MATERIAL SAFETY DATA SHEET

NO ANT BAIT GRANULES

Date Issued: June 2014 and is valid for 3 years from this date.
Revision: 2
Print Date: 3/10/14

1. PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: NO ANT BAIT GRANULES
SUPPLIER: EFEKTO
PO BOX 652147
BENMORE
2010
TEL No. 011 287 5700

EMERGENCY TELEPHONE NUMBERS:
SPILLAGES: 083 1233 911
Fax: 086 685 3129

POISONINGS:
National Poison Centre 021-9386084 (office hours).
021-9316129 (after hours).
082 446 8946

Use: An insect growth regulator that controls ants by breaking the reproductive life cycle of ants.

2. HAZARDS IDENTIFICATION

- Harmful if swallowed
- Very toxic to aquatic organisms.

POTENTIAL HEALTH EFFECTS
Primary Routes of Exposure: Contact by eye or skin or inhalation of dust.

Signs and Symptoms of Systemic Effects:
The acute toxicity of this product is relatively low; transient, minimal signs of toxicity were observed in animals at high oral doses.

Acute Eye Contact:
This product can cause brief and/or minor eye irritation. The expected adverse health effects resulting from an exposure may include redness and possible swelling.

Acute Skin Contact:
This product can cause brief and/or minor irritation. The expected adverse health effects resulting from an exposure may include redness and possibly some minor swelling.
This product is slightly toxic when absorbed through the skin. This product is not expected to cause allergic skin reactions.

Acute Ingestion: This product is minimally toxic when ingested.

Acute Inhalation:
Based on an evaluation of the ingredients and/or similar products, this product may be minimally toxic when
inhaled.
Exposure to high concentrations in the air may result in respiratory irritation. Signs and symptoms may include, but not be limited to, nasal discharge, sore throat, coughing and difficulty in breathing.

**Chronic Toxicity (including cancer):**
Repetitive high exposures to Pyriproxyfen Technical produced changes in the liver, kidney and red blood cells but did not produce cancer in test animals.
Overall, this product is not expected to be a chronic hazard when used according to label directions.

**Developmental Toxicity (birth defects):**
No developmental toxicity was produced in animals exposed to Pyriproxyfen Technical, even at doses that were toxic to the pregnant animal.

**Reproductive Toxicity:**
Pyriproxyfen Technical did not produce reproductive toxicity in animal studies.

**Potentially Aggravated Medical Conditions:**
Individuals with preexisting diseases of the liver, kidney, red blood cell or central nervous system may have increased susceptibility to the toxicity of excessive exposures.

| Symbols: | N |
| Indication of danger: | Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |
| Risk-phrase(s): | R50/53 |
| UN No.: | 3077 |
| Class: | 9 |

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Active ingredients:**

<table>
<thead>
<tr>
<th>Active ingredients</th>
<th>CAS No.:</th>
<th>EC No.[ELINCS]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pyriproxyfen</td>
<td>0.45–0.55 %</td>
<td>95737-68-1</td>
</tr>
<tr>
<td>Others</td>
<td>99.45-99.55 %</td>
<td>Trade secret</td>
</tr>
</tbody>
</table>

**Chemical Name:** 4 – Phenoxo phenyl (RS)-2 (pyridyloxy) propyl ether (IUPAC)
**Chemical Family:** Juvenile Hormone Mimics
**Chemical Formula:** C_{20}H_{19}NO_{3}
**NIOSH/RTECS No.:** -

### 4. FIRST-AID MEASURES

**Eye contact:**
Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**Skin contact:**

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Ingestion:
Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

Inhalation:
Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Note to physician:
No known specific antidote. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Fire and explosion hazard:
Product is not flammable.

Extinguishing agents:
Extinguish small fires with carbon dioxide, dry powder, or alcohol-resistant foam. Water spray can be used for cooling of unaffected stock, but avoid water coming in contact with the product. Contain water used for fire fighting for later disposal.

Firefighting:
Remove container from fire area if possible. Contain fire control agents for later disposal. Use a recommended extinguishing agent for the type of surrounding fire. Water can be used to cool unaffected containers but must be contained for later disposal. Avoid inhaling hazardous vapours. Keep upwind.

Hazardous combustion products:
Normal combustion forms carbon dioxide, water vapor and may produce: Oxides of nitrogen. Incomplete combustion can produce carbon monoxide.

Personal protective equipment:
Fire may produce irritating or poisonous vapours (toxic oxides of carbon), mists or other products of combustion. Fire-fighters and others that may be exposed should wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:
Avoid contact with skin and eyes. For personal protection see Section 8.

For spills on land:
Containment: Reduce airborne dust. Avoid contamination of storm sewers or other bodies of water.
Cleanup: Clean up spill immediately. Vacuum or sweep up material and place in a chemical waste container. Wash area with soap and water. Pick up wash liquid with additional absorbent and place in a chemical waste container.

For spills in water:
Containment: This material is insoluble in water. This material will sink to the bottom. Stop or reduce contamination of any water. Isolate contaminated water.
Cleanup: If possible remove contaminated water for treatment or disposal.
7. HANDLING AND STORAGE

Handling:
Avoid contact with eyes and skin. Wash hands before eating, drinking, chewing gum, smoking or using the toilet. Do not apply directly to areas where surface water is present.

Storage:
Keep under lock and key and out of reach of unauthorised persons, children and animals. Store in its original labelled container in isolated, dry, cool and well-ventilated area. Not to be stored next to foodstuffs and water supplies. Local regulations should be complied with.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits: None
End user must read and observe all precautions on product label.

