

KOMBAT VINE & DUSTING SULPHUR

Registration No. L3419 – ACT 36 OF 1947

KOMBAT VINE & DUSTING SULPHUR is a fungicidal dust for the control of citrus thrips, powdery mildew and erinose on vines, russet mites and erinosemite of tomatoes and powdery mildew of peaches, peas, cucurbits, ornamentals and flowers.

COMPOSITION

Active Ingredient

Sulphur - 980g/kg

METHOD OF APPLICATION

Dosage depends on plant size and spacing.

<i>Crop / Pest & Disease</i>	<i>Dosage Rate</i>	<i>Remarks</i>
Avocados Thrips	10 to 40 kg/ha	Dust when pest is noticed.
Bananas Thrips & Flat mite	Light dusting	Can also be applied into the bags covering the bunches.
Beans Thrips	10 to 40 kg/ha	Full cover dusting. Repeat after 10 to 14 days.
Two-spotted spider mite (Red spider mite)	10 to 40 kg/ha	Dust as soon as the mites are noticed and repeat after 10 to 14 days, if necessary.
Cucurbits Powdery Mildew	10 to 40 kg/ha	Do not used on cucumbers and muskmelons. Start dusting at first signs of this Mildew. Do not confuse with Downy mildew, which cannot be controlled with sulphur. Repeat at 7 to 14 day intervals as long as weather favours disease.
Citrus Thrips	Allow 4 weeks safety period between a dusting and a spray oil treatment 50 to 100 kg/ha	Dust at 100% petal drop and repeat after 10 days, if necessary.
Silver mite	50 to 100 kg/ha	Apply in spring if rus-setting occurred the previous season.
Rust mite & Flat mite	50 to 100 kg/ha	Apply when the first blemishes are notes on the fruit during December to May. It is advisable to treat the whole orchard.
Grey mite	50 to 100 kg/ha	Dust during winter or at petal fall.
Grapevines Powdery Mildew	15 to 30 kg/ha	Heavy applications may cause burn, especially on hot days.

		<p>Wine grapes: Do not apply after the berries have reached pea size (4 to 6 weeks prior to harvesting) as this may adversely influence fermentation.</p> <p>Winter rainfall region: Start dusting when shoots are 10 cm long and repeat every 3 weeks as long as necessary.</p> <p>Summer rainfall region: Start dusting towards the middle of summer, particularly if rainfall is low or when first symptoms are noticed.</p>
Erinose-bud mite	15 to 30 kg/ha	Apply when shoots are approximately 10 cm long and repeat when the vines are in flower and again about the first week in December.
Lupins Powdery Mildew	15 to 20 kg/ha	Dust when symptoms are noticed and repeat at 7 to 14 day intervals, if necessary. May cause leaf burn when high temperatures prevail.
Mangoes Powdery Mildew	20 to 40 kg/ha	Dust at first sign of infection and at full blossom. Repeat if blossoming is irregular or if heavy rain falls.
Ornamentals Powdery Mildew	10 to 40 kg/ha	Sulphur may injure certain species or cultivars. Dust every 10 to 14 days, depending on weather conditions favouring the disease. Ensure light but thorough coverage. In the case of roses dust the new growth weekly.
Thrips	10 to 40 kg/ha	Dust evenly at weekly intervals as soon as the insects or their damage is noticed.
Peaches Powdery Mildew	20 to 40 kg/ha	Dust at first signs of infection and repeat every 10 to 14 days as long as the weather favours the disease.
Peas Powdery Mildew	10 to 40 ha/kg	Apply to give an even light deposit, as soon as the first symptoms appear and repeat every 7 to 10 days as long as weather favours disease.
Tomatoes Erinose & Rust mite	10 to 40 ha/kg	Dust at first symptoms and repeat at 2 to 4 week intervals, if necessary.

WARNINGS AND PRECAUTIONS

WARNINGS:

- **Wine Grapes:** Allow 4 to 6 weeks between last application and harvest of wine grapes. Can cause leaf burn when high temperatures prevail.
- Store in a cool place, away from food and feedstuff.
- Flammable – keep away from open flames.
- Keep out of reach of children, animals and uninformed persons.
- Re-entry: Do not enter treated area until spray deposit has dried, unless wearing protective clothing.

