

MATERIAL SAFETY DATA SHEET

PRODUCT: WETTABLE SULPHUR

Date of Issue: 1 DEC 2016

Valid until: 1 DEC 2021

GHS Format

1. IDENTIFICATION OF MATERIAL & SUPPLIER

Product (material) Name: Wettable Sulphur 500g

Other names: None

Manufacturer's code: MTO0557

Recommended use: Used as fungicide or miticide to control powdery mildew, scab, rust and mites.

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

Poisons Schedule: Not Scheduled

ADG Code:

Non allocated, Non-Dangerous according to the criteria of the Australia Dangerous Goods (ADG) Code

Hazard Classification:

Hazardous according to the criteria of 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 exposed skin thoroughly after handling. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Response	P302 + P352 IF ON SKIN: Wash with plenty of soap & water. P332 + P313 If skin irritation occurs: Get medical advice/attention. P362 Take off contaminated clothing and wash before reuse. P321 Specific treatment (see First Aid Measures on Safety Data Sheet).

3. COMPOSITION/INFORMATION ON INGREDIENTS

	CAS No	Proportion
Sulphur	7704-34-9	80% w/w
Inert materials	No data	20% w/w

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed:	Rinse mouth with water. Do NOT induce vomiting. Seek medical advice.
Eye:	Immediately flush eyes with plenty of water or normal saline for 15 minutes, holding eyelids open. Get medical attention immediately.
Skin:	Remove contaminated clothing. Wash affected area with plenty of Soap and water for at least 15 minutes. If redness, swelling, blistering or irritation occurs, seek medical advice. Wash clothing before reuse.
Inhaled:	Remove victim from exposure to fresh air - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm and at rest until fully recovered. Get medical attention immediately.
Advice to Doctor:	Treat symptomatically based on judgement of doctor and individual reactions of patient. Acute toxic effect may include nausea, headache, diarrhea upon ingestion of large quantities, or dermal irritation if exposed to skin.

5. FIRE FIGHTING MEASURES

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

Flammability Conditions Product is a combustible solid.
Extinguishing Media Use water fog, foam, sand, soil, or dry agent.
Do not use high pressure water.
Keep containers cool with water spray.

Fire and Explosion Hazard May form flammable dust clouds in air. Dust clouds are readily ignited in air by weak frictional sparks. Moving sulfur may generate static charge. Sulfur burns with a pale blue flame that may be difficult to see in daylight.

Hazardous Products of Combustion
On burning will emit toxic fumes, including those of oxides of sulfur (toxic and corrosive sulfur dioxide).

Special Fire Fighting Instructions
Can melt and flow in a fire situation. If safe to do so, remove containers from path of fire. 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) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves).

Flash Point 206°C ASTM D 93
Lower Explosion Limit 35 mg/L
Upper Explosion Limit 1400 mg/L
Auto Ignition Temperature 232 °C
Hazchem Code No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure Avoid accidents, clean up immediately. Slippery when spilt. Eliminate all sources of ignition. Increase ventilation. Avoid generating dust. Stop leak if safe to do so. Isolate the danger area. Use clean, non-sparking tools and equipment.

Clean Up Procedures Take up in dry state without forming dust. If small amount take up by mechanical means and dispose. Transfer to a suitable, labelled chemical waste container and dispose of promptly as hazardous waste.

Containment Stop leak if safe to do so. Isolate 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.

Evacuation Criteria Evacuate all unnecessary personnel.

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

7. HANDLING AND STORAGE

- Safe 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. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid skin and eye contact and breathing in dust. Avoid handling which leads to dust formation. May form flammable dust clouds in air. Keep away from heat/sparks/open flames/hot surfaces - No smoking. Wear protective gloves/protective clothing/eye protection/face protection. Local exhaust ventilation as necessary to control any air contaminants to within their exposure limits during the use of this product. Keep away from halide, strong acid, alkali, oxidizer, etc.
- Safe storage conditions:** Store in a cool and dry place in original containers and away from food stuffs, pets and Children. Keep containers tightly closed when not in use.

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 on biological limit values for this product.

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. Prepare the cleaning system near handling area. □

Personal Protection Equipment **RESPIRATOR:**

Wear an effective dust-proof mask where dusts/vapours are generated and engineering controls are inadequate (AS1715/1716).

EYES: Safety glasses or goggles with side shields (AS1336/1337).

