
STARPLEX 83 CC

Material Safety Data Sheet

Revised on: 7 November 2017

Revision number: 2

1. Substance/preparation and company identification

Garden Care

Use: Public Health, Industrial health, Insecticide

Company:

Starplex 83 CC
Reg. No. 2004/01564/23
P.O. Box 14374
BREDELL 1623
SOUTH AFRICA
TEL: (011) 979-4246/7

Emergency contact numbers

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

2. Composition/information on ingredients

Chemical nature: Imidacloprid

Hazardous components:

Chemical Name: (IUPAC): 1-(6-chloro-3-pyridylmethyl)-N-nitroimidazolidin-2-ylideneamine

Chemical Formula: $C_9H_{10}ClN_5O_2$

CAS No.: 138261-41-3

UN No.: 2902

Chemical Identity	CAS No.	Concentration
Imidacloprid	138261-41-3	350 g/l
Emulsifier, Solvent, Carrier		782 g/l

3. Hazard identification of the product

Active Ingredient and Formulation Health Risk: In severe cases of poisoning –depressed muscular tone, respiratory disturbance, trembling and possibly muscular cramps.

Inhalation: Inhalation may cause coughing, shortness of breath, bronchospasm.

Skin Contact: May cause mild irritation.

Eye Contact: May cause mild irritation.

Ingestion: Ingestion may cause nausea, vomiting, stomach ache and diarrhoea.

Environmental Risks: Toxic to insects and aquatic organisms.

Other Risks: Do not contaminate any water body.

4. First-aid measures

Symptoms of Poisoning: In severe cases of poisoning –depressed muscular tone, respiratory disturbance, trembling and possibly muscular cramps.

Eye contact: Flush eyes with plenty of clean water for at least 15 minutes. Get medical attention.

Skin contact: Remove contaminated clothing. Wash skin thoroughly with soap and water.

Inhalation: Remove patient to fresh air. Administer symptomatic treatment and obtain medical attention.

Ingestion: Get immediate medical attention. Do not induce vomiting unless recommended by a doctor. Do not give anything by mouth to an unconscious or semi-conscious person. See 'Note to Physician' below.

Advice to doctors / physician: Treat symptomatically (nicotine-like effects). Monitor blood pressure and pulse rate as brachycardia and hypotonia are possible; provide supportive measures for respiratory function and cardiac action. Give artificial respiration if necessary. Eliminate imidacloprid from the body with gastric lavage, saline laxatives or activated charcoal.

Antidote: None known.

5. Fire-fighting measures

Extinguishing Media: Water jet, foam, extinguishing powder, CO₂, sand.

Fire and Explosion Hazards: This is a water-based formulation. It is not expected to be flammable or explosive.

Hazardous Products of Combustion: The formation of hydrogen chloride, hydrogen cyanide, carbon monoxide and nitrogen oxides must be anticipated.

Fire Fighting Equipment: Wear respiratory protection. In well ventilated areas wear a full face mask with combination filters. In enclosed areas wear personal protective clothing (overall, boots, gloves) a self-contained breathing apparatus or a respirator with an independent air supply.

6. Accidental release measures

Personal Precautions and Protective Equipment: Use personal protection equipment.

Emergency Procedures: Take up spilled product with absorbent material such as soil, sawdust or something similar. Place spilled material and contaminated cleaning materials in a labelled closed container for disposal in an approved manner.

Environmental Precautions: Do not allow contamination of drains or any water body.

Refer to Section 13 for disposal of spilled material.

7. Handling and storage

Read the product label before use.

Good industrial practice in housekeeping and personal hygiene should be followed at all times when handling this product. Areas for handling and storage should be well ventilated

Handling

Avoid contact with eyes.

Do not eat, drink or smoke while handling this product.

Wash hands and exposed skin thoroughly after handling or contact with this product.

Do not contaminate drains, sewers and water bodies when disposing of equipment rinse water.

Refer to Section 13 for disposal of rinse water.

Observe all safeguards on the label as to cleaning and destruction of the container.

Storage

Keep out of reach of children, uninformed persons and animals.

Store away from food, drink, seed and animal feed.

Store only in the original labelled container.

Minimum Shelf Life:

2 years

8. Exposure controls and personal protection

Personal protective equipment

To reduce personnel exposure to this product, it is recommended to use appropriate personal protective clothing when handling this product.

Respiratory Protection: Wear a disposable respiratory mask if inhalation is likely.

Hand Protection: Wear PVC or rubber or chemical resistant gloves when working with the concentrate.

Eye Protection: Wear goggles or a face shield when working with the concentrate.

Skin and Body Protection: Wear a long sleeve overall and boots

Engineering Controls:

Eye Protection: Goggles.

Skin Protection: Overalls, boots, gloves.

Respiratory Protection: Disposable respiratory mask.

Hygiene Measures:

Do not eat, drink, smoke or go to the bathroom while handling this product.

Wash face, hands and exposed skin after handling this product.

Wash contaminated clothing after exposure to this product.

