

SDS no. 6WHKR24H • Version 1.0 • Date of issue: 2024-07-29

Not a hazardous substance or mixture.

SECTION 3: Composition/information on ingredients

Mixtures

Molecular weight: 241.95

Components

Component	CAS no.	Concentration
Sodium Molybdate Dihydrate	10102-40-6	100 - 100 % (weight)
CLASSIFICATIONS: No data available. HAZARDS: No data available.		

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice	First Aid Facilities: Maintain eyewash fountain in work area.
If inhaled	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.
In case of skin contact	Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. If irritation occurs seek medical advice.
In case of eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. If rapid recovery does not occur, obtain medical attention
If swallowed	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.

Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of immediate medical attention and special treatment needed, if necessary

For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

SECTION 5: Fire-fighting measures

Suitable extinguishing media

Use fire extinguishing media appropriate for surrounding environment. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Specific hazards arising from the chemical

Hazards from Combustion Products: May librate toxic fumes in fire (oxides of carbon and oxides of sodium).  
Material does not burn.

Special protective actions for fire-fighters

Wear SCBA and structural firefighter's uniform.

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## **SECTION 6: Accidental release measures**

### **Personal precautions, protective equipment and emergency procedures**

Avoid inhalation, contact with skin, eyes and clothing.

Wear protective clothing specified for normal operations (see Section 8)

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

Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.

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## **SECTION 7: Handling and storage**

### **Precautions for safe handling**

Avoid generation or accumulation of dusts. Use with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Wash hands and face thoroughly after working with material.

### **Conditions for safe storage, including any incompatibilities**

Store in a well ventilated place away from ignition sources, oxidising agents, foodstuffs and clothing. Keep containers closed when not in use.

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## **SECTION 8: Exposure controls/personal protection**

### **Appropriate engineering controls**

In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.

### **Individual protection measures, such as personal protective equipment (PPE)**

#### **Eye/face protection**

The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

#### **Skin protection**

Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Hand Protection: Ensure hand protection complies with AS 2161, Occupational protective gloves - Selection, use and maintenance.

#### **Body protection**

Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

#### **Respiratory protection**

Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

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## **SECTION 9: Physical and chemical properties**

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## SODIUM MOLYBDATE Dihydrate

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### Basic physical and chemical properties

Physical state	Solid
Appearance	White granular powder.
Color	No data available.
Odor	Odourless.
Odor threshold	No data available.
Melting point/freezing point	687 °C
Boiling point or initial boiling point and boiling range	No data available.
Flammability	No data available.
Lower and upper explosion limit/flammability limit	No data available.
Flash point	No data available.
Explosive properties	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Oxidizing properties	No data available.
pH	7.9 - 10.3 (5%, H <sub>2</sub> O, 20 °C)
Kinematic viscosity	No data available.
Solubility	Solubility in Water: 840 g/L (20 °C)
Partition coefficient n-octanol/water (log value)	No data available.
Vapor pressure	No data available.
Evaporation rate	No data available.
Density and/or relative density	Specific Gravity: 3.28
Relative vapor density	No data available.
Particle characteristics	No data available.

### Supplemental information regarding physical hazard classes

No data available.

### Further safety characteristics (supplemental)

No data available.

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## SECTION 10: Stability and reactivity

### Reactivity

Stable under normal conditions of storage and handling.

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

Explodes on contact with molten magnesium. Violent reaction with interhalogens (e.g. bromine pentafluoride; chlorine trifluoride).  
Incandescent reaction with hot sodium, potassium or lithium.

### Conditions to avoid

Incompatibles

### Incompatible materials

Strong oxidising agents, alkali metals, most common metals, molten magnesium and interhalogens (e.g. bromine pentafluoride; chlorine trifluoride).

### Hazardous decomposition products

Carbon, molybdenum and sodium oxides.

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## SECTION 11: Toxicological information

### Information on toxicological effects

#### Acute toxicity

Ingestion: Large doses may cause severe distress, cramping, vomiting and hypertension. 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.

Inhalation: May be irritating to mucous membranes and upper respiratory tract. Symptoms may include coughing and shortness of breath. Can be route for absorption.

#### Skin corrosion/irritation

May be irritating to skin. Contact with wet skin may cause a rash which is difficult to heal. May be harmful if absorbed through the skin.

#### Serious eye damage/irritation

May irritate eyes.

#### Respiratory or skin sensitization

No data available

#### Germ cell mutagenicity

No data available.

#### Carcinogenicity

No data available.

#### Reproductive toxicity

No data available.

#### Summary of evaluation of the CMR properties

No data available.

#### Specific target organ toxicity (STOT) - single exposure

No data available.

#### Specific target organ toxicity (STOT) - repeated exposure

No data available.

#### Aspiration hazard

No data available.

#### Additional information

Chronic Effects: Prolonged exposure may cause anemia. Molybdenum is rapily excreted from the body.

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Sodium Molybdate Dihydrate: mouse LD50 intraperitoneal 257mg/kg (257mg/kg) BEHAVIORAL: SOMNOLENCE (GENERAL DEPRESSED ACTIVITY)

BEHAVIORAL: COMA Archives Internationales de Pharmacodynamie et de Therapie. Vol. 154, Pg. 243, 1965.

Link to PubMed

rat LD50 intraperitoneal 520mg/kg (520mg/kg) BEHAVIORAL: SOMNOLENCE (GENERAL DEPRESSED ACTIVITY)

BEHAVIORAL: COMA Archives Internationales de Pharmacodynamie et de Therapie. Vol. 154, Pg. 243, 1965.  
[Link to PubMed](#)

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## SECTION 12: Ecological information

### Toxicity

Acute Toxicity - Fish: LC50 (*Onchorhynchus mykiss*): 7600 mg/l/96 h.

Acute Toxicity - Daphnia: EC50 (*Daphnia magna*): 330 mg/l/48 h.

Acute Toxicity - Algae: IC50 (*Selenastrum capricornutum*): > 100 mg/l/72 h.

Acute Toxicity - Bacteria: EC10 (*Ps. putida*): 50 mg/l/18 h.

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## SECTION 13: Disposal considerations

### Disposal methods

#### Product disposal

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

#### Other disposal recommendations

Do not discharge this material into waterways, drains and sewers.

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## SECTION 14: Transport information

### ADG (Road and Rail)

Not dangerous goods

### IMDG

Not dangerous goods

### IATA

Not dangerous goods

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## SECTION 15: Regulatory information

### Safety, health and environmental regulations specific for the product in question

#### Australia SUSMP

Poison Schedule: NS

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## SECTION 16: Other information

### Further information/disclaimer

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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia

National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'

Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.

Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.

Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants, December 2019

Safe Work Australia, Hazardous Chemical Information System (HCIS), [hcis.safeworkaustralia.gov.au](https://hcis.safeworkaustralia.gov.au)

IATA, Dangerous Goods Regulations (DGR)

IMO, International Maritime Dangerous Goods Code (IMDG)