

MICROSUL[®] WG ELITE

MATERIAL SAFETY DATA SHEET



1. IDENTIFICATION OF THE PRODUCT & SUPPLIER

Name of Product: Microsul[®] WG Elite

Supplier Details:

Name: Melpat International Pty Ltd
Address: 4/22 Parry Ave, Bateman WA 6150
Telephone: (08) 9312 3200
Fax: (08) 9312 3233
E-mail: melpat@melpat.com.au
Website: <http://www.melpat.com.au>

2. COMPOSITION / INGREDIENTS

Chemical Name: Sulphur
Common Name: Sulphur
Chemical Formula: S
Atomic Weight: 32.06
Composition: 80%
CAS no: 7704 34 9
UN no: None allocated
Class: None allocated

3. IDENTIFICATION OF RISKS

CLASSIFICATION OF RISKS OF THE PRODUCT:

Flammable Solid

EFFECTS OF ACUTE OVEREXPOSURE (ONE TIME) / INHALATION (SULPHUR POWDER):

May cause cough, burning of the throat, and may product pulmonary enema.

CONTACT WITH THE SKIN:

May cause skin irritation.

IDENTIFICATION OF RISKS (continued)

CONTACT WITH THE EYE:

May cause irritation of the eyes manifested as tearing and possible conjunctivitis.

INGESTION:

This product may act as a laxative and produce nausea or vomiting.

EFFECTS OF CHRONIC OVEREXPOSURE (LONG TERM):

Chronic exposure to elemental sulphur is generally recognised as safe, but studies show that people exposed to sulphur dioxide frequently present respiratory and ophthalmological problems, as well as bronchitis and sinusitis.

CONDITIONS THAT COULD BE WORSENERD BY EXPOSURE TO THE PRODUCT:

People with asthma or respiratory problems.

DANGERS FOR THE ENVIRONMENT:

None, although sulphur powder in prolonged contact with the product may be harmful to the ground and vegetation.

SPECIAL DANGERS OF THE PRODUCT:

Hydrogen sulphide may be emitted by the decomposition of sulphur, which may cause depression in the nervous system. This can result in headaches, nausea, vertigo, salivation, unconsciousness and death.

4. FIRST AID MEASURES

In case of accidental contact with the product, proceed accordingly:

- Inhalation: Remove the victim from the source of exposure. If the person is affected by the products of sulphur decomposition, immediately give the person fresh air and seek medical attention. If breathing is irregular, administer artificial respiration, administer 100 of oxygen if necessary.
- Contact with the Skin: Wash contaminated skin with soap & water. If irritation persists seek medical attention.
- Contact with the Eyes: Thoroughly wash eyes in water for at least 15 minutes.
- Ingestion: Do not feed or give beverages to an unconscious person. Give the person at least 2 glasses of water or milk (if available). Seek medical attention immediately.
- Notes for the Doctor Treating Exposure: The stomach can be washed with 15cc/kg of physiological serum for those patients who have ingested the substance within the hour.

5. MEASURES TO COUNTER FIRE

EXTINGUISHING AGENTS:

Suffocate the fire with inert materials (for example a fine water or mist aerosol or vapor). Apply indirectly in order to avoid further aggravating loose product and suspend the particles in the air. For localized fires utilize carbon dioxide or sand.

SPECIAL PROCEDURES TO COMBAT FIRE:

Take precautions for the emission of toxic gases (sulphurous anhydride).

PERSONAL PROTECTIVE EQUIPMENT TO COMBAT FIRE:

Use adequate protective clothing and independent positive pressure tested breathing equipment, especially for closed areas.

6. MEASURES TO CONTROL SPILLAGE OR LEAKS

EMERGENCY PROCEDURES TO TAKE IF THERE IS A PRODUCT LEAK:

- Avoid unnecessary mixing with cleaning equipment;
- Avoid crushing and creating powder;
- The reaction with the environment is minimal if the product is maintained dry and cool.
- Remove all the spilled material and take it to an appropriate place for it's cleaning and disposal.
- Avoid disposing of the product by combustion, and avoid all sources of spark.

PERSONAL PROTECTIVE EQUIPMENT TO ADDRESS THE EMERGENCY:

Use protective clothing and glasses.

7. HANDLING & STORAGE

TECHNICAL RECOMMENDATIONS:

Microsul[®] WG Elite is a fungicide, especially called for to control certain fungi in different crops. The does to apply varies depending on the type of crop and level of infection. Avoid applying when the temperature is high.

PRECAUTIONS TO TAKE:

- The product possesses corrosive properties and therefore should be protected from electronic equipment.
- Do not eat or drink while handling the product.
- Change clothing once the work has been finished, and wash with warm soap and water.

HANDLING & STORAGE (continued)

SPECIFIC RECOMMENDATIONS ABOUT SAFE HANDLING:

- Do not expose the product to high temperatures and humidity.
- Do not apply the product against the wind.

STORAGE CONDITIONS:

Always store in a safe, cool, dry, and well-ventilated place. Rotating may minimize the acidity generated. This acidity may cause corrosion of metals or concrete structural materials.

