

SPINOSIN 480 SC

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE

Product Name: SPINOSIN 480 SC
Other identifier: Spinosad 480 SC
Recommended use: Insecticide
Restrictions on use: Agriculture, Home & Garden

Supplier: Villa Crop Protection (Pty) Ltd.
Co. Reg. No.: 1992/002474/07
 PO Box 10413
 Aston Manor, 1630, South Africa

Telephone: (011) 3962233
Fax: (011) 3964666
Website: www.villacrop.co.za

Emergency telephone numbers:
24 Hr Transport / Spill emergency no:
 (Hazcall24) +27 86 044 4411
 (Client: Villa Crop Protection)
 Griffon Poison Information Centre +27 82 446 8946
 (Client: Villa Crop Protection)
Poisoning Emergency telephone numbers:
 Griffon Poison Information Centre +27 82 446 8946
 Poisons Information Centre +27 861 555 777

2. HAZARDS IDENTIFICATION

UN GHS, Regulation EC 1272/2008 [EU-GHS/CLP] EU & SANS 10234:2008		
Hazard classes	Hazard categories	H-statements
Environment		
Aquatic Acute	Aquatic Acute 1	H400
Aquatic Chronic	Aquatic Chronic 1	H410

The most important adverse effects:
Physiochemical effects: None known.
Human health effects: None known.
Label elements:



Signal word: Warning.
Hazard statements:
 H400: Very toxic to aquatic life.
 H410: Very toxic to aquatic life with long lasting effects.
Precautionary statements:
 P273: Avoid release into the environment.
 P391: Collect spillage.

P501: Dispose of contents/container to suitable landfill in accordance with local regulations.

Special labelling of certain mixtures:

None known.

Other hazards:

None known.

Toxicity:

Classification according to GHS: Unclassified

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture.

Composition:

Chemical Name	CAS	Conc. (m/v %)	Classification EC 1272/2008
Spinosad	168316-95-8	48%	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Dispersant	67-63-0 (35-40%) 25213-24-5 (5-15%)	<5%	Flammable liquid 2 (H225) Eye Irritation 2 (H319) STOT SE 3 (H336)

4. FIRST AID MEASURES

Remove the victim from the area of exposure. Wash off remaining material with plenty of water. In the event of any complaints or symptoms, avoid further exposure.

Inhalation: Remove source of contamination or move victim to fresh air. If breathing has stopped, perform artificial respiration and administer oxygen. Avoid mouth-to-mouth resuscitation. Keep person warm and at rest. Treat symptomatically and supportively as and when required.

Skin contact: Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with non-abrasive soap or mild detergent and large amounts of water until no evidence of chemical remains (approximately 15 to 20 minutes). Seek medical advice if necessary.

Eye contact: Flush eyes with large amounts of gently flowing cold water or normal saline solution, occasionally lifting upper and lower lids, until no evidence of chemical remains (approximately 15 to 20 minutes). If irritation persists, get medical attention.

Ingestion: Have victim rinse mouth thoroughly with water. If the person is alert and respiration is not depressed, give large quantity of water to drink. Never give anything by mouth to an unconscious person. Establish and maintain airway. Treat respiratory difficulty with artificial respiration and oxygen.

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Anticipated acute effects: None known.
Anticipated delayed effects: None known.
Most important symptoms/effects: None known.
Advice to physician: No specific antidote. Treatment based on judgement of the physician in response to reactions of patient.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Extinguish fires with carbon dioxide, dry powder, or alcohol-resistant foam.
Unsuitable Extinguishing Media: High volume water jet. Use a water jet only to cool heated containers.
Specific hazards: Hazardous combustion products may include and are not limited to nitrogen oxides, hydrogen fluoride, carbon monoxide and/or carbon dioxide.
Special Fire Fighting Procedures: Remove spectators from surrounding area. Isolate the fire area and evacuate all personnel downwind of the fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Remain upwind of fire. Avoid inhaling hazardous vapours and fumes from burning materials. Remove container from fire area if possible and without risk. Do not use high volume water jet, due to contamination risk. Do not scatter the burning material. Water can be used to cool unaffected containers but must be contained for later disposal. Contain fire control agents for later disposal. Avoid pollution of waterways by run-off from the site.
Personal protective equipment: Wear NIOSH/MSHA approved self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with eyes and skin. Do not breathe in spray mist or fumes/vapours. Ventilate area of spill or leak, especially in contained areas.
Protective equipment: Refer to Section 8 for personal protective equipment to be worn during containment and clean up of spills involving this product.
Emergency procedures: Alert firefighting personnel, evacuate unprotected personnel and animals.
Environmental Precautions: Prevent spilled product from entering sewers, waterways or ground water. This product is classified to be very toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment. Any spillages or uncontrolled discharges into watercourses should be reported immediately to the police and the Department of Water/Environmental Affairs.
Methods and Materials for Containment: Contain spilled product by diking area with sand or earth.
Methods and Materials for Clean-up: Cover contained spill with an inert absorbent material such as sand,

vermiculite, earth or other appropriate material. Vacuum, scoop, or sweep up material and place into a clean, dry, sealable container. Label containers with the contents and dispose of according to local regulations. Do not place spilled material back in original container. Do not re-use spilled material. Collect washings and add to the drums already collected. Do not flush spilled material or washings into drains or waterways. To decontaminate the spill area, tools and equipment, wash with water and suitable detergent. See section 13 for disposal considerations.

