

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name SODIUM MOLYBDATE, DIHYDRATE, CRYSTAL

CAS number 10102-40-6

Synonyms Molybdic acid, disodium salt, dihydrate

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses Laboratory Chemicals

1.3 Details of the supplier of the safety data sheet

Company Lab Alley, LLC
12501 Pauls Valley Road
Austin, Texas 78737
U.S.A.

Telephone 512-668-9918

Fax 512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

This chemical is not considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). Not a dangerous substance or mixture according to the Globally Harmonized System (GHS).

2.2 GHS Label elements, including precautionary statements

None required.

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

None identified.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Sodium Molybdate, Dihydrate	Molybdic acid, disodium salt, dihydrate	10102-40-6	100%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice	National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.
If inhaled	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
In case of skin contact	Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops. Consult a physician if necessary.
In case of eye contact	Flush eyes with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.
If swallowed	Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

4.2 Most important symptoms and effects, both acute and delayed

May cause eye/skin irritation.
May cause irritation of respiratory tract.
Coughing.
Dyspnea (Shortness of breath and difficulty breathing).
May cause digestive (gastrointestinal) tract irritation.
May cause stomach cramping.
Nausea.
Vomiting.
May cause diarrhea.
Central nervous system effects.
It may affect the kidneys.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

Unsuitable extinguishing media No information available.

5.2 Specific hazards arising from the substance or mixture

No information available.

5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

5.4 Further information

Flash Point No information available.

Autoignition Temperature No information available.

Explosion limits

Upper No data available.

Lower No data available.

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
2	1	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers.

6.3 Methods and materials for containment and cleaning up

Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading. Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

6.4 Reference to other sections

Refer to protective measures listed in Sections 7 and 8. See section 13 for proper disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Do not ingest. Do not breathe dust.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatibilities

Oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Sodium Molybdate, Dihydrate	TWA	5 mg/m ³

US. ACGIH Threshold Limit Values

Component	Type	Value
Sodium Molybdate, Dihydrate	TWA	5 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Sodium Molybdate, Dihydrate	-	-

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal protective equipment**Eye/face protection**

Safety glasses with side-shields.

Skin protection

Gloves.

Body Protection

Long sleeved clothing. Chemical resistant apron.

Respiratory protection

Effective dust mask. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust, dust clouds, inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

Control of environmental exposure

Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Solid
Appearance	White powder
Odor	Odorless
Odor Threshold	No information available
pH	7.0-10.5 (pH of 5% solution)
Melting Point/Range	No information available
Boiling Point/Range	No information available
Evaporation Rate	No information available
Flammability (solid)	No information available
Flammability or explosive limit	
Upper	No information available
Lower	No information available
Vapor Pressure	No information available
Vapor Density	No information available
Density	3.28
Solubility	Soluble in hot or cold water
Partition coefficient; n-octanol/water	65 g/100 ml @ 20 deg. C; 84 g/10 ml @ 100 deg. C
Autoignition Temp	No information available
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	Na ₂ MoO ₄ ·2H ₂ O
Molecular Weight	241.95
VOC Content(%)	No information available
Oxidizing properties	No information available

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Reactive with oxidizing agents.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerization does not occur.

10.4 Conditions to avoid

Incompatible materials.

10.5 Incompatible materials

Oxidizing agents.

10.6 Hazardous decomposition products

Sodium oxides. Molybdenum oxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium Molybdate, Dihydrate	4233 mg/kg Rat	>2000 mg/kg Rat	>1.93 mg/l Rat 4 hr

Skin corrosion/irritation

May cause skin irritation.

Serious eye damage/eye irritation

May cause eye irritation.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Sodium Molybdate, Dihydrate	10102-40-6	Not listed	Not listed	A3 - Confirmed animal carcinogen with unknown relevance to humans (molybdenum soluble compounds)	Not listed	Not listed

Specific target organ toxicity - single exposure

No information available.

Specific target organ toxicity - repeated exposure

No information available.

Reproductive toxicity

No information available.

Chronic effects

Prolonged or repeated ingestion may affect the blood (normocytic anemia, changes in serum composition), metabolism (weight loss), teeth (changes in teeth and supporting structures), and urinary system. Inhalation: Chronic exposure of workers in molybdenum-copper plants has produced liver dysfunction (liver function tests impaired, fatty liver degeneration))with hyperbilirubinemia. Chronic exposure may also affect behavior/central nervous system and cause joint and muscle pain. Medical Conditions Aggravated by Exposure: Pre-existing respiratory, kidney, or blood disorders, or gout.

11.2 Additional Information

No information available.

SECTION 12: Ecological information**12.1 Toxicity**

No data available.

12.2 Persistence and degradability

No information available.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1 Waste Disposal Methods**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

UN Number	Not regulated
Proper Shipping name	Not regulated
Hazard Class	None
Packaging Group	Not regulated
Technical name	Sodium Molybdate Dihydrate

IMDG

UN Number	Not regulated
Proper Shipping name	Not regulated
Hazard Class	None
Packaging Group	Not regulated
Technical name	Sodium Molybdate Dihydrate

IATA

UN Number	Not regulated
Proper Shipping name	Not regulated
Hazard Class	None
Packaging Group	Not regulated
Technical name	Sodium Molybdate Dihydrate

SECTION 15: Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed/applicable.

SARA 304 Emergency release notification

Not listed/applicable.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed/applicable.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed/applicable.

SARA 311/312 Hazardous

Not listed/applicable.

SARA 313 (TRI reporting)

Not listed/applicable.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not listed/applicable.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not listed/applicable.

Safe Drinking Water Act

Not listed/applicable.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed/applicable.

US state regulations

US. Massachusetts RTK - Substance List

Not listed.

US. New Jersey Worker and Community Right-to-Know Act

Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

California Proposition 65

Not listed.

SECTION 16: Other information

Date of Issue: 6/19/2025

SECTION 17: Disclaimer

The information provided on this Safety Data Sheet 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.