

SODIUM MOLYBDATE

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE AND COMPANY

Product Name: SODIUM MOLYBDATE
UN No.: Not regulated
Supplier: Universal Crop Protection (Pty) Ltd.
Co. Reg. No.: 1983/008184/07
 PO Box 801,
 Kempton Park, 1620, South Africa
Telephone: (011) 396 2233
Fax: (011) 396 4666
Website: www.villacrop.co.za

Emergency telephone numbers:

24 Hr Transport / Spill emergency no:

Envirosure. +27 31 205 4918
 (Hazcall24) +27 86 044 4411
 (Client: Villa Crop Protection)
 Griffon Poison Information Centre +27 82 446 8946
 (Client: Villa Crop Protection)

Poisoning Emergency telephone numbers:

Griffon Poison Information Centre +27 82 446 8946
 Poisons Information Centre +27 861 555 777

Villa Crop Protection Emergency number:

National Safety, Health and Environmental Manager:
 +27 63 698 0668

2. COMPOSITION / INFORMATION ON INGREDIENTS

Common Name: Soluble Sodium molybdate

Chemical name of the substance:

Molybdic acid, disodium salt

CAS No.: 7631-95-0

Chemical Family: Inorganic salt.

Chemical Formula: Na₂MoO₄·2H₂O (Mol. wt: 241.94)

Use: Used as a seed dressing or foliar spray to combat **Molybdenum** deficiency in agriculture crops.

Formulation: **Molybdenum:** 395 g/kg
 Water soluble Powder

Hazardous components:

SYMBOLS: Xi

RISK-PHRASE(S): R 22, R36/38

3. HAZARD IDENTIFICATION

Likely routes of exposure: Ingestion, inhalation and skin contact.

Eye contact: May cause eye irritation.

Skin contact: Minimally toxic. May cause mild skin irritation.

Ingestion: Harmful.

Inhalation: Irritating to the mucous membranes and upper respiratory tract.

4. FIRST AID MEASURES AND PRECAUTIONS

Signs and symptoms of overexposure: May cause respiratory tract irritation, coughing and chest discomfort. May cause a hard to heal rash on prolonged or repeated skin contact. Ingestion of large amounts may cause cramping, vomiting and hypertension. Gout has been associated with **Molybdenum** poisoning.

Inhalation: Remove source of contamination or move victim to fresh air. If breathing has stopped, perform artificial respiration and administer oxygen. Keep person warm and at rest. Treat symptomatically and supportively as and when required. **Obtain medical advice if necessary.**

Skin contact: Remove contaminated clothing, shoes and leather goods. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. **Seek medical attention if necessary.**

Eye contact: Immediately flush the contaminated eyes with gently flowing lukewarm water or saline solution for 20 minutes, holding the eyelid(s) open. **Seek medical attention if necessary.**

Ingestion: Have victim rinse mouth thoroughly with water. Give ½ to 1 glass of water to dilute the material if victim is alert and not convulsing. **Do not induce vomiting.** If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water. Administration of gastric lavage or oxygen should be performed by qualified medical personnel. **Seek medical advice immediately.**

5. FIRE FIGHTING MEASURES

Fire and explosion hazard: No fire or explosion hazard.

Extinguishing agents: Extinguish small fires with carbon dioxide, dry powder, halon or alcohol-resistant foam. Water spray or fog can be used for larger fires or cooling of unaffected stock.

Firefighting: Remove container from fire area if possible. Contain fire control water for later disposal. Use a recommended extinguishing agent for the type of surrounding fire.

Personal protective equipment: Fire may produce irritating or poisonous vapours (toxic metal fumes), mists or other products of combustion. Fire-fighters and others that may be exposed should wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES (SPILLAGE)

Personal precautions: Avoid contact with skin and eyes. Do not inhale fumes. For personal protection see Section 8.

Environmental precautions: Do not allow entering drains or watercourses. Spillage or uncontrolled

SODIUM MOLYBDATE

MATERIAL SAFETY DATA SHEET

discharges into water courses (or public waters) to be reported immediately to the Police and to the Department of Water/Environmental Affairs.

Occupational spill: For small liquid spills, soak up with sand or other suitable non-combustible absorbent material, and place into containers for subsequent disposal. For large spills, contain liquid far ahead of spill. Contain spillage and contaminated water for subsequent disposal. Do not flush spilled material into drains. Keep spectators away.