Eyes: Do not get this material in your eyes. Eye contact can be avoided by wearing protective eyewear.

Respiratory protection: Use this material only in well ventilated areas. If operating conditions result in airborne concentrations of this material, the use of an approved respirator is recommended.

Skin protection: Avoid contact with skin or clothing. Skin contact should be minimized by wearing protective clothing including gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Solid, small flakes with the appearance of corn grits.
Colour: Golden
Odour: Mild soybean oil odour
Flammability: Not flammable.
Explosive properties: Not explosive.
Flash point: Not applicable.

pH: 6.6 @25°C[1.0% dispersion in water].
Density: 0, 44 g/m³ at 20°C
Viscosity: Not applicable
Solubility in water: Not soluble.

10. STABILITY AND REACTIVITY

Storage stability:
Stable for up to 2 years under normal warehouse conditions.

Incompatibility:
Not compatible with strong acids or bases. Not compatible with strong oxidizers.
This product is ready to use. Do not physically mix directly with other herbicides or pesticides.

Oxidation/Reduction properties:
Not reactive with water, monoammonium phosphate, zinc, and potassium permanganate.
11. TOXICOLOGICAL INFORMATION

Data as for active ingredient.

Acute oral LD$_{50}$: >5000 mg/kg (Rat).
Acute Dermal LD$_{50}$: 2000 mg/kg of body weight.
Inhalation LC$_{50}$: >1300 mg/l of air
Skin sensitization: Not a skin sensitizer.
Carcinogenicity: Not carcinogenic.
Teratogenicity: Animal studies did not detect any teratogenic effects.
Reproduction: No effects on reproduction were produced even at 5000 ppm, the highest dose tested.
Mutagenicity: Animal studies did not detect any mutagenic activity.

12. ECOLOGICAL INFORMATION

Pyriproxyfen Technical is practically non-toxic to avian species. Test results include:
Oral LD$_{50}$ mallard duck: greater than 2000 mg/kg;
Oral LD$_{50}$ bobwhite quail: greater than 2000 mg/kg;
Dietary LC$_{50}$ mallard duck: greater than 5200 ppm;
Dietary LC$_{50}$ bobwhite quail: greater than 5200 ppm;
Reproduction bobwhite quail: NOEC = 600 ppm;
Reproduction mallard duck: NOEC = 600 ppm

Aquatic Organism Toxicity
Pyriproxyfen Technical is moderately to highly toxic to fish and moderately to very highly toxic to aquatic invertebrate species. Test results include:

**Freshwater species:**
LC$_{50}$ (96 hr) Bluegill Sunfish: greater than 270 µg/l;
LC$_{50}$ (96 hr) Rainbow Trout: greater than 325 µg/l;
LC$_{50}$ (21 day) Rainbow Trout: 90 µg/l;
LC$_{50}$ (96 hr) Carp: 450 µg/l;
LC$_{50}$ (96 hr) Killifish: 2660 µg/l;
EC$_{50}$ (48 hr) Daphnia magna: 400 µg/l;
MATC (21 day) Daphnia magna: 20 ppt;
MATC (Early Life Cycle) Rainbow Trout: 5.4 µg/l.

**Estuarine species:**
LC$_{50}$ (96 hr) Sheepshead Minnow: greater than 1.02 ppm;
LC$_{50}$ (96 hr) Mysid Shrimp: 65 ppb;
EC$_{50}$ (96 hr) Oyster Shell Deposition: 92 ppb.

**Other Non-Target Organism Toxicity:**
Pyriproxyfen Technical is practically non-toxic to bees. The acute contact LC$_{50}$ in bees was greater than 100 µg/bee.

13. DISPOSAL CONSIDERATIONS

Pesticide disposal:
Never pour untreated waste or surplus products into public sewers or where there is any danger of run-off or seepage into water systems. Comply with local legislation applying to waste disposal.

Package product wastes:
Puncture, or shred and bury empty containers in a local authority landfill. If not available, bury the containers below 500 mm in a disposable pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots. Empty containers and product should NOT be burnt.

14. TRANSPORT INFORMATION

UN No.: 3077
ADR
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Pyriproxyfen)
Class: 9
Classification code: M7
Packaging group: III
Label: 9
Hazard ID: 90

IMDG
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Pyriproxyfen)
Class: 9
Label: 9 Marine Pollutant

ICAO/IATA
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Pyriproxyfen)
Class: 9
Label: 9
Packing Group: III
Pack Instr. Passenger: 911
Pack Instr. Cargo: 911

Tremcard Nr. CEFIC: 90M7-III

15. REGULATORY INFORMATION

Symbol: N
Indication of danger: Dangerous for the environment.
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Risk phrase(s):
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Safety phrases:
S 2 Keep out of reach children.
S13 Keep away from food, drink and animal feeding stuffs.
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:
In accordance with the South African National Road Traffic Act, 1996 (Act 93 of 1996), the Fire Brigade Act,1987 (Act 99 of 1987) and the Occupational

16. OTHER INFORMATION

Compiled by: Danie Fourie

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the PRODUCT AS SUCH. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulations(s) containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.

REFERENCES

• VALENT, Esteem Flybait MSDS, 29/07/2004
• ELINCS[EINECS].
• ADR 2011, Part 3.
• IATA Dangerous goods regulations, Effective 1 January 2011

END OF MSDS.