7. HANDLING AND STORAGE

Handling:
Precautions for safe handling: Avoid contact with eyes and skin. Ensure adequate ventilation during handling and use. Do not handle broken packages without protective equipment. Immediately clean up spills that occur during handling. Keep containers tightly closed when not in use. In the case of contact with the product, refer to First Aid Measures – Section 4.
General occupational hygiene: Practice good hygiene when using this product. Wash hands before eating, drinking, chewing gum, smoking, using the toilet or applying cosmetics. Worker should shower at the end of each workday. Launder all clothing before it is re-used.
Storage:
Conditions for safe storage: Keep under lock and key and out of reach of unauthorised persons, children and animals. Store in its original, labelled container, tightly closed in an isolated, dry, cool and well-ventilated area. Avoid excess heat. Not to be stored next to foodstuffs, feed and water supplies. Avoid cross contamination with other pesticides and fertilisers.
Incompatible substances and mixtures: Refer to product label.
Packaging material: Plastic containers.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Permissible concentration

Components	Exposure limits	Type of exposure limit	Source
Isopropyl alcohol	400 ppm	8-hour TWA (ST)	www.osha.gov

Engineering Controls:
 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. Local Exhaust: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OELs

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or other specified exposure limits. Local exhaust ventilation is preferred. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

Personal Protective Equipment:

Respiratory Protection: For most well-ventilated conditions, no respiratory protection should be needed. If used in a poorly ventilated area (airborne concentrations exceed exposure limits), use a NIOSH approved, air-purifying respirator with cartridges / canisters approved for organic vapours.

Hand Protection: The use of chemically protective gloves is recommended to prevent against skin contact.

Eye Protection: The use of chemical safety goggles is recommended to prevent against eye contact. Contact lenses are not protective eye devices.

Skin and Body Protection: The use of appropriate protective clothing e.g. long sleeved cotton coveralls, rubber boots, face shield and hat is recommended to prevent repeated or prolonged skin contact with this product.

Emergency eyewash: Where there is any possibility that an employee's eyes may be exposed to this product; the employer should provide an eyewash fountain or appropriate alternative within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Off-white to light tan, liquid suspension.

Odour: Musty (stale), characteristics of spinosad.

pH (1% aqueous dilution): 8.0 at 27°C.

Melting point: Not available.

Freezing Point: Not available.

Boiling Point: 100°C.

Flash Point: Not available.

Flammability: Not flammable.

Upper/lower explosion limits: Not available.

Vapour Pressure (mm Hg): Similar to water.

Relative Vapour Density: Not available.

Density/Relative density: 1.09 g/ml at 27°C.

Solubility: Forms dispersion in water.

n-octanol/water partition coefficient: Not available.

Auto-ignition temperature: Not available.

Decomposition temperature: Not available.

Viscosity: Not available.

10. STABILITY AND REACTIVITY

Chemical Stability: The product is stable for 2 years at ambient temperature and pressure, under normal storage and handling conditions. Avoid storage under extreme temperatures and conditions. Store below 50°C,

preferably below 30°C, and not for prolonged periods in direct sunlight.

Reactivity: None known.

Possibility of Hazardous Reactions: None known.

Conditions to Avoid: Avoid extreme heat, violent steams may be formed if heated.

Incompatible Materials: Avoid contact with oxidizing materials.

Hazardous Decomposition Products: Hazardous decomposition products are thermally dependent on air supply as well as the presence of other materials.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Calculated according to GHS.

Oral LD₅₀ (24 h) rat >8500 mg/kg.

Dermal LD₅₀ (24 h) rat >11 000 mg/kg.

Inhalation LC₅₀ (4 h) rat >5 mg/ℓ

Skin irritation/Corrosion: Not classified.

Eye Damage/Irritation: Not classified.

Skin Sensitization: Not classified.

Respiratory Sensitization: Not classified.

Reproductive cell mutagenicity: Not classified.

Carcinogenicity: Not classified.

Reproductive toxicity: Not classified.

Specific target organ toxicity – single exposure: Not classified.

Specific target organ toxicity – repeated exposure: Not classified.

Aspiration hazard: Not classified.

Chronic Effects: Not available.

POTENTIAL ADVERSE EFFECTS: None known.

12. ECOLOGICAL INFORMATION

This product is very toxic to aquatic organisms with long lasting effects.

