

MATERIAL SAFETY DATA SHEET

PRODUCT: DUSTING SULPHUR

Date of Issue: 1 DEC 2016

Valid until: 1 DEC 2021

GHS Format

1. IDENTIFICATION OF MATERIAL AND SUPPLIER

Product (material) Name: Manutec Dusting Sulphur

Other names: None

Manufacturer/Supplier codes: MTO0556 / FSULDUST

Recommended use: used as a fungicide or miticide to control Powder mildew, mites in fruit & vegetable crops.

Manufacturer/Supplier Information:

Name: MANUTEC PTY LTD

Address: 30 Jonal drive, Cavan, South Australia 5094

Telephone No:+61-8-8260 2277 **Fax:**+61-8-8260 2399

Email: manutec@manutec.com.au

Emergency contact only: Poisons Information Centre (Australia) 131126

2. HAZARDS IDENTIFICATION

ADG Code DANGEROUS GOODS according to ADG Code, However subject to special provision as below.
Note: Sulphur is not subject to the provisions of the ADG Code when it is transported in quantities of less than 400 kg per package, or when it has been formed into a specific shape like prills, granules, pellets, pastilles or flakes. [Special Provision 242]

ASCC Hazard Classification

Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Hazard Categories Skin Corrosion/Irritation - Category 2

Pictograms



Signal Word Warning

Hazard Statements

H315 Causes skin irritation.

Precautionary Statements Prevention

P264 Wash contacted areas thoroughly

	after handling.
Response	P280 Wear protective gloves/protective clothing. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P332 + P313 If skin irritation occurs: Get medical advice/attention. P362 Take off contaminated clothing and wash before reuse. P321 Specific treatment (see supplemental first aid instructions on this label).

National Transport Commission (Australia)

Dangerous goods according to ADG Code, However subject to special provision as below.

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Poisons Schedule: None allocated

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Entity</u>	<u>CAS No.</u>	<u>%</u>
Sulphur (prilled)	7704-34-9	>90%
Inert ingredients	No data	< 10%

4. FIRST AID MEASURES

Swallowed: Rinse mouth with water. If swallowed, give a glass of water to drink. If vomiting occurs give further water. Seek medical advice.

Eye: If in eyes, hold eyelids apart and flush the eye continuously with running water. or for at least 15 minutes. Continue flushing until if advised by a Poisons Information Centre or a doctor.

Skin: If skin or hair contact occurs, remove contaminated clothing and wash skin and hair with soap and water. Seek medical assistance if required.

Inhaled: Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

Advice to Doctor: Treat symptomatically based on judgement of doctor and individual reactions of patient. Acute toxic effect may include nausea, headache, diarrhoea upon ingestion of large quantities, or dermal irritation if exposed to skin.

Medical Conditions Aggravated by Exposure: No information available on medical conditions aggravated by exposure to this product

5. FIRE FIGHTING MEASURES

General Measures: Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk. Avoid all ignition sources.

Flammability Conditions: Flammable solid. Can melt and flow in a fire situation.

Extinguishing Media: Coarse water spray, fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder). Unsuitable Extinguishing Media: Solid water jet/stream may scatter and spread the fire. Keep containers cool with water spray.

Hazardous Products of Combustion: On burning will emit toxic fumes, including those of oxides of sulfur

Special Fire Fighting Instructions: Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment

Personal Protective Equipment: Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) & protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves).

Flash Point:	>207.2°C
Lower Explosion Limit	53 g/m ³
Upper Explosion Limit	460 g/m ³
Auto Ignition Temperature	>250°C
Hazchem Code	1Z

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure: Avoid accidents, clean up immediately. Slippery when spilt. Eliminate all sources of ignition. Work up wind or Increase ventilation. Avoid generating dust. Stop leak if safe to do so. Isolate the danger area. Use clean, non-sparking tools and equipment. All equipment used when handling the product must be grounded

Clean Up Procedures: Contain and sweep/shovel up spills with dust binding material. Transfer to a suitable, labelled container and dispose of promptly as hazardous waste

Containment: Stop leak if safe to do so. Isolate the danger area.

Environmental Precautionary Measures: Do NOT let product reach drains or

waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management

Personal Precautionary Measures: Personnel involved in the clean up should wear full protective clothing as listed in section 8.

7. HANDLING AND STORAGE

Handling: Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. In common with many organic chemicals, may form flammable dust clouds in air. For precautions necessary refer to Safety Data Sheet "Dust Explosion Hazards". Take precautionary measures against static discharges by bonding and grounding equipment. Avoid handling which leads to dust formation. Avoid contact with eyes, skin and clothing. Do not inhale product dust/fumes.

Storage: Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in section 10. Keep out of direct sunlight, sources of heat or ignition.

This product has a UN Classification of 1350 and a Dangerous Goods Class 4.1 according to The Australian Code for the Transport of Dangerous Goods by road/rail

Container: Store in original packaging as supplied by manufacturer

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

General: No exposure standard has been established for this product by the Australian Safety and Compensation Council (ASCC). However, the exposure standard for dust not otherwise specified is 10mg/m³ (for inspirable dust) and 3mg/m³ (for respirable dust).

Exposure Limits No Data Available

Biological Limits No information available

Engineering Measures: A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it

into the general work area. Adequate ventilation should be provided so that exposure limits are not exceeded.

