

MELPAT SULPHUR 93%

MATERIAL SAFETY DATA SHEET



1. IDENTIFICATION OF THE PRODUCT & SUPPLIER

Name of Product: Melpat Sulphur 93%

Supplier Details:

Name: Melpat International Pty Ltd
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2. COMPOSITION / INGREDIENTS

Chemical Name: Sulphur
Chemical Formula: S
CAS no: 7704 34 9
UN no: 1350
Class: None allocated

3. HAZARDS IDENTIFICATION

Markings on label: Class 4.1, NCh 382 of 2004

Chemical Product Hazard Classification: Classification IV: Product normally does not present hazards. Resolution SAG 2196, 2000.

Hazards to People's Health: Effects of acute over-exposure (one time only): Symptoms may appear similar to acute ingestion.

Inhalation:

May cause irritation of nose, throat, and upper respiratory tract, sneezing or breathing difficulties, if inhaled in large quantities.

Skin Contact:

Repeated or prolonged contact may cause irritation in some individuals.

Eye Contact:

May cause eye irritation and possible conjunctivitis.

Ingestion:

This product may act as a laxative, expressed in nausea, vomiting.

Effects of chronic over-exposure (long-term): Chronic exposure to elemental sulfur is generally recognized as safe.

Medical conditions that will be aggravated with exposure to product: Asthma and respiratory problems, sensitive skin.

Hazards to the Environment: None, even though lengthy exposures of soil and vegetation to powder sulfur may be harmful. Product should be used as per the dosages recommended and properly applied.

Special Product Hazards: At high temperatures, Sulphur may generate SO₂ and H₂S toxic gasses.

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 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. If irritation persists, repeat flushing. Seek medical help, preferably an ophthalmologist.
- Ingestion: Do not feed or give beverages to an unconscious person. Give the person at least 2 glasses of water. DO NOT induce vomiting; if vomiting occurs, bend victim over. Seek medical attention immediately.

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). Avoid the possibility of dispersing clouds of Sulphur dust in the air. Dust can form explosive mixtures with the air.

Explosive Limits as dust in the air: lower – 35g/m³; upper – 1,400 g/m³

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.

PRECAUTIONS TO BE TAKEN TO PREVENT ENVIRONMENTAL DAMAGES:

Prevent runoff to sewers and other water courses. Do not raise dust when picking up the spill.

CLEANING METHODS:

Pick up spill immediately. Sweep without raising dust and dispose of in duly labeled containers.

7. HANDLING & STORAGE

TECHNICAL RECOMMENDATIONS:

Melpat Sulphur 93% is a fungicide with a secondary acaricide activity. Product is slightly toxic; especially indicated for the treatment against oidium.

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 Powder
Appearance, colour & odour:	Solid, shapeless yellow structures, characteristic odor
Concentration:	93%
pH:	4.5 at 7.0, suspension at 10%, 20°C
Temperature of decomposition:	Expose to no more than 200°C
Point of inflammation:	207.2°C
Flammability limits:	Lower 35g/m ³ and upper 1400g/m ³ , only as dust in suspension
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:	Variable, depending on shape
Solubility in water or other solvents:	Insoluble in water & in the majority of known organic solvents. Somewhat soluble in Carbon Sulphur.

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 susceptible to corrosion.

STABILITY & REACTIVITY (continued)

- Dangerous Products of Decomposition: Generation of sulphurous anhydride, sulphurous acid, sulphuric acid.
- Dangerous Products of Combustion: SO₂ and H₂S toxic gasses
- Dangerous Polymerization: Does not occur.

II. TOXICOLOGICAL INFORMATION

Acute Toxicity: LD₅₀ oral rats = > 5,000 mg/kg*
LD₅₀ dermal rats = > 5,000 mg/kg*
LD₅₀ dermal rabbits = >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 SO₂ 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 formation 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.
- Bio-accumulation: Product is not bio-accumulative.
- Effects on the Environment: Sulphur is a component of the natural environment. There is a natural cycle of oxide-reduction 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.

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

Truck or Rail:	Class IV, Packaging Group III, GRENA 133
Ocean Freight:	Class IV, Packaging Group III, page 55 of IMDG Code, Volume II
Air Freight:	Information Class IV, Packaging Group III, IATA / ICAO
River / Lake Transport:	None allocated
Application Markings:	NCh 2190, safety marking 9
UN Number	1350

15. NORMS IN USE

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

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