

VILLA SORENTO 600 FS

MATERIAL SAFETY DATA SHEET

1. PRODUCT & COMPANY IDENTIFICATION

Product Name: SORENTO 600 FS
 Insecticide
UN No.: 3082
Supplier: Villa Crop Protection (Pty) Ltd.
 PO Box 10413,
 Aston Manor, 1630, South Africa
Telephone: (011) 396 2233
Fax: (011) 396 4666
Website: www.villacrop.co.za

Emergency telephone numbers:
24 Hr Transport / Spill emergency no:
 Bateleur: +27 86 199 9071
 (Client: Villa Crop Protection)

Poisoning:
 Griffon Poison Information Centre +27 82 446 8946
 Western Cape Poisons +27 861 555 777
 Tygerberg Hospital +27 21 931 6129

2. COMPOSITION/INFORMATION ON INGREDIENTS

Common name: Thiametoxam
Chemical name: 3-(2-chloro-1,3-thiazol-5-ylmethyl)-5-methyl-1,3,5-oxadiazinan-4-ylidene(nitro)amine
(IUPAC)
CAS no: 153719-23-4
Chemical family: neonicotinoid
Chemical formula: C₈H₁₀ClN₅O₃S
Molecular weight: 291.7
Use: A systemic insecticide seed treatment for the control of pests as indicated.

Formulation: Thiametoxam 600 g/l
 Flowable seed treatment

Hazardous ingredients of Toxicological concern:
 Thiametoxam slightly hazardous – 60 %
Other non hazardous ingredients: to 100 %

Symbols: Xi, N
Indication of danger: Irritating substance
 Harmful substance
Risk phrase: R 20/21/22, R 36/38, R 51/R 53

3. HAZARD IDENTIFICATION

Toxicity Class: WHO (a.i.) III

Skin Contact:

May irritate skin. The dermal toxicity of this product is low. However, skin contact should be avoided. This product is not a skin sensitizer.

Eye Contact:

This product may be mildly irritating to eyes. However, it is unlikely to cause any more than mild transient discomfort. It is also unlikely to cause any lasting effects.

Inhalation:

May be a slight respiratory irritant.

Ingestion:

The acute toxicity of this product is low, but it may be harmful if a large amount is swallowed.

Environmental:

TOXIC TO AQUATIC ORGANISMS.

Fire and Explosion:

Not flammable and explosive.

4. FIRST AID MEASURES AND PRECAUTIONS

Inhalation:

Remove to fresh air. If not breathing, follow standard resuscitation practices.

Skin contact:

Flush with soap and water, remove contaminated clothing, and seek medical attention.

Eye contact:

Flush with plenty of water for at least 15 minutes. Seek medical attention if irritation begins and/or persists.

Ingestion:

Drink 1 to 2 glasses of water, induce vomiting, and seek medical attention. Do not induce vomiting or give anything by mouth to an unconscious person.

Not to Physician:

Advice to physician:

The following symptoms may occur: Local – slight skin and eye irritation. Systemic – none documented over many years' experience. For local contamination treatment should be symptomatic after decontamination. In case of skin or eye contamination, treat as documented under "First Aid". If a large amount of this product is ingested the following measures should be considered: Induction of vomiting if the patient is fully conscious and it is less than 30 minutes since ingestion. Monitor blood count, Gastric lavage, and Charcoal administration. Anticonvulsant therapy is not appropriate.

Advice on treatment: There is no specific antidote available. Treat symptomatically. Check blood pressure and pulse rate frequently as brachycardia and hypotonia are possible. Provide supportive measures for respiratory and cardiac action. Give artificial respiration if signs of paralysis appear. Additional measures to be considered involve the elimination of the substance from the body or acceleration of its excretion (gastrolavage, saline laxatives).

Treat symptomatically.

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5. FIRE FIGHTING MEASURES

Flammability:

Not flammable.

Extinguishing Media:

Water spray, foam, dry agent, carbon dioxide.

Special Fire Fighting Procedures:

Wear self-contained breathing apparatus. If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may cause increase contamination hazard.

Unusual Fire and Explosion Hazards:

Toxic and flammable fumes.

Special exposure hazards:

Do not release chemically contaminated water into drains, Soil and surface waters.

Auto ignition Temperature:

N/A

Fire fighting: Remove spectators from surrounding area. Isolate the fire area and evacuate downwind. Use a recommended extinguishing agent for the type of surrounding fire.

Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal. Avoid inhaling hazardous vapours and fumes from burning materials. Keep upwind. Remove container from fire area if possible and without risk. Water can be used to cool unaffected containers but must be contained for later disposal.

Dyke fire control water for later disposal. Do not scatter the material. Avoid pollution of waterways.

Do not use high volume water jet, due to contamination risk. Contain water used for fire fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

Personal protective equipment:

Fire may produce irritating or poisonous vapours (toxic compounds of carbon, nitrogen and chlorine), mists 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 breathe in spray or fumes. For personal protection see Section 8.

Environmental precautions:

Do not allow entering drains or watercourses. Spillage or uncontrolled discharges into water courses (or public waters) to be reported immediately to the Police and to the Department of Water/Environmental Affairs. Considered as Marine Pollutant.

Occupational spill:

Do not touch spilled material; stop leak if you can do it without risk. Keep out unprotected persons and animals.

For spills: Soak up with absorptive material such as damp earth or sand or other suitable non-combustible absorbent material. Place the material into a clean, dry container and cover for subsequent disposal. In situations where product comes in contact with water, contain contaminated water for later disposal. Prevent material from spreading by damming in with absorptive material. Do not flush spilled material into drains. Keep spectators away and upwind.

To decontaminate spill area, tools and equipment, wash with a suitable solution (i.e. organic solvent, detergent bleach or caustic). Add the solution to the drums already collected. Label drums with its content and dispose it in accordance with local regulations.

Open burning or dumping of this material is prohibited. Do not get water inside containers.

7. HANDLING AND STORAGE REQUIREMENTS

Handling:

Product may be mildly irritating to eyes and skin. Avoid contact with eyes and skin, and inhalation of spray and vapour. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Operators should change and wash clothing daily. Remove clothing immediately if the pesticide 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 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:

Keep under lock and key and out of reach of unauthorized persons, children and animals. Store in its original labelled container in isolated, dry, cool and well-ventilated area. Do not store above 35 C. Do not contaminate ponds, lakes, streams or any source of water. Keep out of reach of children. Handle in a well-ventilated area. Local exhaust recommended. Use personal protective equipment to prevent contact with skin and eyes. Do not drink, eat or smoke while handling. Wash hands before eating, drinking or smoking.

Not to be stored next to foodstuffs and water supplies. 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

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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 mists of pesticides is adequate. Limitations of respirator use specified by the approved 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 appropriate synthetic protective gloves to prevent contact with this substance.

Eye protection:

The use of safety goggles is recommended.

Emergency eye wash: 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 and Odour:

Pink or Reddish colour viscous liquid.

Odour: Mild odour

Flash point: Above 90 °C

Melting Point:

N/A

Evaporation Rate: N/A

Freezing Point: N/A

pH: 5.0 to 8.0

pH in 1 % aqua solution: 6.5 to 8.0

Solubility in Water:

Dispersion.

Specific Gravity:

1.11 to 1.20 g/ml @ 20°C

Vapour Pressure:

N/A

Stability:

Active ingredient content immediately before start of test: 601.25 g/l

Active ingredient content after 14 days at 54 °C +/- 1 °C – 601.24 g/l

Stable for at least 2 years below 50 °C.

10. STABILITY AND REACTIVITY

Stability:

Stable under normal conditions of use. Incompatible with alkaline materials. Oxides of carbon and nitrogen may be given off when exposed to extreme heat or fire.

Conditions to avoid:

Open flames, sparks, ignition sources, and dampness.

Incompatibility:

Strong acids, oxidizers, dampness (in storage).

Hazardous Polymerization: N/A

Hazardous Decomposition Products:

Can decompose at high temperatures and form toxic gases.

11. TOXICOLOGICAL INFORMATION

Formulation (calculated):

Acute oral LD₅₀:

> 2000 mg/kg in rats.

Acute dermal LD₅₀:

> 2000 mg/kg in rats.

Acute inhalation LC₅₀:

> 3.5 mg/l /4 hours (rat).

Eye irritation:

Mild-irritant.

Skin irritation:

Mild-irritant.

Skin sensitization:

Non sensitization in guinea pigs.

