

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: DORINE EC 50

Use: Public Health, Industrial

Company Name:

Starplex 83 CC
 Reg. No. 2004/015647/23
 P.O. Box 14374
 BREDELL 1623
 SOUTH AFRICA
 TEL: (011) 979-4246/7

Emergency Contact Numbers:

Griffon Poison Information Centre: 082 446 8946
 Poison Information Centre: 0861 555 777

2. HAZARD IDENTIFICATION

SANS 10234:2008, Regulation EC 1272/2008 [EU-GHS/CLP]		
Hazard classes	Hazard categories	Hazard codes
Flammable Liquid	Category 3	H226
Aspiration Toxicity	Category 1	H304
Skin Irritation	Category 3	H316
Specific Target Organ Toxicity Single Exposure	Category 3	H335
Specific Target Organ Toxicity Single Exposure	Category 3	H336
Aquatic Chronic	Category 2	H410

Hazard pictograms:



Signal Word: Danger

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Hazard Statements:

H226: Flammable liquid and vapour.
 H304: May be fatal if swallowed and enters airways.
 H316: Causes mild skin irritation.
 H335: May cause respiratory irritation.
 H336: May cause drowsiness or dizziness.
 H410: Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P233: Keep container tightly closed.
 P261: Avoid breathing mist, vapours and spray.
 P271: Use only outdoors or in a well-ventilated area.
 P273: Avoid release to the environment.
 P280: Wear protective clothing, gloves, eye/face protection and suitable respirator.
 P301+P316: IF SWALLOWED: Get emergency medical help immediately.
 P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water.
 P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P332+P317: If skin irritation occurs: Get medical help.
 P331: Do NOT induce vomiting.
 P391: Collect spillage.
 P403+P233+P235: Store in a well-ventilated place. Keep container tightly closed. Keep cool.
 P405: Store locked up.
 P501: Dispose of contents/container in accordance with local regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS:

Substance / Mixture: Mixture

Composition:

CHEMICAL NAME	CAS NO	CONCENTRATION	GHS CLASSIFICATION
Esbiothrin	260359-57-7	5	Acute Toxicity 4 (oral) (H302) Acute Toxicity 4 (inhalation) (H332) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Piperonyl butoxide	51-03-6	30	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Shellsol A100	64741-95-6	> 50%	Flammable Liquid 3 (H226) Aspiration Toxicity 1 (H304) Skin irritation 3 (H316) STOT SE 3 (H335+H336) Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411)

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4. FIRST AID MEASURES:

General advice:	Remove contaminated, soaked clothing immediately and dispose of safely.
Inhalation:	Move the patient to fresh air and keep comfortable for breathing. If symptoms persist, call a physician.
Skin contact:	Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Apply Vitamin E cream or soothing ointment. 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 for at least 5 minutes. Seek medical advice in case of eye irritation.
Ingestion:	Immediately call a POISON CENTRE or doctor/physician. DO NOT INDUCE VOMITING. Wash out mouth with water. Keep at rest.

NOTES TO PHYSICIAN:

Symptoms:

Local:	After skin contact: paresthesia (local). May cause skin 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. 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:

Suitable extinguishing media: Water spray, alcohol-resistant foam, dry powder, carbon dioxide (CO₂).
Unsuitable extinguishing media for safety reasons: High volume water jet. Use water jet only to cool heated containers.
Specific hazards: In the event of fire, toxic gasses such as carbon monoxide and carbon dioxide may be released.

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Special fire-fighting procedures: In case of fire and/or explosion do not breathe fumes. Remain upwind of fire and keep out of low areas. Move containers from fire area if you can do it without risk. Cool containers that are exposed to flames with water until well after the fire is out. Do not use high volume jet, due to contamination risk. Do not scatter the burning material. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Whenever possible, contain firefighting water by bunding area with sand or earth. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Personal protective equipment: Wear self-contained breathing apparatus for firefighting, chemical impermeable gloves, face shield, and full-length protective clothing and boots.