Personal Protection Equipment RESPIRATOR: Wear a dust mask where dusts /vapours are generated and engineering controls are Inadequate (AS1715/1716).

EYES: Chemical goggles (AS1336/1337).

HANDS: Wear impervious gloves (AS2161).

CLOTHING: Long-sleeved protective clothing and safety footwear (AS3765/2210)

Work Hygienic Practices Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

- Bright yellow solid, as prills, granules, pellets, flakes or pastilles; insoluble in water. Slightly soluble in alcohol and ether. Soluble in carbon disulfide, benzene and toluene.
- Odourless, but impurities may cause H₂S smell.

PHYSICAL PROPERTIES

- Solid.
- Does not mix with water.
- Sinks in water.

State	solid – FINE POWDER
Melting Range (°C)	112.8- 119
Boiling Range (°C)	444.6 (IBP)
Flash Point (°C)	>180 (as dust)
Decomposition Temp (°C)	Not available.
Autoignition Temp (°C)	232 (as dust)
Upper Explosive Limit (%)	1400 g/m ³ dust
Lower Explosive Limit (%)	35 g/m ³ dust
Volatile Component (% vol)	Nil

Molecular Weight	32.06
Viscosity	Not Applicable
Solubility in water (g/L)	Ins oluble
pH	6-8
Vapour Pressure (kPa)	0 .133 @ 184 deg
Specific Gravity (water=1)	1.92- 2.07
Relative Vapour Density (air=1)	Not available.
Evaporation Rate	Non Volatile

10. STABILITY AND REACTIVITY

- Chemical Stability** Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
- Conditions to Avoid** Avoid dust generation. Avoid exposure to heat, sources of ignition, and open flame.
- Materials to Avoid** Incompatible with oxidising agents. Corrosive to damp steel.
- Hazardous Decomposition Products** Sulfur dioxide.
- Hazardous Polymerisation** Hazardous polymerisation will not occur.

11. TOXICOLOGICAL INFORMATION

General Information

Acute Health effects:

Oral: >5000 mg/kg (rat).

Eye: > 2000 mg/kg (rabbit).

Inhalation: >2.56 mg/l (rat).

Acute toxicity:

Eye contact: Mild irritant (rabbit).

Skin contact: Slight irritant (rabbit)

Skin sensitization: Not a sensitizer (guinea pig).

Mutagenic potential: Non mutagenic.

Reproductive hazard potential: No reproduction hazard.

Chronic /subchronic toxicity studies: No risk of chronic toxicity.

Carcinogenic potential: Non carcinogenic.

Acute toxic effect may include nausea, headache, diarrhoea upon ingestion of large quantities, or dermal irritation if exposed to skin.

Inhalation

Breathing in dust may result in respiratory irritation.

Eye Irritant

A mild eye irritant.

Ingestion

Acute toxic effect may include nausea, headache, diarrhea upon ingestion of large quantities.

Skin Irritant

Irritating to skin. Acute toxic effect may include dermal irritation if exposed to skin.
Not a sensitiser (guinea pig).

Carcinogen Category No Data Available

12. ECOLOGICAL INFORMATION

- Ecotoxicity** Non toxic to bees and fish
Birds: LC50 for Bobwhite quail: >5000 ppm
Daphnia LC50: >665 mg/L

Persistence/Degradability	No Data Available
Mobility	No Data Available
Environmental Fate	Do NOT let product reach waterways, drains and sewers.
Bioaccumulation Potential	No Data Available
Environmental Impact	No Data Available

13. DISPOSABLE CONSIDERATIONS

Disposable methods: Non hazardous waste, dispose in accordance with all local, state and federal regulations.

Packaging/containers: Containers/packaging must be treated as waste and disposed in accordingly depending on material type. Plastic packaging can be treated as recycled waste as appropriate.

14. TRANSPORT INFORMATION

Land Transport (Australia)
ADG
Proper Shipping Name SULPHUR
Class 4.1 Flammable Solids
Subsidiary Risk(s) No Data Available
EPG 20 Solids - Flammable
UN Number 1350
Hazchem 1Z
Pack Group III

15. REGULATORY INFORMATION

Special Provision

Note: Sulphur is not subject to the provisions of the ADG Code when it is transported in quantities of less than 400 kg per package, or when it has been formed into a specific shape like prills, granules, pellets, pastilles or flakes. [Special Provision 242]

POISONS SCHEDULE: None

REGULATIONS

Elemental Sulphur (CAS: 7704-34-9) is found on the following regulatory lists; "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances", "International Council of Chemical Associations (ICCA) - High Production Volume List", "OECD Representative List of High Production Volume (HPV) Chemicals"

16. OTHER INFORMATION

The MSDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

STATEMENT OF DISCLAIMER:

This Material Safety Data Sheet has been developed according to WHS Code of Practice Preparation of Safety Data Sheets for Hazardous Chemicals Guidelines and written in accordance with GHS format.

All information is as accurate and up-to-date as possible. Since Manutec Pty Ltd cannot anticipate or control the conditions under which this information may be used, each user should review the information in the specific context of the intended application. Manutec Pty Ltd will not be responsible for damages of any nature resulting from use of or reliance upon this information.

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