ECOTOXICITY DATA:

Spinosad

Fish:

LC ₅₀ (96 h)	Rainbow trout	27 mg/ℓ
	Bluegill sunfish	5.8 mg/ℓ
	Common carp	4.0 mg/ℓ
	Japanese carp	3.5 mg/ℓ
	Sheepshead minnows	7.6 mg/ℓ

Daphnia:

EC ₅₀ (48 h)		14 mg/ℓ
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Algae:

EC ₅₀	<i>Pseudokirchneriella subcapitata</i>	39 mg/ℓ
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E _b C ₅₀	<i>Navicula pelliculosa</i>	0.08 mg/ℓ
	<i>Skeletonema costatum</i>	0.2 mg/ℓ
	<i>Anabaena flos-aquae</i>	6.1 mg/ℓ
Birds:		
Acute oral LD ₅₀	Bobwhite quail & Mallard ducks	>2000 mg/kg
Dietary LC ₅₀ (8d)	Bobwhite quail	5250 mg/kg
	Mallard ducks	>5160 mg/kg
Bees:		
LD ₅₀ oral		0.057 µg/bee
LD ₅₀ contact	Dry residues non-toxic	0.0025 µg/bee
Worms:		
LC ₅₀ (14 d)	<i>Eisenia foetida</i>	>1000 mg/kg soil.

incineration plant. Where possible, recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

Container: Emptied containers retain vapour and product residues. Do not re-use the empty container for any other purpose. Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to dripping. Thereafter rinse the empty container three times in succession with one quarter of the container volume fresh water and decant the rinsate into the spray or mixing tank. Puncture the triple rinsed container and dispose of via an approved collector or recycler (www.croplife.co.za). Do not bury, burn or donate the container to any other parties that may use it as a container for food or beverages. Observe all labelled safeguards until container is destroyed.

ENVIRONMENTAL EFFECTS:

Plants: On plant surfaces, DT₅₀ 1.6 –16 d; degradation is mainly by photolysis. No residues of Spinosad or metabolites were found in cotton seed.

Persistence and degradability: Rapidly degraded by UV light and soil microbes to naturally occurring substances. Soil DT₅₀ for aerobic metabolism 9.4–17.3 d (spinosyn A), 14.5 d (spinosyn D); the major metabolite from spinosyn A is spinosyn B (N-demethylation product); spinosyn D is metabolised similarly. DT₅₀ for photodegradation on soil 8.7 d (spinosyn A), 9.4 d (spinosyn D). DT₅₀ for anaerobic aquatic metabolism 161 d (spinosyn A), 250 d (spinosyn D).

Bio-accumulative Potential: Spinosad is rapidly absorbed, extensively metabolised, and eliminated mainly via urine and faeces. Metabolites include glutathione conjugates and N- and O- demethylated macrolides. No residues of Spinosad were found in meat, milk or eggs.

Mobility in soil: Adsorption Freundlich K for spinosyn A 5.4–323; not determined for spinosyn D (expected to be less mobile); for A metabolite (spinosyn B) 4.3–179. DT₅₀ for field dissipation is ≤0.5 d, with no detectable radiolabel below 24 inches.

Other adverse effects: Not determined.

13. DISPOSAL CONSIDERATION

Waste: Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or re-processed. Never pour untreated waste or surplus product 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. The product may be taken to a registered waste disposal site or

14. TRANSPORT INFORMATION

UN NUMBER:	3082
Road Transport ADR/IRD:	
Class:	9
Packing Group:	III
UN Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (Spinosad 480 g/ℓ)
Maritime Transport IMDG/IMO:	
Class:	9
Packing Group:	III
UN Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (Spinosad 480 g/ℓ)
Marine Pollutant (Y/N):	YES
Air Transport IATA/ICAO:	
Class:	9
Packing Group:	III
UN Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (Spinosad 480 g/ℓ)

Special/Environmental Precautions: None known.
Transport in bulk: Refer to MARPOL 73/78, Annex II and the IBC code.

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15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation for the mixture:

OHSA 1993 Regulations for Hazardous Chemical Substances.

Relevant information regarding restrictions: None.

EU regulation: Regulation EC1272/2008 (EU-GHS/CLP)

Other national regulations: None.

Chemical Safety Assessment carried out? No

16. OTHER INFORMATION

Packed in 50, 100, 150, 200, 250, 500 ml & 1, 2, 5, 10, 20, 25 and 50 liters plastic containers and labelled according to South African regulations and guidelines.

Other hazard statements, abbreviations and explanations:

H225: Highly flammable liquid and vapour.

H319: Causes serious eye irritation.

H336: May cause drowsiness or dizziness.

IATA: International Air Transport Association.

IBC: International Bulk Chemical.

ICAO: International Civil Aviation Organization.

IMDG: International Maritime Dangerous Goods

IMO: International Maritime Organization.

LD₅₀ value: The median lethal dose or the amount of a toxic agent that is sufficient to kill 50 percent of a population within a certain period of time.

OEL/RL: Occupational exposure limit-recommended limit.

TWA: Time-weighted average – The average exposure over a specified period, usually a nominal eight hours.

ST/STEL: Short-term exposure limits.

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 and 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.