

UNIVERSAL DUSTING SULPHUR

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE

Product Name: DUSTING SULPHUR
 Fungicide
Common Name: Dusting sulfur
Chemical Name: Sulfur (IUPAC)
CAS No.: 7704-34-9
Chemical Family: Non-metallic element
Chemical Formula: S_x (Mol. wt: 32.1)
Use: Non-systemic fungicide with protective action. Secondary acaricidal activity.
Formulation: Sulphur: 980 g/kg
 Dusting Powder
EEC no. 231-722-6
UN no.: 1350

Supplier: Universal Crop Protection (Pty) Ltd.
Co. Reg. No.: 1983/008184/07
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 Kempton Park, 1620, South Africa
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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

Hazardous components: Sulfur
SYMBOLS: X_n
RISK-PHASE(S): R 22, R 36/38.

3. HAZARD IDENTIFICATION

Toxicity class: WHO (a.i.) III (Table 5); EPA (formulation) IV.
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: Can be dangerous if large amounts are ingested. **Inhalation:** Irritating to the mucous membranes and upper respiratory tract.

4. FIRST AID MEASURES AND PRECAUTIONS

Elemental **Sulfur** is moderately irritating to the skin, and airborne dust is irritating to the eyes and the respiratory tract. In hot sunny environments, there may be some oxidation of foliage-deposited **Sulfur** to irritating gaseous **Sulfur** oxides, which are very irritating to the eyes and respiratory tract.

Ingested **Sulfur** powder induces catharsis, and has been used medicinally (usually with molasses) for that purpose. Some hydrogen sulfide is formed in the large intestine and this may present a degree of toxic hazard. However, an adult has survived ingestion of 60 grams.

Ingested colloidal **Sulfur** is efficiently absorbed by the gut and is promptly excreted in the urine as inorganic sulfate.

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. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water. **Seek medical advice immediately.**

Advice to the physician: Unless an extraordinary amount of **Sulfur** (several grams) has been ingested shortly prior to treatment, there is probably no need for emptying the stomach or administration of a cathartic. Adsorb ability of **Sulfur** on activated charcoal has not been tested. The most serious consequence of **Sulfur** ingestion is likely to be that of catharsis: dehydration and electrolyte depletion, particularly in children. If diarrhea is severe, oral or intravenous administration of glucose and/or electrolyte solutions may be appropriate.

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5. FIRE FIGHTING MEASURES

Fire and explosion hazard: Slight fire hazard when exposed to heat and flame. Dust-air mixtures may ignite or explode.

Extinguishing agents: Extinguish small fires with carbon dioxide, dry chemical, sand or standard foam. Water spray, standard foam 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 vapours 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. When the product contaminates public waters, inform appropriate authorities in accordance with local regulations.

Occupational spill: For small spills, with clean shovel, place material into clean, dry container and cover for subsequent disposal. For large spills, wet down with water and dike for later disposal. Contain spillage and contaminated water for subsequent disposal. Do not flush spilled material into drains. Keep spectators away.

7. HANDLING AND STORAGE REQUIREMENTS

Handling: 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 labeled 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 work site 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 eyewash:** 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: Yellow powder.

Boiling point: 444.6°C

Melting point: 114.5 °C

Specific gravity: 2.07

Vapor pressure: 0.527 mPa (30.4°C)

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

Solubility in water: Practically insoluble in water.

Flash point: 207 °C.

Solubility: Crystalline forms are soluble in carbon disulfide, but amorphous forms are not. Very slightly soluble in ether and petroleum ether; more readily soluble in hot benzene and acetone.

10. STABILITY AND REACTIVITY

Stability: The product is very stable. In the presence of strong alkalis, sulfides can be formed.

Incompatibility: Do not mix with oils, due to phytotoxicity.

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11. TOXICOLOGICAL INFORMATION

Practically non-toxic to humans and animals.

Acute oral LD₅₀: 175 mg/kg in rabbits.

Inhalation: Irritating.

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:

Fish: Non toxic.

Bees: Non toxic.

13. DISPOSAL CONSIDERATION

Pesticide disposal: 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 labeled safeguards until container is cleaned, reconditioned, or destroyed. Containers must be triple rinsed with water. Containers are not to be reused and should be punctured and transported to a scrap metal facility for recycling or disposal in approved landfill site. Comply with any local legislation applying to disposal.

14. TRANSPORT INFORMATION

UN NUMBER: 1350

ADR/RID:

Hazard Identification no.: 40. Label: 4.1

IMDG/IMO:

Shipping name: **Sulphur**, lump and coarse-grained powder.

Label of class: 4.1

Packaging group: III

ICAO/IATA:

Proper shipping name: **Sulphur**. Class: 4.1

Hazard Label: Flammable solid

Packaging group: III

Passenger aircraft: No limit

Cargo aircraft: No limit

15. REGULATORY INFORMATION

Symbol: X_i

Indication of danger: Irritant.

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. PACKING AND LABELLING

Packed in 1, 2, 5, 10, 20, 25 kg 4 ply paper bags or woven polypropylene (with polyethylene inner) bags labeled according to the South African regulations and guidelines.

17. OTHER INFORMATION

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the PRODUCT AS SUCH. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulations(s) containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.

18. REFERENCES

- Applicable own physical and chemical, toxicity and ecotoxicity research studies.
- *The Pesticide Manual*; Tenth Edition; Editor Clive Tomlin; Crop Protection Publications, 1994.
- *Agriculture and Public Health*; Guide to the Treatment of Poisoning by Chemicals, 1993.

END OF DOCUMENT

Compiled: August 1998

Reviewed: March 2019

Revision no: (3)

Next revision: March 2024

Subject: *DUSTING SULPHUR*
Document no: *031UM*
Effective Date: *August 1998*
Revision no: *March 2019 (3)*
Product Code: *FSUL01P*

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For detailed information on revisions, contact the
Registration holder.