Re-entry Interval: Do not enter treated area within 1 day after treatment unless wearing protective clothing.

Pre-Harvest Interval: See the label.

9. Physical and chemical properties

These are typical data based on tests but may vary from sample to sample. These typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

Appearance, Colour	Suspension Concentrate (SC); white.
Form	Liquid
Odour	Slight characteristic smell
pH	4-7
Flash Point	Not applicable – water-based formulation.
Flammability	Not flammable.
Explosive Limits	Not explosive.
Decomposition Temperature	136 – 143 °C
Density	1.150
Solubility in water	510 mg/l (a.i.)
Partition Coefficient	Log Pow = 0.57 (a.i.)
Viscosity	Not viscous
Volatility	Not viscous
Corrosivity	Not expected to be corrosive.

10. Stability and reactivity

Stability: Stable at ambient temperatures.

Hazardous Decomposition: None

Incompatibility: None

Conditions to Avoid: None

11. Toxicological information

This section is intended for use by toxicologists and health professionals.

Data obtained on this and similar products and components are summarised below:

Acute Oral Toxicity: (Rat) LD50:768mg/kg body weight(♂); 1042 mg/kg body weight (♀).

Acute Dermal Toxicity: (Rat) LD50:> 5000mg/kg body weight

Skin Irritation/Corrosion: (Rabbit) Not an irritant.

Eye Irritation/Damage: (Rabbit) Not an irritant.

Skin Sensitization: (Guinea Pig) Not a skin sensitiser.

Mutagenicity: Weak to negative mutagen.

Carcinogenicity: Not carcinogenic.

Toxicity to Reproduction and/or Fertility: Not regarded as a reproductive toxin.

Developmental Toxicity / Teratology: Not regarded as a developmental toxin.

12. Ecological information

This section is intended for use by ecotoxicologists and environmental specialists. Data obtained on this active ingredient and similar formulated products and components are summarised below:

Aquatic Toxicity, Fish:

Rainbow Trout (*Oncorhynchus mykiss*): Acute toxicity, 96 hours, static, LC50=211 mg/l

Common Carp (*Cyprinus carpio*): Acute toxicity, 96 hours, static, LC50=280mg/l

Bioaccumulation:

Imidacloprid has a low potential to bioaccumulate and no evidence of accumulation has been observed.

Aquatic Toxicity, Invertebrates:

Water Flea (*Daphnia magna*), 48 hours, static, EC50= 85 mg/l

Arthropod Toxicity:

Honey bee (*Apis mellifera*): Contact, 48 hours, LD50= 0.008µg/bee

Harmful to honey bees by direct contact; avoid foliar application when the crop is in flower.

Avian Toxicity (a.i.):

Bobwhite Quail (*Colinus virginianus*): Dietary toxicity, 5 days, LC 50=2 225mg/kg diet

Bobwhite Quail (*Colinus virginianus*): Acute oral toxicity, LD50 = 152 mg/kg body weight

Mallard Duck (*Anas platyrhynchos*): Dietary toxicity, 5 days, LC 50=> 5 000mg/kg diet

Mallard Duck (*Anas platyrhynchos*): Acute oral toxicity, LD50 = 152 mg/kg body weight

Soil Organism Toxicity, Invertebrates:

Earthworm (*Eisenia foetida*): Acute toxicity, 14 days, LC50=10.7 mg/kg dry soil

Direct contact in the laboratory indicated that Imidacloprid is toxic to earthworms.

Repeated field applications did not reveal any long-term detrimental effects on earthworms.

Soil Organism Toxicity, Microorganisms:

Nitrogen and carbon transformation test: X l/ha, 28 days: % effect on nitrogen or carbon transformation process in soil.

Persistence / Degradability:

DT50 = 48-190 days

Mobility in Soil:

Imidacloprid is regarded as immobile in soil.

Possible Impact on the Environment:

Imidacloprid is bound by clay and organic material in the soil.

13. Disposal considerations

Product

Recycle if appropriate equipment and/or facilities are available.
Burn only in controlled high temperature incinerator.
Dispose of as hazardous industrial waste.
Keep out of drains, sewers, ditches and water ways.
Follow all local / regional / national / international regulations.

Containers

Triple or pressure rinse empty containers.
Pour rinse water into spray tank; spray on target area.
Store for collection by approved waste or recycling disposal service
Dispose of as non-hazardous industrial waste.
Do not use containers for any other purpose.
Follow all local / regional / national / international regulations

14. Transport information

For safe transport of hazardous substances apply appropriate local codes, classifications and regulations.

UN Number:	2902
Class:	9
Packing group:	III
UN Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (IMIDACLOPRID SOLUTION)

15. Regulatory information

RSA Classification:
Group II (Yellow, Hazardous)

16. Other information

The information presented is not necessarily exhaustive but is regarded as representative. These data are presented in good faith and are believed to be correct. No representation as to the completeness or accuracy of these data is made. No responsibility for damages of any nature whatsoever resulting from the use of or reliance upon this information will be accepted. In the event of any uncertainty, consult the supplier before use.
