

# StarBug

## SAFETY DATA SHEET

### 1. PRODUCT & COMPANY IDENTIFICATION

**Product Name:** StarBug  
**Pesticide Classification:** Insecticide  
**UN No.:** 3082

**Supplier**

Enviro Bio-Chem (Pty) Ltd  
Co. Reg. No.: 2013/194774/07  
44 Kerk Street, Lichtenburg  
North West, South Africa 2740

**Registration Holder**

Erintrade t/a RT Chemicals  
Co. Reg. No.: CK2001/036403/23  
44 Kerk Street, Lichtenburg  
North West, South Africa 2740

**Telephone:** +27 87 231 7261  
**Fax:** 086 541 7948  
**Website:** [www.envirobiochem.co.za](http://www.envirobiochem.co.za)

**24 Hr Emergency Number:** Bateleur: +27 83 123 3911

**In case of Poisoning:**

Poison Information Centre: +27 82 446 8946  
Tygerberg Hospital: (+27 21) 931 6129  
Poison Emergency Enquiries: (+27 21) 689 5227

**Common Name:** Imidacloprid 350g/l SC  
**Chemical Name:** 1-(6-chloro-3-pyridylmethyl)- N-nitroimidazolidin-2- ylideneamine  
**Empirical Formula:** C<sub>9</sub>H<sub>10</sub>ClN<sub>5</sub>O<sub>2</sub>  
**CAS No.:** 138261-41-3  
**RSA Reg. No.:** L8008 Act 36 of 1947  
**Namibia Reg. No.:** N-AR 1460

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### 2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Ingredient Name</u>	<u>Concentration</u>
Imidacloprid	350 g/l
Other ingredients including emulsifiers, stabilizers & antifungal	755 g/l

### 3. HAZARD IDENTIFICATION

**Hazard Class:** WHO Class II -Moderately hazardous.

**Main Hazard:** Harmful if swallowed or inhaled.

**Flammability:** Non-flammable, water based product.

**Chemical Hazard:** In a fire, formation of hydrogen chloride, hydrogen cyanide, carbon monoxide and nitrogen oxides can be expected.

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

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### 4. FIRST AID MEASURES AND PRECAUTIONS

If poisoning is suspected, do not wait for symptoms to develop. Contact a physician, the nearest hospital or the nearest Poison Control Centre.

**Symptoms of Human Poisoning:** Systemic symptoms include apathetic state, depressed muscular tone, respiratory disturbances and trembling. Muscular cramps are also possible in severe cases of poisoning.

#### First Aid Measures:

**Skin Contact:** Remove contaminated clothing, shoes and leather goods. Wash affected skin immediately with water and non-abrasive soap. Seek medical advice if symptoms develop.

**Eye Contact:** Immediately flush eyes with gently flowing cold water for 10 to 20 minutes, holding the eyelids open. Seek medical attention.

**Ingestion:** Obtain immediate medical advice. Do not induce vomiting unless advised to do so by doctor or poisons information Centre. Do not give anything by mouth to an unconscious or semi-conscious person.

**Inhalation:** If inhaled, remove patient to fresh air and keep warm and at rest. Seek medical advice.

**Advice to Physician:** Absorption promoting agents such as alcoholic beverages and milk causes contraindications. Oils and fats are of no particular use, as the active ingredient has low lipo-solubility.

The active ingredient, imidacloprid belongs to the chemical group, chloronicotinyl or neonicotinoid. Therapeutic measures include basic acid, decontamination and symptomatic treatment.

**Treatment:** Symptomatic (nicotine-like effects). Check blood pressure and pulse rate frequently, as bradycardia and hypotonia are possible. Provide supportive measures for respiratory function and cardiac action. Give artificial respiration if signs of paralysis appear. Additional therapeutic measures involve elimination of the substance from the body or acceleration of its excretion (gastric lavage, saline laxatives activated charcoal).

**Antidote:** There is no specific antidote for poisoning with this product.

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### 5. FIRE FIGHTING MEASURES

**Flammability:** Non-flammable, water based product.

**Extinguishing Agents:** Use water, foam, extinguishing powder, carbon dioxide or sand.

**Firefighting:** Firefighters should wear full protective gear, including self-contained breathing apparatus. Keep unnecessary people away. If it can be done safely, remove intact containers from the fire. Otherwise, use water spray to cool the intact containers. Bund the area with sand or earth to prevent contamination of drains or waterways. Dispose of fire control water, other extinguishing agents and spillage according to Section 13 of this document. Do not release contaminated water into the environment.

**Special Hazards:** In a fire, formation of hydrogen chloride, hydrogen cyanide, carbon monoxide and nitrogen oxides can be expected.

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### 6. ACCIDENTAL RELEASE MEASURES (SPILLAGE)

**Personal Precautions:** When dealing with spills do not eat, drink or smoke and wear protective clothing and equipment as described in Section 8. Keep people and animals away.

**Environmental Precautions:** Prevent spilled material from entering drains or watercourses. If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority.

**Spills:** Avoid contact with the spilled material or contaminated surfaces. Contains spill and absorb with earth, sand, clay or another absorbent material. Collect and store in properly labeled, sealed drums for disposal. Deal with all spillages immediately. Dispose of product waste according to Section 13 of this document.