6. ACCIDENTAL RELEASE MEASURES:

Personal precautions: Wear suitable protective clothing. Avoid contact with the skin, eyes and clothing. Remove contaminated clothing and shoes immediately. Ventilate area of spill or leak especially in confined areas.

Protective equipment: Wear protective gloves and chemical safety goggles. If conditions warrant, wear a positive pressure NIOSH approved self-contained breathing apparatus, or respirator.

Emergency procedures: Evacuate unprotected personnel. Equip clean-up crew with proper personal protection equipment.

Environmental precautions: Avoid release to the environment, especially water sources such as sewers, waterways and drinking water. Do not contaminate crops and/or grazing. The material is toxic to fish, bees and wildlife.

Methods and Materials for containment: Dike spillage and collect in closed and suitable containers for disposal.

Methods and Materials for clean-up: Pick up with suitable absorbent material (e.g. sand, sawdust or general-purpose binder). Shovel up carefully and place the material in a clean, dry and sealable container. Label container with the contents and dispose of as for toxic waste in accordance with local/national regulations. DO NOT burn. To decontaminate the spill area, tools and equipment, wash with water and suitable detergent. Collect wash water and add to the drums already collected. Do not flush spilled material or wash water into drains or waterways.

7. HANDLING AND STORAGE:

Precautions for safe handling: Do not handle or store near open flame. No special measures are necessary if stored and handled correctly. Follow label recommendations. Ensure thorough ventilation of stores and work areas.

General occupational hygiene: Practice good hygiene when using this material. 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 a dry, cool and well-ventilated area. Do not store near heat, open flame, sources of ignition or hot surfaces. Not to be stored next to foodstuffs, feed and water supplies. Avoid cross contamination with other pesticides and fertilizers.

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Incompatible substances and mixtures: Strong oxidizing agents. Protect against moisture. Protect from direct sunlight.

Packaging material: Fluorinated HDPE plastic containers.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION:

Permissible concentration: Occupational exposure limit for solvent: 50 ppm total hydrocarbon.

Engineering controls: It is essential to provide adequate ventilation. The measures appropriate for a particular worksite depend on how this material is used and on the extent of the exposure. Provide general or local exhaust ventilation systems. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire and other applicable regulations.

Personal protective equipment:

Respiratory protection: If used in poorly ventilated areas (airborne concentrations exceed exposure limits), use a NIOSH approved, positive pressure self-contained breathing apparatus (SCBA).

Skin and body protection: Use protective gloves, coveralls and rubber boots to prevent repeated or prolonged skin contact with the product.

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

Emergency eyewash: Have an eye wash fountain readily available in the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance:	Clear yellow liquid
Odour:	Slight characteristic
Odour threshold:	Not known.
pH:	Not established.
Melting point:	Not available.
Freezing point:	Not available.
Boiling point:	Not available.
Flashpoint:	ca. 42 °C (closed cup)
Flammability:	Flammable.
Upper / lower explosion limits:	Not available.
Vapour pressure:	Not established.
Relative vapour density:	Not available.
Density / relative density:	0,939 g/cm ³
Solubility:	Miscible in water.
n-octanol / water partition coefficient:	Not available.
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
Viscosity:	Not applicable.

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10. STABILITY AND REACTIVITY:

Chemical stability: The product is stable for two years at ambient temperature and pressure, under normal storage and handling conditions. Avoid storage under extreme temperatures and conditions. Store below 30 °C and not for prolonged periods in direct sunlight.

Reactivity: None known.

Possible hazardous reactions: None known.

Conditions to avoid: Keep away from heat and flames.

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

Hazardous decomposition products: In the event of fire gasses such as carbon monoxide and carbon dioxide may be released.

