
STARPLEX 83 CC

Material Safety Data Sheet

Revised on: 1 January 2017

Revision number 11

1. Substance/preparation and company identification

Dorine EC 50

Use: Public Health, Insecticide

Company:

Starplex 83 CC
Reg. No. 2004/01564/23
P.O. Box 14374
BREDELL 1623
SOUTH AFRICA
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Emergency contact numbers

Tygerberg Poison Center: +2721 931 6129
Griffon Poison Information Centre - 082 446 8946

2. Composition/information on ingredients

Chemical nature: Emulsifiable concentrate (EC)
Esbiothrin (pyrethroid) 50 g/l
Piperonyl Butoxide 300 g/l

Hazardous components:

Chemical Name	CAS-No. / EINECS-No.	Symbol(s)	R-phrase(s)	Concentration [%]
Esbiothrin	84030-86-4	Xn, N	R20/22, R50/53	5.0
Piperonyl butoxide	51-03-6 200-076-7	N	R50/53	30.0

For the full text of the R phrases mentioned in this Section, see Section 16.

3. Hazard identification

Possible Hazards

Flammable.

Irritating to respiratory system.

Risk of serious damage to eyes.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Harmful: may cause lung damage if swallowed.

Repeated exposure may cause skin dryness or cracking.
Vapours may cause drowsiness and dizziness.

4. First-aid measures

General advice: Remove contaminated, soaked clothing immediately and dispose of safely.
Inhalation: Move the patient to fresh air and keep at rest. If symptoms persist, call a physician.
Skin contact: Take off all contaminated clothing immediately. Wash off immediately with soap and plenty of water.
After skin contact: Apply Vitamin E cream or simple toilet milks. When symptoms persist or in all cases of doubt seek medical advice.
Eye contact: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Ingestion: Do not induce vomiting. Wash out mouth with water. Keep at rest. Obtain medical attention.

NOTES TO PHYSICIAN:

Symptoms: Local: After skin contact: paresthesia (local). May cause skin and eye irritation.
Inhalation may provoke the following symptoms: irritation, cough.
Systemic: Excitement, gastrointestinal discomfort, tremor, dizziness, headache, listlessness, nausea and vomiting, epigastric pain, muscular fasciculation of limbs, unconsciousness, convulsions and coma (very high doses).

Risks: This product/preparation contains a pyrethroid.
Must NOT be confused with organophosphorus compounds!
Risk of product entering the lungs on vomiting after ingestion.

Treatment: Local: Initial treatment should be symptomatic and supportive.
After eye contact: Instillation of local anaesthetic drops e.g. 1% Amethocaine Hydrochloride eye drops. Give Analgesics as necessary.
Systemic: Endotracheal intubation should be done and gastric lavage performed, followed by administration of charcoal.
Monitoring of respiratory and cardiac functions
ECG - monitoring (Electrocardiogram)
Check for pulmonary oedema in event of inhalation.
Keep airway clear, administer artificial respiration if necessary.
Against convulsions: Give diazepam: for adults 5-10 mg intravenously as necessary until fully sedated; for children 2.5 mg i.v.
There is no antidote.
Contraindication: Atropine
Contraindication: Derivatives of adrenaline
Recovery: Spontaneous.

5. Fire-fighting measures

Fire hazards: FLAMMABLE LIQUID. Flash point (Closed Cup): 41 °C.

Suitable extinguishing media: Water spray, alcohol-resistant foam, dry powder, carbon dioxide (CO₂)

Extinguishing media which must not be used for safety reasons: High volume water jet

Specific hazards during firefighting:
In case of fire the evolution of dangerous gases is possible.

Special protective equipment for fire-fighters:

In the event of fire and/or explosion do not breathe fumes.
Wear self-contained breathing apparatus for firefighting if necessary.
Chemical impermeable gloves, face shield, effective respirator or self-contained breathing apparatus as dictated by circumstances, full length protective clothing and boots.

Further information:

Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat.
Whenever possible, contain firefighting water by bunding area with sand or earth.

6. Accidental release measures

Personal:

Wear suitable protective clothing and effective respirator; avoid skin contact.
Eliminate all ignition sources, no smoking in vicinity. Report incident to emergency personnel in the event of a large spillage.

Environmental:

Prevent contamination of sewers, waterways, low areas, drinking water crops and/or grazing. The material is toxic to fish, bees and wildlife.

Methods for cleaning:

Extinguish all ignition sources. Dike spill. Absorb liquid spillage with sand, earth or other suitable inert absorbent material, carefully shovel up and transfer to salvage drum and dispose of as for flammable and toxic waste.

Prevention of secondary hazards:

No smoking or naked flames. Inspect for damaged containers.
Avoid contact of the product with nitric acid, sulphuric acid and/or strong oxidizing agents.

Protective clothing:

Chemical impermeable gloves, safety goggles or face shield, effective respiratory protection or self-contained breathing apparatus as dictated by circumstances, full length protective clothing, apron and boots.

Accidental spillages:

Soak up liquid spillage with dry sand, sweep up and dispose of as for toxic and flammable waste in accordance with local/national regulations. Protective clothing to be worn when clearing spillage.

7. Handling and storage

Handling:

Use only as per directions on label.
Flammable - do not handle or store near open flame.
Do not inhale spray mist.
Wear rubber gloves, face shield and dust mask when handling and applying.
Avoid skin contact and wash with soap and water after accidental skin contact.
Do not eat, drink or smoke while applying or before washing hands and face.

Environmental:

Precautions:

During application and when cleaning equipment and protective clothing, contamination of all sources of drinking water, rivers, dams, other crops or grazing shall be prevented.

Hazards:

The product is toxic to fish, bees and wildlife.

