Safety Data Sheet
According to 29 CFR 1910.1200 (OSHA HCS)

SDS No. 2170

1 Identification of substance and company

Product details
Product name: Sodium molybdate, dihydrate
Product code: 13734, 17117
Relevant identified uses of the product: Research and product development
Manufacturer/Supplier: Noah Technologies Corporation
1 Noah Park
San Antonio, Texas 78249-3419
Phone: (210) 691-2000
Web site: www.noahtech.com
Emergency information: CHEMTREC
703-527-3887

2 Hazards identification

GHS label elements: None
Signal word: None
Hazard/precautionary statements: Avoid consumption
Information pertaining to particular dangers for man and environment: None
HMIS ratings (scale 0-4):
Health: 1
Flammability: 0
Physical hazard: 0

3 Composition/Information on ingredients

Chemical name: Sodium molybdate, dihydrate
Designation: (CAS#): 10102-40-6
Formula: Na₂MoO₄·2H₂O
Synonyms: Disodium molybdate, sodium molybdenum oxide
Identification number(s): EC Number: 231-551-7

4 First aid measures

After inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Get medical attention
After skin contact: Instantly wash with water and soap and rinse thoroughly
For symptoms of exposure consult a physician
After eye contact: Rinse opened eye for at least 15 minutes under running water. Assure adequate flushing by separating the eyelids with fingers. Consult a physician.
After swallowing: If conscious, give large quantities of water and seek medical attention.
Never give anything by mouth to an unconscious individual.
Information for doctor:
Prolonged or repeated exposure may cause nausea, headache, vomiting
Symptoms of overexposure may include cramping, vomiting, and hypertension. Medical conditions aggravated by exposure: Blood system problems, bone joint or teeth problems and/or respiratory problems. Symptoms of acute molybdenum(VI) intoxication: diarrhea, anemia (decreased hemoglobin concentration in the blood), fatigue. Toxic effect on liver and kidneys after high doses.

5 Fire-fighting measures

Suitable extinguishing agents: Use extinguishing media most appropriate to surrounding fire conditions
Special hazards caused by the material, its products of combustion or resulting gases: In case of fire, the following can be released:
Oxides of sodium and molybdenum
Protective equipment:
Wear self-contained breathing apparatus
Wear fully protective suit.
6 Accidental release measures

Person-related safety precautions: Wear personal protective equipment. Keep unprotected persons away.
Measures for environmental protection: Do not allow material to be released to the environment without proper governmental permits.
Measures for cleaning/collecting: Dispose of contaminated material as waste according to item 13.
Additional information: See Section 7 for information on safe handling.
See Section 8 for information on personal protective equipment.
See Section 13 for information on disposal.

7 Handling and storage

Information for safe handling: Keep containers tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires: No data available.
Storage requirements to be met by storerooms and containers: Keep container tightly closed in a dry and well-ventilated place. Hygroscopic.
Information about storage in one common storage facility: Do not store together with oxidizing agents.
Further information about storage conditions: Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.

8 Exposure controls/personal protection

Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Components with critical values that require monitoring at the workplace: ACGIH TLV: TWA 5 mg(Mo)/m3.
USA PEL: TWA 5 mg(Mo)/m3.

Additional information: No data.

Personal protective equipment:
General protective and hygienic measures: The usual precautionary measures should be adhered to in handling the chemicals.
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.

Respiratory protection: Use suitable respirator when high concentrations are present.
Use only NIOSH/MESHA or CEN approved dust mask type N95 or TYPE P1 (EN 143).

Hand protection: Impervious gloves.

Eye protection: Safety glasses.

Skin protection: Protective work clothing.

Additional protective equipment: Sufficient to prevent contact.
Emergency eyewash and safety shower.

9 Physical and chemical properties

General Information:
Physical state: Powder.
Color: White.
Smell: Odorless.

Molecular Weight (Calculated): 241.95.
Melting/Freezing point/range: 100 °C.
Boiling point/range: No data available.
Sublimation temperature/start: No data available.
Flash point: Non-flammable.
Autoignition temperature: No data available.
Decomposition temperature: No data available.
Danger of explosion: None.

Vapor pressure (mm Hg): No data available.
Vapor density: No data available.
Specific gravity at 20 °C: 2.37.
Solubility in/Miscibility with water at 0 °C: 840 g/L @ 20 °C.

10 Stability and reactivity

Conditions to be avoided: No decomposition if used and stored according to specifications.
See section 7 for information on proper handling and storage.

Materials to be avoided: Oxidizing agents.

Dangerous reactions: See section 7.

Hazardous decomposition products: Oxides of sodium and molybdenum.
11 Toxicological information

Acute toxicity:
LD/LC50 values that are relevant for classification:
oral-rat LD50: 4,233 mg/kg
Intraperitoneal-rat LD50: 520 mg/kg

Primary irritant effect:
on the skin: Irritant for skin and mucous membranes
on the eye: Irritant effect
Sensitization: No sensitizing effect known.

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

Carcinogenicity: No component of this product is identified as a probable, possible or confirmed human carcinogen

12 Ecological information

Toxicity:
Toxicity to fish: Rainbow trout LC50: 7,600 mg/L:96H
Toxicity to daphnia and other aquatic invertebrates: Daphnia magna EC50: 330 mg/L:48H
Toxicity to algae: Green algae IC50: > 100 mg/L:72H
Toxicity to bacteria: Pseudomonas putida EC50: 50 mg/L:18H

Persistence and degradability: Not applicable
Bioaccumulative potential: No data available
Mobility in soil: No data available
Results of PBT and vPvB assessment: No data available

13 Disposal considerations

Recommendation:
Consult state, local or national regulation for proper disposal
Allow professional disposal company to handle waste
Must be specially treated under adherence to official regulations

Unclean packagings
Recommendation: Disposal must be made according to official regulations

14 Transport information

Land transport DOT
Proper shipping name: Chemicals Non-Hazardous
Technical name: Sodium molybdate, dihydrate

Air transport ICAO-TI and IATA-DGR:
Proper shipping name: Chemicals Non-Hazardous
Technical name: Sodium molybdate, dihydrate

UPS Ground / FedEx Ground
Proper shipping name: Chemicals Non-Hazardous
Technical name: Sodium molybdate, dihydrate

UPS Air
Proper shipping name: Chemicals Non-Hazardous
Technical name: Sodium molybdate, dihydrate

15 Regulatory information

SARA 302 Components: Not subject
SARA 311/312 Hazards: No SARA Hazards
SARA 313 Components: Not subject
TSCA: Listed on TSCA Inventory
California Prop 65 Components: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm
Water hazard class: No data available

16 Other information

The above information is accurate to the best of our knowledge. However, since data, safety standards and government regulation are subject to change and the conditions of handling and use, or misuse are beyond our control, NOAH MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON. User should satisfy himself that he has all current data relevant to his particular use.