RECOMMENDED STORAGE CONTAINERS:

Those which permit the product to be isolated from the environment and humidity are recommended. Avoid metallic materials.

8. EXPOSURE CONTROL / SPECIAL PROTECTION

It is important to avoid the accumulation of powder in the air since it could cause an explosion.

PARAMETERS OF CONTROL:

- LEL (lower limit of explosivity) = 35 g/m³*
- UEL (higher limit of explosivity) = 1,400 g/m³*
- (*) Note: Data for pure sulphur

PERMISSIBLE LIMITS (LLP & LPA):

It has none according to national norms.

RESPIRATORY PROTECTION:

If there are any problems with the powder, a NIOSH approved respirator should be used.

PROTECTIVE GLOVES:

Use acid and heat-resistant gloves.

EYE PROTECTION:

Use safety glasses to protect from the powder, or, according to the circumstances, a full-face mask.

OTHER PROTECTIVE EQUIPMENT:

Use adequate clothing according to the emergency.

VENTILATION:

There should be constant ventilation whether natural or forced.

9. PHYSICAL & CHEMICAL PROPERTIES

Physical State:	Solid
Appearance & colour:	Light brown microgranules
Concentration:	80%
pH:	8.5 – 9.5 (Suspension)
Temperature of decomposition:	Expose not on 200°C
Point of inflammation:	207.2°C
Temperature of self ignition:	Undisturbed surface (liquid): 248-281°C* Cloud of powder in the air (sulphur particles): 190°C* (* Note: data for pure sulphur
Explosive properties:	Sensitive to the impact of a moderate mechanical explosion while the likelihood of explosion grows when there are small particles in the air exposed to static charge.
Risk of fire or explosion:	Presents risk of fire and explosion, both of which are greater when there are small particles in the air.
Speed the flame spreads:	No data available.
Vapour pressure at 20°C	Not applicable.
Vapour density:	Not applicable.
Apparent density:	0.84 – 0.89 g/cc
Solubility in water or other solvents:	Insoluble in water & in the majority of known organic solvents. Somewhat soluble in sulphur carbide.

10. STABILITY & REACTIVITY

- Stability: It does not produce a rapid reaction with air or water without initiators, but is corrosive when wet or humid. Unstable in the presence of strong oxidizing agents, forming sulphur dioxide.
- Conditions that should be avoided: Humidity, acidic media, oxidizing agents.
- Incompatibilities (Materials to be avoided): Materials that are susceptible to corrosion.

STABILITY & REACTIVITY (continued)

- Dangerous Products of Decomposition: Generation of sulphurous anhydride, sulphurous acid, sulphuric acid.
- Dangerous Products of Combustion: Sulphurous anhydride.
- Dangerous Polymerization: Does not occur.

II. TOXICOLOGICAL INFORMATION

Acute Toxicity:	LD ₅₀ oral rats = > 5,000 mg/kg* LD ₅₀ dermal rats = > 2,000 mg/kg* (*) Note: data for pure sulphur
Chronic or long-term toxicity:	Chronic, low-level exposure is generally recognised to be safe. People exposed to SO ₂ present repeated respiratory and ocular problems.
Local effects:	Reduction of pulmonary function.
Allergic Sensibility:	Moderate effect when in formulated form.

12. ECOLOGICAL INFORMATION

- Instability: The product does not react rapidly in water or in air without initiators, but is highly corrosive when wet due to the formulation of acids.
- Durability / Degradability: Elemental sulphur is converted into sulphate on the ground by autotrophic bacteria while in vegetation it oxidizes slowly when exposed to the air or microbial reactions.
- Bioaccumulation: Sulphur is incorporated in physiological substances in plants.
- Effects on the Environment: Sulphur is a component of the natural environment. There is a natural cycle of oxidoreduction reactions that transform sulphur into organic and inorganic compounds.

13. CONSIDERATIONS ABOUT FINAL DISPOSAL

METHOD TO DISPOSE OF RESIDUAL PRODUCT:

The product can be eliminated in authorised sanitary fill, generally requiring the application of lime.

CONSIDERATIONS ABOUT FINAL DISPOSAL (continued)

ELIMINATION OF CONTAMINATED CONTAINERS:

Dispose of containers according to existing local legislation. It is recommended to wash the containers three times and control the acidity and sulphur content of the water collected in case it is necessary to neutralize the water by filtering.

14. INFORMATION ABOUT TRANSPORTATION

Formulation Type:	Water dispersible granule
Chemical Type:	Inorganic
UN Number:	None allocated
DG Class / Sub Risk:	None allocated
Hazchem Code:	None allocated
Packing Group:	None allocated
Poisons Schedule:	Exempt

15. NORMS IN USE

Applicable international norms:	Food & Agricultural Organisation Regulations
Labeling:	Caution

For further details, please contact Melpat International Pty Ltd:

Tel: (08) 9312 3200
Fax: (08) 9312 3233
Mobile: 0402 310 854
E-mail: melpat@melpat.com.au
Address: 4/22 Parry Ave
Bateman, WA 6150



15 January 2010