PRECAUTIONS:

- Avoid inhalation of dust.
- Wash immediately with soap and water after accidental skin contact and after use.

- Do not eat, drink or smoke while mixing, applying or before washing hands and face and change of clothing.
- Prevent drift of dust onto other crops, grazing, rivers, dams or areas not under treatment.
- Clean applicator with water after use or before using it for other chemicals. Dispose of wash water where it will not contaminate food, grazing, boreholes, rivers or dams.
- Disposal of containers:
 - containers must be completely emptied before being disposed of,
 - shake out thoroughly into the application hopper before destroying the empty container,
 - **never** re-use the empty container for any other purpose.
- Prevent contamination of food, feed drinking water and eating utensils.

KOMBAT VINE & DUSTING SULPHUR is classified with a green band. All recommendations are to be followed carefully.

PLEASE READ THE LABEL BEFORE USE.



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Version: 1.2

Revision Date: August 2018

**1. IDENTIFICATION OF SUBSTANCE / PREPARATION AND COMPANY UNDERTAKING:****PRODUCT INFORMATION**

Product Name : KOMBAT VINE & DUSTING SULPHUR

Design Code : ...

Registration No. : L3419, Act No. 36 of 1947

Use : Fungicide and acaricide

Company : Kombat (Pty) Ltd
39 Dr. Gordon Road
Greytown
3250

Telephone : +27-33-417-1906/7

**Harmful****Dangerous for the environment****EMERGENCY TELEPHONE NUMBERS****SPILLAGES:**

Emergency telephone: +27-82-446-8946 (all hours)

POISONING INCIDENTS:

Poison Information Centre of the Western Cape: +27-861-555-777 (all hours)

Griffon Poison Information Centre +27-82-446-8946 (all hours)

UFS Pharmacology/Toxicology information centre: +27-82-491-0160

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: 980g/kg
Dusting Powder

EEC no.: 231-722-6

UN no.: 1350

2. HAZARD IDENTIFICATION**Toxicity class:**

WHO (a.i.) III (Table 5); EPA (formulation) IV.

Likely routes of exposure:

Ingestion, inhalation and skin contact.

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**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.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components:	Sulfur
SYMBOLS:	X _n
RISK-PHASE(s):	R 22, R 36/38.

4. FIRST- AID MEASURES

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 sulphur to irritating gaseous sulphur 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 sulphide 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 sulphate.

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 vomitus, rinse mouth and administer more water. **Seek medical advice immediately.**

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Advice to the physician:

Unless an extraordinary amount of Sulphur (several grams) has been ingested shortly prior to treatment, there is probably no need for emptying the stomach or administration of a cathartic. Absorb ability of Sulphur on activated charcoal has not been tested. The most serious consequence of Sulphur 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.

5. FIRE-FIGHTING MEASURES

Fire and explosion hazard:

Slight fire hazard when exposed to heat and flame. Dusting 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 product 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 material into drains. Keep spectators away.

7. HANDLING AND STORAGE

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

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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

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Vapour 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.

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.

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**13. DISPOSAL CONSIDERATIONS****Pesticide disposal:**

Contaminated absorbents, surplus products (in diluted form), etc., should be buried in approved landfill. Comply with any local legislation applying to waste disposal.

Packaging 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 ₁
Indication of danger:	Irritant
Risk phases:	
R 22	Harmful if swallowed.
R 36/38	Irritating to eyes and skin.
Safety phrases:	
S 2	Keep out of reach of 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.

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16. PACKING AND LABELLING

Packed in a) 25kg HDPE bags with virgin polythene liner and b) in 2kg plastic containers and labelled according to the South African regulations and guidelines.

17. OTHER INFORMATION

All information and instructions provided in this Safety Data Sheet (SDS) are based on the current state of scientific and technical knowledge at the date indicated on the present SDS 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 person in receipt of this SDS 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 containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this SDS to their own SDS.