7. HANDLING AND STORAGE REQUIREMENTS

Handling: Harmful if swallowed. Avoid contact with eyes, prolonged contact with skin, and inhalation of fumes. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Remove clothing immediately if the product gets inside. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing. Do not apply directly to areas where surface water is present, or to intertidal areas below the mean high water mark. Water used to clean equipment must be disposed of correctly to avoid contamination.

Storage: Store in its original labelled container in a shaded, well-ventilated area, away from heat, sparks and other sources of ignition. Not to be stored next to foodstuffs and water supplies. Keep out of reach of children and animals. Local regulations should be complied with.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

It is essential to provide adequate ventilation. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

PERSONAL PROTECTIVE EQUIPMENT: If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal protective equipment including approved respiratory protection.

Respirator: An approved respirator suitable for protection from dusts and mists of pesticides is adequate. Limitations of respirator use specified by the approving agency and the manufacturer must be observed.

Clothing: Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance.

Gloves: Employee must wear protective rubber gloves to prevent contact with this substance.

Eye protection: The use of safety goggles is recommended.

Emergency eye wash: Where there is any possibility that an employee's eyes may be exposed to this substance; the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White crystalline powder.

Odour: No odour.

pH: 9.0.5 %

Boiling point: Sublimes.

Melting point: 687°C.

Specific gravity: 3.28.

Vapor density: 7.1 (Air=1).

Solubility in water: Readily soluble in water.

Flash point: None.

10. STABILITY AND REACTIVITY

Storage stability: Stable for up to 2 years under normal warehouse storage conditions.

Stability: The product is relatively stable, but is decomposed by strong oxidising agents. Avoid high temperatures.

Incompatibility: Incompatible with strong oxidizing agents.

Thermal decomposition: Toxic metal fumes are released when the product decomposes on heating.

11. TOXICOLOGICAL INFORMATION

Acute oral LD₅₀: 520 mg/kg i.p.r. in rats.

Acute dermal LD₅₀: 576 mg/kg i.p.r. in rats.

Inhalation: LC₅₀ (4 hours) > 2 080 mg/m³

Acute skin irritation: The product causes irritation to the skin.

Acute eye irritation: The product causes eye irritation.

Carcinogenicity, Teratogenicity, Mutagenicity: Not listed by IARC, NTP or OSHA as a carcinogen, mutagen, teratogen or neurotoxin.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGY:

Birds, Fish, Bees, Daphnia, Earthworms, Soil micro-organisms: This section is subject to future development.

13. DISPOSAL CONSIDERATION

Pesticide disposal: Open dumping or burning of this pesticide is prohibited. Never pour untreated waste or surplus products into public sewers or where there is any danger of run-off or seepage into water systems. Do not

SODIUM MOLYBDATE

MATERIAL SAFETY DATA SHEET

contaminate rivers, dams or any other water sources with the product or used containers.

Contaminated absorbents, surplus product (in diluted form), etc., should be buried in approved landfill. Comply with any local legislation applying to waste disposal.

Package product wastes: Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is cleaned, reconditioned, or destroyed. Empty the container of excess product into the container of the applicator. Destroy the emptied containers by perforation and flattening. Bury in an approved dump site. Do not re-use the empty container for any other purpose. Comply with any local legislation applying to disposal.

END OF DOCUMENT

Compiled: January 2000
Reviewed: September 2020
Revision no: (4)
Next revision: September 2025

For detailed information on revisions, contact the Registration holder.

14. TRANSPORT INFORMATION

UN NUMBER: Not regulated.
Road Transport ADR/IRD: Not regulated.
Air Transport ICAO/IATA: Not regulated.
Maritime Transport IMDG/IMO: Not regulated.

15. REGULATORY INFORMATION

Symbol: Xi
Indication of danger: Irritating substance
Risk phrases:
R 22 Harmful if swallowed.
R 36/38 Irritating to eyes and skin.
Safety phrases:
S 2 Keep out of reach children.
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S 46 If swallowed seek medical advice immediately and show this container and label.

16. OTHER INFORMATION

Packaging: Packed in 1 kg, 2 kg, 5 kg & 10 kg plastic containers and 25 kg woven bags or 3 ply paper bags and labelled according to South African regulations and guidelines.

Disclaimer: The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage use of the product. It is not applicable to unusual or non-standard uses of the product nor where instructions or recommendations are not followed.

All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.