SAFETY DATA SHEET

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

1.1 Product identifiers

Product name	: Sodium molybdate dihydrate
Product Number	: CP-A2355D, CP-B2355D, CP-M2355D
CAS-No.	: 10102-40-6

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

Identified uses	: Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company	ChemPure Brand Chemicals 39103 Warren Road Westland, Michigan 48185 UNITED STATES
Telephone	: +1 734-884-4773
Fax	: +1 734-405-6623

1.4 Emergency telephone

Emergency Phone #	: 800-424-9300 CHEMTREC (USA)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture.

2.2 GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms	: Molybdic acid sodium salt dihydrate, Sodium molybdate-2-hydrate
Formula	: $MoNa_2O_4 \cdot 2H_2O$
Molecular Weight	: 241.95 g/mol
CAS#	10102-40-6
EC#	231-551-7

SECTION 4: First aid measures

4.1 Description of first-aid measures

If inhaled
After inhalation: fresh air.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact
After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed
After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed

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

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Sodium oxides
Molybdenum oxides
Not combustible.
Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

5.4 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

6.1 Personal precautions, protective equipment and emergency procedures Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 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.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
Tightly closed. Dry.
Storage class (TRGS 510): 13: Non Combustible Solids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters
Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls
Change contaminated clothing. Wash hands after working with substance.

Personal protective equipment

Eye/face protection
Safety glasses with side shields.

Skin protection
Avoid contact with skin.
If using Nitrile Rubber gloves, Minimum layer thickness: 0.11 mm with an approximate Break through time: 480 minutes.

Body protection:
Wear Protective suit

Respiratory protection
Required when dusts are generated. In the case of dust or aerosol formation use respirator with an approved filter.

Hygiene measures
Keep away from food, drink and animal feeding stuffs. Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of the work day.

Control of environmental exposure
Do not let product enter drains.

Exposure Guidelines
ACGIH: US ACGIH Threshold limit values, 2009, TWA (Time weighed average) 0.5 mg/m^3 for CAS#10102-40-Form of exposure as respirable fraction. Expressed as Mo.

OSHA_TRANS: US. Table Z-1, limits for Air contaminants (29CFR 1910.1000) updated 02-2006, PEL (permissible exposure limit) 5 mg/m^3 for cas#10102-40-6 . Expressed as Mo.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: solid Color: white
b)	Odor	odorless
c)	Odor Threshold	Not applicable
d)	pH	9 - 10 at 840 g/l at 20 °C (68 °F)
e)	Melting point/freezing point	Melting point/range: 100 °C (212 °F)
f)	Initial boiling point and boiling range	Not applicable
g)	Flash point	Not applicable
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	The product is not flammable.
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapor pressure	Not applicable
l)	Vapor density	No data available
m)	Relative density	2.70 g/mL at 20C
n)	Water solubility	840 g/l at 20 °C (68 °F)
o)	Partition coefficient: n-octanol/water	Not applicable No data available
p)	Autoignition temperature	
q)	Decomposition temperature	130 (266 °F) - Elimination of water of crystallization
o)	Viscosity	No data available
r)	Explosive properties	No data available
s)	Oxidizing properties	No data available

9.2 Other safety information
No data available

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available

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

10.3 Possibility of hazardous reactions
no information available

10.4 Conditions to avoid
no information available

10.5 Incompatible materials
No data available

10.6 Hazardous decomposition products
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
Acute toxicity estimate Oral - 4,233 mg/kg
(Calculation method)

LD50 Oral - Rat - 4,233 mg/kg
Remarks: (External MSDS)Symptoms: Nausea, Vomiting

Acute toxicity estimate Dermal - 2,500 mg/kg
(Calculation method)
LD50 Dermal - Rat - > 2,000 mg/kg
Remarks: (External MSDS)

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation
Remarks: (External MSDS)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: slight irritation
Remarks: (External MSDS)

Respiratory or skin sensitization
Sensitisation test: - Guinea pig
Result: negative
(OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: Mutagenicity (mammal cell test):
Result: positive
Remarks: (Lit.)

Test Type: Mutagenicity (mammal cell test): micronucleus. Result: positive
Remarks: (Lit.)

Carcinogenicity

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity

Specific target organ toxicity - single exposure

Specific target organ toxicity - repeated exposure

Aspiration hazard

11.2 Additional Information
Not available
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

12.1 Toxicity

Toxicity to fish	NOEC - Oncorhynchus mykiss (rainbow trout) - 3,200 mg/l - 96 h Remarks: (External MSDS)

	LC50 - Oncorhynchus mykiss (rainbow trout) - 7,600 mg/l - 96 h Remarks: (External MSDS)
Toxicity to daphnia and other aquatic invertebrates	NOEC - Daphnia magna (Water flea) - 100 mg/l - 48 h Remarks: (External MSDS)
	EC50 - Daphnia magna (Water flea) - 330 mg/l - 48 h Remarks: (External MSDS)
Toxicity to algae	NOEC - Pseudokirchneriella subcapitata (green algae) - 4.6 mg/l - 72 h Remarks: (External MSDS)
	IC50 - Pseudokirchneriella subcapitata (green algae) - > 100 mg/l - 72 h Remarks: (External MSDS)
Toxicity to bacteria	EC10 - Pseudomonas putida - 50 mg/l - 18 h Remarks: (External MSDS)

12.2 Persistence and degradability

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

12.3 Bioaccumulative potential

12.4 Mobility in soil

12.5 Results of PBT and vPvB assessment

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

12.6 Other adverse effects

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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 uncleaned containers like the product itself.

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SECTION 14: Transport information

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

Further information

Not classified as dangerous in the meaning of transport regulations.

SECTION 15: Regulatory information

SARA 302 Components
This material does not contain any components with a section 302 EHS TPQ.

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

SARA 311/312 Hazards
No SARA Hazards

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

SECTION 16: Other information

Revision	Date
Revision#1	10/06/2018
Revision#2	03/23/2023

NFPA Rating

Health Hazard	**2**
Fire Hazard	**0**
Reactivity Hazard	**0**

Further information

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