Cleaning equipment
after use:

Clean protective clothing, used protective clothing and the workers' personal clothing shall be kept apart.

At the end of each day, all protective clothing and respirators shall be decontaminated, washed, rinsed and dried. Extra care must be taken when cleaning equipment after use.

Storage:

Suitable conditions: Store under lock and key, out of reach of children, animals and uninformed persons.
Store in a cool, dry place away from sunlight, sources of heat and naked flames.

Precautions: Store away from farm feeds, foodstuffs, eating utensils and drinking water.
Store away from nitric acid, sulphuric acid and/or strong oxidizing agents.

Packaging materials:

Recommended packaging: Original container.

Unsuitable packaging: Solvent is incompatible with vinyl coatings, butyl rubber and/or natural rubber.

8. Exposure controls and personal protection

Exposure limits: Recommended Occupational exposure limit for solvent: 50 ppm total hydrocarbon.

Exposure controls: Effective ventilation to be maintained. Where concentrations of solvent vapours in air may exceed limits of safety, approved respirators may be necessary to prevent overexposure by inhalation.

Personal protection:

Mixing of concentrate: Gloves, full length overalls.

Application: Gloves, goggles, dust mask, full length overalls. Wash exposed skin area, face and hands after use.

Manufacture: Chemical impermeable gloves, barrier cream on exposed skin, goggles or face shield, respiratory protection, full length overalls, apron and boots.

Emergency: Chemical impermeable gloves, safety goggles or face shield, effective respiratory protection or self-contained breathing apparatus as dictated by circumstances, full length protective clothing and boots.

Specific hygiene measures:

Contact with the liquid should be avoided by persons showing a skin photosensitization reaction.

9. Physical and chemical properties

Form:	Liquid
Colour:	Yellow, clear
Odour:	Characteristic
Flash point:	ca. 42 °C (closed cup)
Density:	0,939 g/cm ³
Solubility in water:	Esbiothrin, technical in water at 20 °C: 4,6 mg/l; Soluble in ethanol, acetone, toluene at more than 500 g/kg.

10. Stability and reactivity

Corrosiveness: The solvent is incompatible with vinyl coatings, butyl rubber and/or natural rubber.

Stability: Esbiothrin is degraded by UV light. Esbiothrin is light sensitive, store product in original container.

Compatibility: The product may be used with residual insecticides.

Fire: Esbiothrin and piperonyl butoxide decompose in a fire to emit acrid smoke and irritating fumes.

Chemical contact: The solvent is incompatible with vinyl coatings, butyl rubber, natural rubber, nitric acid, sulfuric acid, strong oxidizing agents.

11. Toxicological information (active ingredient)

Acute toxicity:

LD50 oral, rat: 3,345 mg/kg

LD50 dermal, rat: > 4,000 mg/kg

Acute inhalation toxicity: Irritating to respiratory system.

Skin irritation, rabbit: Slight irritant effect - does not require labeling

Eye irritation, rabbit: Risk of serious damage to eyes

Sensitization: non-sensitizing (guinea pig)
OECD Test Guideline 406, Buehler test

Further information: Cutaneous sensations may occur, such as burning or stinging on the face and mucosae. However, these sensations cause no lesions and are of a transitory nature (max. 24 hours).
When inhaled in larger quantities, the solvent vapors cause a narcotic effect.

12. Ecological information

Toxicity to fish:
For esbiothrin, technical the LC50 (96-h) for Rainbow trout is 0,01 mg/l and for bluegill is 0,033 mg/l.
For piperonyl butoxide, technical the LC50 (24 hours) for Carp is 5,3 mg/l .

Toxicity to birds:
For esbiothrin, technical the acute oral LD50 for Mallard ducks and bobwhite quail is more than 5 000 mg/kg.
For piperonyl butoxide, technical the acute oral LD50 for starling is more than 100 mg/kg.

Marine Pollutant: P3 - Product contains a marine pollutant.
Degradation: Esbiothrin, technical is degraded by UV light.

13. Disposal considerations

Waste from residues: Residue to be disposed of as for toxic and flammable waste in accordance with local/national regulations.

Disposal of used packaging material:
Invert the empty container over the spray or mixing tank and allow to drain 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 10 % of that of the container. Add the rinses to the contents of the spray tank and destroy the empty container by perforation and flattening and dispose of as toxic waste in accordance with local/national regulations. DO NOT re-use for any other purpose.

14. Transport information

Un No.: 1993
Class: 3

MFAG: **
Subsidiary risk: ●
Packaging group: III
Declaration for land shipment: 1993 FLAMMABLE LIQUID, N.O.S.
Declaration for sea shipment: 1993 FLAMMABLE LIQUID, N.O.S.
Declaration for shipment by air: 1993 FLAMMABLE LIQUID, N.O.S.

Marine pollutant.

15. Regulatory information

Classification and labelling in accordance with the EC Directive on dangerous preparations 1999/45/EC as amended.

Symbols: Xn Harmful
N Dangerous for the environment

Risk phrase(s):

R10: Flammable.
R22: Harmful if swallowed.
R36/38: Irritating to eyes and skin.
R51: Very toxic to aquatic organisms.
R55: Toxic to fauna.
R57: Toxic to bees.

Safety phrase(s):

S2: Keep out of the reach of children.
S15: Keep away from heat.
S23: Do not breathe spray mist.
S24: Avoid contact with skin.
S28: After contact with skin, wash with plenty of water.
S36/39: Wear suitable protective clothing and eyes/face protection.

Exceptional labelling: To avoid risks to man and the environment, comply with the instructions for use.

WHO Classification: II (moderately hazardous)

16. Other information

Text of R-phrases mentioned in Section 3:

R20/22: Harmful by inhalation and if swallowed.
R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.