HANDS: Wear impervious gloves (AS2161).

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

Work Hygienic Practices

Eyewash and washing facilities must be readily available. For decontamination of clothes and equipment have soap and water on hand.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Odour	Sulphurous odour or Odourless
Colour	Yellow to Brown
pH No	Data Available
Vapour Pressure	1 torr (@ 184 °C)
Relative Vapour Density	No Data Available
Boiling Point	445 °C
Melting Point	119 °C
Freezing Point	119 °C
Solubility	Insoluble
Specific Gravity	No Data Available
Flash Point	206 °C ASTM D 93
Auto Ignition Temp	232 °C
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temp	No Data Available
Density	1.95 - 2.07 g/cm ³
Specific Heat	No Data Available
Molecular Weight	32.07 g/mol
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available

Additional Characteristics

Wet sieve test:	Max. 0.05 % on 75 um test sieve
Suspensibility:	Min. 65.00 % - 80.0 %
Persistent foam:	Max. 10.0 mL
Wettability:	Max. 20.0 sec.

(All data on the basis of Sulphur Technical)

10. STABILITY AND REACTIVITY

General Information Reactivity

Reacts violently with finely divided metals , alkali metals , and mineral acids,
 Chemical Stability Product is stable under normal conditions of use, storage and temperature. Causes dust explosion when dust of product mix air in a large scale.
 Stirring, transport and feeding of product produces static electricity in dry condition.

Conditions to Avoid: Avoid heat, flames, sparks and other sources of ignition.

Materials to Avoid: Incompatible with oxidising agents. Avoid strong acid. Corrosive to damp steel. Metallic salt, base, oxidizer, halide, flammable materials, metallic oxide, reductant

Hazardous Decomposition Products

On burning will emit toxic fumes, including those of oxides of sulfur. Toxic and corrosive sulfur dioxide

Hazardous Polymerisation No Data Available

11. TOXICOLOGICAL INFORMATION

General Information

Acute toxicity

Oral LD50: > 5000 mg/kg (Rat)

Oral LD50 : > 8437 mg/kg (Rat)

Oral LDLo : 1750 mg/kg (Rabbit)

Dermal LD50: > 2000 mg/kg (Rat)

Dermal LD50 : > 2000 mg/L (Rabbit) □ □

Inhalation LC50: > 2.6 +/- 0.35 mg/l (Rat)

Eye contact: Slight irritant (Rabbits)

Serious eye damage/ eye irritation:

Draize test : 10.6 (1 hr), 12.8 (2 hr), 9.0 (48hr), 6.3 (72 hr), 9 (7 days)

Skin contact: Slight irritant (Rabbits)

Skin sensitization: Not a sensitizer

Mutagenic potential: Non mutagenic

Reproductive hazard potential: No reproduction hazard

Chronic /subchronic toxicity studies: No risk of chronic toxicity

Carcinogenic potential: Non carcinogenic

Target organs: Eyes, skin , respiratory system

Specific target organ toxicity (single exposure):

Causes bronchitis and damage to airway through exposure.

Specific target organ toxicity (repeated exposure):

Causes damage to airway, stomach and lung through exposure 8.4 - 63.2 mg/m³ sulfur contents during 2 - 2.5 years.

EyeIrritant

May be an eye irritant. Exposure to the dust may cause discomfort due to particulate nature. May cause physical irritation to the eyes.

Inhalation

Breathing in dust may result in respiratory irritation. Causes bronchitis and damage to airway through exposure.

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

SkinIrritant

Dermal irritation if exposed to skin. Causes dermatitis through prolonged or repeated exposure. Causes hypersensitiveness through repeated contact in rare case.

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 Fish : LC50: < 866 mg/L 96 hr Daphnia : LC50: 160 ug/L 24 days
Persistence/Degradability	No Data Available
Mobility	No Data Available
Environmental Fate	No Data Available
Bioaccumulation Potential	No Data Available
Environmental Impact	No Data Available

13. DISPOSABLE CONSIDERATIONS

Bioaccumulative potential:	not applicable.
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 disosed in accordingly depending on material type. Plastic packaging can be treated as recycled waste as appropriate.

14. TRANSPORT INFORMATION

Land Transport (Australia)

Proper Shipping Name	Sulphur
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	242

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification

NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	Not scheduled
<u>National/Regional Inventories</u>	
Australia (AICS)	Listed
New Zealand (NZIoC)	Listed

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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