12. ECOLOGICAL INFORMATION

Mobility, Degradability & Accumulation:

Animals Quickly and completely absorbed, rapidly distributed in the body and rapidly eliminated. The toxicokinetic and metabolism are not influenced by the route of administration, the dose level, pre-treatment, the site of label or the sex of animals. The major metabolic pathways are essentially the same in rats as in mice, goats and hens. **Plants** Degradation/metabolism has been studied in 6 different crops with soil, foliar and seed treatment application. The qualitative metabolic pattern was similar for all types of applications and for all studied crops. **Soil/Environment** Soil DT₅₀ 7–109 d (field, 37 soils, median 32.3 d). K_{oc} 32.5–237 ml/g o.c. (25 soils, mean 68.4 ml/g o.c.). Photolysis accelerates degradation in soil. Stable in water under acid conditions, hydrolysed under alkaline conditions. DT₅₀ in surface water 7.9–39.5 d (lab., darkness, 7 water-sediment systems, mean 21.5 d). Aqueous photolysis occurs rapidly. No bioaccumulation. No significant volatilisation; efficiently degraded in air by photochemical oxidative degradation.

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ECOTOXICOLOGY:

Toxicity to bees:

LD₅₀ for honeybees (oral) 0.005 µg/bee; (contact) 0.024 µg/bee.

Toxicity to fish and other aquatic organisms:

LC₅₀ (96 hours): Bluegill sunfish: >114 ppm. Rainbow trout: >100 ppm.

Toxicity to birds:

Dietary LD₅₀: Quail :> 5200 mg/kg

Toxicity to earthworms and soil micro-organisms:

LC₅₀ (14 d) for *Eisenia foetida* >1000 mg/kg soil.

Toxicity to other non-target organisms:

Daphnia: LC₅₀(48 hour) >100 ppm.

Algae EC₅₀ (96 h) for green algae >100 mg/l.

Other aquatic spp.: LC₅₀ (96 h) for mysid shrimps 6.9 mg/l; EC₅₀ (96 h) for eastern oysters >119 mg/l.

13. DISPOSAL CONSIDERATION

Pesticide disposal:

Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or reprocessed. Never pour untreated waste or surplus products into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers.

Comply with local legislation applying to waste disposal.

Container disposal:

Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is destroyed.

TRIPLE RINSE empty containers in the following manner: Invert the empty container over the spray or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a drip. Thereafter rinse the container three times with a volume of water equal to a minimum of a third of that of the container. Add the rinsing to the contents of the spray tank before destroying the container in the prescribed manner.

Do not re-use the empty container for any other purpose but destroy it by perforation and flattening and bury in an approved dump site. Prevent contamination of food, feedstuffs, drinking water and eating utensils.

Comply with local legislation applying to waste disposal.

14. TRANSPORT INFORMATION

UN Number: 3082

Road Transport ADR/IRD:

Class: 9

Packaging group: III

UN Proper Shipping Name: Environmentally hazardous substance, Liquid, N.O.S. (**Thiamethoxam** 600 g/l)

Maritime Transport IMDG/IMO:

Class: 9

Packaging group: III

UN Proper Shipping Name: Environmentally hazardous substance, Liquid, N.O.S. (**Thiamethoxam** 600 g/l)

Marine Pollutant (Y/N): Yes.

Air Transport IATA/ICAO:

Class: 9

Packaging group: III

UN Proper Shipping Name: Environmentally hazardous substance, Liquid, N.O.S. (**Thiamethoxam** 600 g/l)

Special/Environmental Precautions: Wedge drums tightly to avoid movement.

Transport in bulk (according to MARPOL 73/78, Annex II and the IBC code): Not available.

15. REGULATORY INFORMATION

Symbol: Xi, N

Indication of danger: Irritating substance
Harmful substance

Risk phrases:

R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R 36/38 Irritating to eyes and skin.

R 51/R 53 Toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.

Safety phrases:

S 1/2 Keep locked up and out of reach children.

S 13 Keep away from food, drink and animal feeding stuffs.

S 24/25 Avoid contact with skin and eyes.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 60 This material and its container must be disposed of as hazardous waste.

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

16. OTHER INFORMATION

Packaging:

Packed in 1, 5, 10, 12, 15, 20, 25, 50 and 200 litres fluorinated plastic containers / bottles / drums and labelled according to South African regulations and guidelines.

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Disclaimer:

The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage use of the product. It is not applicable to unusual or non-standard uses of the product nor where instructions or recommendations are not followed.

All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.

END OF DOCUMENT

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For detailed information on revisions, contact the Registration holder.