11. TOXICOLOGICAL INFORMATION:

ACUTE TOXICITY

Calculated according to GHS:

Oral LD₅₀: > 5000 mg/kg (rat)

Dermal LD₅₀: > 5000 mg/kg (rabbit)

Inhalation LC₅₀: > 5 mg/ℓ/4 hr (rat)

Skin irritation / corrosion: Causes mild skin irritation.

Eye damage / irritation: Not calculated.

Skin sensitization: Not calculated.

Respiratory sensitization: Not calculated.

Germ cell mutagenicity: Not calculated.

Carcinogenicity: Not calculated.

Reproductive toxicity: Not calculated.

Specific target organ toxicity – single exposure: .

Specific target organ toxicity – repeat exposure: Not calculated.

Aspiration toxicity: May be fatal if swallowed and enters airways.

Chronic effects: Not available.

POTENTIAL ADVERSE EFFECTS:

Other hazards:

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).

12. ECOLOGICAL INFORMATION:

ECOTOXICITY DATA:

For active ingredient – Esbiothrin:

Fish

LC ₅₀ (96 h)	Rainbow trout	0,01 mg/ℓ
	Bluegill sunfish	0,033 mg/ℓ

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Daphnia

EC₅₀ (48 h) 0.00895 mg/ℓ

Algae

No information

Birds

LD ₅₀	Bobwhite quail	> 5000 mg/kg
	Mallard duck	> 5000 mg/kg

Bees

Toxic to bees.

LD₅₀ (oral) 6.85 µg/bee

LD₅₀ (contact) 3.4 µg/bee

ENVIRONMENTAL EFFECTS:

Based on information for the active ingredient:

Plants: No information.

Persistence and degradability: Degraded by UV light.

Bio-accumulative potential: No information.

Mobility in soil: No information.

Other adverse effects: No incidence on soil microflora and the nitrogen cycle.

13. DISPOSAL CONSIDERATIONS:

Waste: Open dumping, burying or burning of this product is prohibited. Waste resulting from the use of this product cannot be reused or re-processed. Do not contaminate rivers, dams or any other water sources with the product or used containers. Place in labelled containers and dispose of in accordance with local legal requirements.

Container: Empty plastic containers contain traces of active ingredients. It is thus categorized as hazardous waste. Triple rinse the empty container as follows: 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 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. Disposal of empty containers should be in accordance with local legal requirements.

14. TRANSPORT INFORMATION:

UN Nr.:	1993
Road Transport ADR / ORD:	
Class:	3
Packaging group:	III
UN Proper Shipping Name:	Flammable liquid, n.o.s (Shellsol A100 > 50%)

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Maritime Transport IMDG / IMO:

Class: 3
Packaging group: III
UN Proper Shipping Name: Flammable liquid, n.o.s (Shellsol A100 > 50%)
Marine pollutant: Yes

Air Transport IATA / ICAO:

Class: 3
Packaging group: III
UN Proper Shipping Name: Flammable liquid, n.o.s (Shellsol A100 > 50%)

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

Transport in bulk: Refer to MARPOL 73/78, Annex II and the IBC code.

15. REGULATORY INFORMATION:

Safety, health and environmental regulations / legislation for the mixture: OSHA 2021 Regulations for Hazardous Chemical Substances.

Relevant information regarding the restrictions: None.

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

Other national regulations: None.

Chemical Safety Assessment carried out? No.

16. OTHER INFORMATION:

Packaging: Packed in 200 ml, 500 ml and 1 l fluorinated high density polyethylene plastic drums labelled according to South African regulations and guidelines.

Other hazard statements, abbreviations and explanations:

H302: Harmful if swallowed.

H332: Harmful if inhaled.

H411: Toxic to aquatic life with long lasting effects.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

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.

PEL: Permissible exposure limits.

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

ST/STEL: Short-term exposure limits.

STOT: Single target organ toxicity.

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Disclaimer:

The data contained in this safety data sheet are based on our current knowledge and experience and describes the product only with regard to safety requirements. The information on this sheet is not a specification; it does not guarantee specific properties. 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. 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. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

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