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## 7. HANDLING AND STORAGE REQUIREMENTS

**Handling:** Avoid contact with skin, eyes and clothing. Keep away from direct sunlight, food, seed, animals, children and uniformed persons. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Remove clothing immediately if the product gets inside, then wash skin thoroughly using 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:** Store at temperature not exceeding 30 °C. Store in original sealed containers, in a well-ventilated and dry storehouse. Keep away from direct sunlight, food, seed, animals, children and uniformed persons. Do not leave spray solution in spray tanks for long periods.

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## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

**Acceptable Daily Intake (ADI):** No data available.

**Engineering Controls:** Control process conditions to avoid contact. Use outdoors in a well-ventilated area. Comply with occupational safety, environmental, fire and other applicable regulations. Wear suitable personal protective equipment.

### Personal Protective Equipment:

**Clothing:** Wear cotton overalls buttoned to the neck and wrist and a washable hat.

**Gloves:** Wear elbow-length PVC gloves.

**Eye Protection:** Wear eye protection. During mixing or pouring operations or other activities in which eye contact with undiluted product is likely to occur, splash goggles should be worn. 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.

**Respiratory:** Wear a disposable mask if inhalation is likely.

**Other Protection:** Do not eat, drink or smoke while handling this product. Prevent contamination of food, feeds, drinking water and eating utensils. After using this product wash hands and face before eating. Take extreme care to avoid drift. Wash accurately (preferably a shower) after a work shift. Wash hands with soap and water during breaks and at the end of work.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** White to slightly beige liquid suspension.

**Odor:** Slight characteristic.

**pH:** 5.5-7.5

**Vapor Pressure:**  $4 \times 10^{-7}$  mPa at 20°C.

**Solubility:** Miscible with water.

**Specific Gravity:** 1.15 at 20°C.

**Flash Point:** No flash point up to 100°C.

**Partition Coefficient (octanol/ water):**  $\log P_{ow} = 0.57$  at 21°C (imidacloprid).

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## 10. STABILITY AND REACTIVITY

**Stability:** Stable under normal conditions of use.

**Conditions to Avoid:** Avoid extreme heat.

**Incompatible Materials:** None under normal conditions.

**Decomposition Products:** Hydrogen chloride, hydrogen cyanide, carbon monoxide and nitrogen oxides can be expected.

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## 11. TOXICOLOGICAL INFORMATION

Acute toxicity based on the active ingredient toxicity.

**Acute Oral LD<sub>50</sub> (rat):** 750 mg/kg. Harmful if swallowed.

**Acute Dermal LD<sub>50</sub> (rabbit):** >5 000 mg/kg.

**Acute Inhalation LC<sub>50</sub> (rat, 4 hr):** May be harmful if inhaled.

**Skin and Eye Irritation (rabbit):** Slightly irritating to skin and eyes.

**Skin Sensitization (guinea pig):** Not a skin sensitizer.

**Chronic Effects:** Animal studies with imidacloprid showed no evidence of oncogenic effects, no evidence of carcinogenic effects and no teratogenic potential.

**Carcinogenicity:** Animal studies with imidacloprid showed no evidence of carcinogenic effects.

**Mutagenicity:** Studies indicate that the product is not mutagenic.

**Reproductive Hazard:** No data available.

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## 12. ECOLOGICAL INFORMATION

Ecotoxicity is based on the active ingredient toxicity.

**Aquatic Toxicity Fish LC<sub>50</sub> (96 hr):** 211 mg/l (rainbow trout); 237 mg/l (golden orfe). Practically non-toxic to fish.

**Aquatic Toxicity Daphnia EC<sub>50</sub> (48 hr):** 85 mg/l (Daphnia magna). Moderately toxic to daphnia.

**Aquatic Toxicity Algae EC<sub>50</sub> (72 hr):** > 100 mg/l (green alga).

**Avian Toxicity LD<sub>50</sub> (9 days):** 31 mg/kg (Japanese quail); 152 mg/kg (bobwhite quail). Highly toxic to birds.

**Bee Toxicity LD<sub>50</sub>:** Toxic to bees.

**Biodegradability:** The half-life of imidacloprid in soil is 48-190 days, depending on the amount of ground cover.

**Bio-accumulation:** No data available.

**Mobility:** Imidacloprid shows a medium adsorption to soil. Classified as immobile in soil. Not expected to leach.

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## 13. DISPOSAL CONSIDERATION

**Pesticide Disposal:** Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. Dispose of waste product via a licensed disposal contractor to an approved landfill.

**Package Product Wastes:** Triple rinse or preferably pressure rinse containers before disposal. If recycling, replace cap and return clean containers to authorized recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local approved landfill. If no landfill is available, bury the containers below 50 cm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and products should not be burnt.

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## 14. TRANSPORT INFORMATION

**UN No.:** 3082

**Hazard Class:** 9

**Packing Group:** III

**Proper Shipping Name:** Environmentally Hazardous Substance; Liquid; N.O.S. (contains Imidacloprid)

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## 15. REGULATORY INFORMATION

**Risk Phrases:** 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.

**Safety Phrases:** S2- Keep out of the reach of children.

S24/25- Avoid contact with skin and eyes.

S60- This material and its container must be disposed of as hazardous waste.

S61- Avoid release to the environment. Refer to special instructions/safety data sheets.

**National Legislation:** This product is registered under Act 36 of 1947 of the Republic of South Africa. It is a violation of South African law to use this product in any manner inconsistent with its approved labelling. Read and follow all label directions.

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## 16. OTHER INFORMATION

**Note:** Read and understand all the information on the product label before using the product.

**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.

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