



# SAFETY DATA SHEET

[Required under safety and health regulations for shipping and handling]

Version: 2023

Date Updated: Jan. 19, 2023

## SECTION 1. ----- PRODUCT AND COMPANY IDENTIFICATION-----

**Product Name** Molybdic acid, sodium salt  
**Product Code(s)** MB0358  
**Recommended Use** For Laboratory Research Use Only  
Not for Human or Animal Drug Use

**Supplier** Bio Basic Inc.  
**Address** 20 Konrad Crescent, Markham, Ontario,  
Canada, L3R 8T4

**Telephone** (905) 474 4493  
**Fax** (905) 474 5794  
**For Chemical Emergency Phone#** (416) 995 9730

## SECTION 2. ----- HAZARDS IDENTIFICATION -----

### Emergency Overview

#### WHMIS Classification

Not WHMIS controlled.

#### GHS Classification

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS).

#### GHS Label elements, including precautionary statements

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS).

#### Hazards not otherwise classified (HNOC) or not covered by GHS

- none

## SECTION 3. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----

Chemical Name	EC No.	CAS-No	Weight %
Molybdic acid, sodium salt	231-551-7	10102-40-6	<100

## SECTION 4. ----- FIRST-AID MEASURES-----

### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## SECTION 5. ----- FIRE FIGHTING MEASURES -----

### **Conditions of flammability**

Not flammable or combustible.

### **Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### **Special protective equipment for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

### **Hazardous combustion products**

Hazardous decomposition products formed under fire conditions. - Sodium oxides, Molybdenum oxides  
Ambient fire may liberate hazardous vapors.

### **Explosion data - sensitivity to mechanical impact**

No data available

### **Explosion data - sensitivity to static discharge**

No data available

### **Further information**

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## SECTION 6. ----- ACCIDENTAL RELEASE MEASURES-----

### **Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

### **Environmental precautions**

Do not let product enter drains.

### **Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

## SECTION 7. ----- HANDLING AND STORAGE-----

### **Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

### **Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place.

### **Storage class**

Storage class (TRGS 510): 13: Non Combustible Solids

## SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION-----

### **Control parameters**

### **Ingredients with workplace control parameters**

Contains no substances with occupational exposure limit values.

## Personal protective equipment

### Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

### Eye protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

### Skin and body protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

### Full contact / Splash contact

Material: Nitrile rubber  
Minimum layer thickness: 0.11 mm  
Break through time: 480 min  
Material tested:KCL 741 Dermatril® L

### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### Specific engineering controls

Use mechanical exhaust or laboratory fumehood to avoid exposure.

### Control of environmental exposure

Do not let product enter drains.

## SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - -

### Appearance

Form	solid
Color	white

### Safety data

pH	9 - 10 at 840 g/l at 20 °C (68 °F)
Melting point/freezing point	Melting point/range: 100 °C (212 °F)
Boiling point	No data available
Flash point	No data available
Ignition temperature	No data available
Auto-ignition temperature	No data available
Lower explosion limit	No data available

Upper explosion limit	No data available
Vapour pressure	No data available
Density	2.71 g/cm <sup>3</sup> at 22 °C (72 °F)
Water solubility	840 g/l at 20 °C (68 °F)
Partition coefficient: n-octanol/water	No data available
Relative vapour density	No data available
Odour	No data available
Odour Threshold	No data available
Evaporation rate	No data available
Decomposition Temp	130 °C (266 °F)

## SECTION 10. -----STABILITY AND REACTIVITY -----

### Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

### Possibility of hazardous reactions

No data available

### Conditions to avoid

No data available

### Materials to avoid

No data available

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Sodium oxides,  
Molybdenum oxides Other decomposition products - no data available

## SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

### Acute toxicity

#### Acute toxicity estimate Oral - > 2,000 mg/kg

(Calculation method)

#### LD50 Oral - Rat - male and female - 4,040 mg/kg

(OECD Test Guideline 401)

Remarks: The value is given in analogy to the following substances: disodium molybdate

#### LC50 Inhalation - Rat - male and female - 4 h - > 1.93 mg/l - dust/mist

(OECD Test Guideline 403)

Remarks: The value is given in analogy to the following substances: disodium molybdate

#### Acute toxicity estimate Dermal - > 2,000 mg/kg

(Calculation method)

#### LD50 Dermal - Rat - male and female - > 2,000 mg/kg

(OECD Test Guideline 402)

Remarks: The value is given in analogy to the following substances: disodium molybdate.

### Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation  
(OECD Test Guideline 404)

Remarks: The value is given in analogy to the following substances: disodium molybdate

### **Serious eye damage/eye irritation**

Eyes - Rabbit

Result: No eye irritation  
(OECD Test Guideline 405)

Remarks: The value is given in analogy to the following substances: disodium molybdate

### **Respiratory or skin sensitization**

Sensitisation test: - Guinea pig

Result: negative  
(OECD Test Guideline 406)

Remarks: The value is given in analogy to the following substances: disodium molybdate

### **Germ cell mutagenicity**

Test Type: Micronucleus test

Test system: Human lymphocytes

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 487

Result: negative

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Mouse lymphoma test

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Test Type: Mutagenicity (mammal cell test): micronucleus.

Species: Rat

Cell type: Red blood cells (erythrocytes)

Method: OECD Test Guideline 474

Result: negative

### **Carcinogenicity**

No data available

### **Reproductive toxicity**

no data available

### **Teratogenicity**

No data available

### **Specific target organ toxicity - single exposure (Globally Harmonized System)**

no data available

### **Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

No data available

### **Aspiration hazard**

No data available

### **Additional Information**

Repeated dose toxicity - Rat - male and female - Oral - 90 d - NOAEL (No observed adverse effect level) - 42.5 mg/kg

Remarks: Subchronic toxicity

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Symptoms of an acute molybdenum(VI) intoxication: diarrhoea, anaemia (decreased haemoglobin concentration in the blood), fatigue. Toxic effect on liver and kidneys after high doses.

However, when the product is handled appropriately, hazardous effects are unlikely to occur. Handle in accordance with good industrial hygiene and safety practice.

## SECTION 12. ----- ECOLOGICAL INFORMATION -----

### Toxicity

**Toxicity to fish** semi-static test LC50 - Pimephales promelas (fathead minnow) - 609.1 mg/l - 96 h  
(OECD Test Guideline 203)

Remarks: (ECHA)

NOEC - Pimephales promelas (fathead minnow) - 143.8 mg/l - 32 d

Remarks: (ECHA)

**Toxicity to daphnia and other aquatic invertebrates** static test EC50 - Daphnia magna (Water flea) - 130.9 mg/l - 48 h  
(OECD Test Guideline 202)

Remarks: (ECHA)

**Toxicity to algae** static test NOEC - Isochrysis galbana (salt water algae) -  $\geq$  9.5 mg/l - 72 h  
(OECD Test Guideline 201)

Remarks: (ECHA)

static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 289.2 mg/l - 72 h  
(OECD Test Guideline 201)

Remarks: (ECHA)

**Toxicity to bacteria** static test EC50 - activated sludge - 820 mg/l - 3 h  
(OECD Test Guideline 209)

Remarks: The value is given in analogy to the following substances: disodium molybdate

### **Persistence and degradability**

The methods for determining the biological degradability are not applicable to inorganic substances.

### **Bioaccumulative potential**

Oncorhynchus tshawytscha (Disodium molybdate dihydrate)

Remarks: No data available

### **Mobility in soil**

No data available

### **PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

**Other adverse effects**

No data available

**SECTION 13. ----- DISPOSAL CONSIDERATIONS -----**

**Product**

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle unclean containers like the product itself.

**Contaminated packaging**

Dispose of as unused product.

**SECTION 14. ----- TRANSPORT INFORMATION -----**

**TDG (Canada)**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

**SECTION 15. ----- REGULATORY INFORMATION -----**

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

**SECTION 16. ----- OTHER INFORMATION -----**

Further information: no limited for paper copy, just for internal uses.  
For research use only. Not intended for human or animal diagnostic or therapeutic uses.

**Disclaimer**

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of SDS**