively.

### Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Dust can be an explosion hazard when exposed to heat or flame. Flammable solid. May burn rapidly with flare burning effect. May re-ignite after fire is extinguished. Runoff to sewer may create fire or explosion hazard.

**Extinguishing Media:** Do NOT use water directly on fire. For large fires, use water spray, fog or regular foam. Contact professional fire-fighters immediately. For small fires, use dry chemical, carbon dioxide, sand, earth, water spray or regular foam. Cool containers with flooding quantities of water until well after fire is out.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 1; Flammability: 3; Instability: 0

### Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Sweep up, then place into a suitable container for disposal. Scoop up with a nonsparking tool, then place into a suitable container for disposal. Avoid generating dusty conditions. Remove all sources of ignition.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

**Storage:** Keep away from heat, sparks, and flame. Keep away from sources of ignition.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

### Exposure Limits

| Chemical Name      | ACGIH   | NIOSH           | OSHA - Final PELs         |
|--------------------|---|-----------------|---------------------------|
| Molybdenum, powder | 10 mg/m3 TWA (inhalable fraction);<br>3 mg/m3 TWA (respirable fraction) | 5000 mg/m3 IDLH | 15 mg/m3 TWA (total dust) |

**OSHA Vacated PELs:** Molybdenum, powder: 10 mg/m3 TWA

### Personal Protective Equipment

**Eyes:** Wear safety glasses and chemical goggles if splashing is possible. Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

## Section 9 - Physical and Chemical Properties

**Physical State:** Powder

**Appearance:** gray or dark gray

**Odor:** None reported.

**pH:** Not available.

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** 4825 deg C @ 760.00mm Hg

**Freezing/Melting Point:** 2622 deg C

**Decomposition Temperature:** 400 deg C

**Solubility:** insoluble

**Specific Gravity/Density:** 10.28 g/L

**Molecular Formula:** Mo

**Molecular Weight:** 95.94

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Incompatible materials, ignition sources, dust generation, excess heat, strong oxidants.

**Incompatibilities with Other Materials:** Strong oxidizing agents, chlorine trifluoride, fluorine, lead dioxide, nitric acid, sulfuric acid.

**Hazardous Decomposition Products:** Irritating and toxic fumes and gases.

**Hazardous Polymerization:** Has not been reported.

## Section 11 - Toxicological Information

### RTECS#:

CAS# 7439-98-7: QA4680000

### LD50/LC50:

Not available.

### Carcinogenicity:

CAS# 7439-98-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information found

**Teratogenicity:** Teratogenic effects have occurred in experimental animals.

**Reproductive Effects:** Adverse reproductive effects have occurred in experimental animals.

**Mutagenicity:** No information found

**Neurotoxicity:** No information found

**Other Studies:**

## Section 12 - Ecological Information

No information available.

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

## Section 14 - Transport Information

|                       | US DOT                           | Canada TDG                               |
|-----------------------|----------------------------------|--|
| <b>Shipping Name:</b> | METAL POWDERS, FLAMMABLE, N.O.S. | METAL POWDERS FLAMMABLE NOS (MOLYBDENUM) |
| <b>Hazard Class:</b>  | 4.1                              | 4.1                                      |
| <b>UN Number:</b>     | UN3089                           | UN3089                                   |
| <b>Packing Group:</b> | II                               | II                                       |

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 7439-98-7 is listed on the TSCA inventory.

#### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

#### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

#### Section 12b

None of the chemicals are listed under TSCA Section 12b.

#### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

#### CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

#### SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

**Section 313** No chemicals are reportable under Section 313.

#### Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

#### Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

#### OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

#### STATE

CAS# 7439-98-7 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

#### California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

### European/International Regulations

#### European Labeling in Accordance with EC Directives

##### Hazard Symbols:

F

##### Risk Phrases:

R 11 Highly flammable.

##### Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.

#### WGK (Water Danger/Protection)

CAS# 7439-98-7: No information available.

#### Canada - DSL/NDL

CAS# 7439-98-7 is listed on Canada's DSL List.

#### Canada - WHMIS

This product has a WHMIS classification of B4, D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

#### Canadian Ingredient Disclosure List

CAS# 7439-98-7 is listed on the Canadian Ingredient Disclosure List.

## Section 16 - Additional Information

**MSDS Creation Date:** 9/02/1997

**Revision #5 Date:** 10/03/2005

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.*