MATERIAL SAFETY DATA SHEET

LAST CALL FF

1 IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY

Identification of the substance or preparation

Product denomination (s) Last Call FF

Ident. - no. 0003

Company / undertaking identification

Customer/Supplier INSECT SCIENCE SA.

Street / P.O.Box 26 A First Ave

Country / Zip / Location Tzaneen, Rep of South Africa

Phone Number 015 307 1391 Telefax 015 307 6555

Information (Office Hours) 015 307 1391

Emergency Phone Number (24h) 083 269 2235

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical characteristic

Chemical Class ---Empirical Formula ---Molecular Weight ---Formulation Type Grease
Sector Insecticide

Active ingredient (s) 6.00 % w/w permethrin

Hazardous Component (s)

CAS-Nr. Chem. Demon. Concentration. Symbol. R-Phrase

52645-53-1 3-Phenoxybenzyl-3-(2,2-dichlorvinyl)-2-dimethyl-cyclopropancarbamap;

Permethrin 6 % Xn 22

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3. HAZARDS IDENTIFICATION

Health Hazards

Slight.

Environmental Hazards

Very toxic to aquatic organisms. Toxic to bees.

4. FIRST-AID MEASURES

First Aid in General

In case of indisposition place the patient in a well-ventilated area and protect the person from hypothermia. IN CASE OF SUSPECTED POISONING: Immediately call a physician.

First Aid after Inhaltion

Immediately remove to fresh air.

First Aid after Skin Contact

Remove contaminated clothing and thoroughly wash the affected parts of the body with soap and water.

First Aid after Eye Contact

Rinse eye with clean water for several minutes.

First Aid after Ingestion

Repeatedly administer medicinal charcoal in a large quantity of water. Note: Never give anything by mouth to an unconscious person. Do not induce vomiting.

Antidote

No specific antidote is known! Apply symptomatic therapy.

5. FIRE – FIGHTING MEASURES

Combustibility yes

Suitable Extinguishing Media

Extinguishing agent: powder, foam, carbon dioxide or waterspray (do not use direct jet of water)

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Special Hazards during Fire Fighting

Combustion products are toxic and/or irritant. Measures have to be taken to prevent the contaminated extinguishing agent from seeping into the ground or from spreading uncontrollably.

Protective Equipment for Fire Fighting

Use respirator to protect from fumes.

6. ACCIDENTAL RELEASE MEASURES

Do not contaminate water and sewers. Cover up product with absorptive material such as sand, soil, diatomaceous earth, etc. and dispose of in an incinerator approved for chemicals. Collect material in specially marked, tightly closing containers. Spilled product cannot be used further and must be disposed of. If safe disposal is not possible, contact manufacturer, the dealer or the local representative.

7. HANDLING AND STORAGE

Handeling / General Precautions

Avoid contact with skin, eyes and clothing. Avoid inhalation of fog and vapours. Do not eat, drink or smoke while working. In addition to the standard chemical manufacturing practices, like splashproof filling and measuring equipment (including vapour stripping), further personal protection measures may have to be implemented to avoid possible contact with the product.

Special Instructions for Storage

Store the product in closed original containers. Protect from light.

Storage Compatibility with Other products

Store separately from feed, food and stimulants.

Max. Storage Temperature

30 C

Min. Storage Temperature

0 C

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Toxicity Risk

Low

Insect Science Corporation

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Personal Protective Equipment in General

Change working clothes daily.

Personal Protective Equipment / Breathing Protection

In case of heavy exposure, wear: Gas mask with filter A.

Personal Protective Equipment / Hand Protection

Gloves.

Personal Protective Equipment / Eye Protection

Goggles.

Personal Protective Equipment / Body Protection

Heavy duty cotton or synthetic fabric working clothes (e.g. overalls).

Precautionary Measures after Work

Wash thoroughly (shower, bathe, was hair). Change clothing. Thoroughly clean protective gear. Troroughly clean contaminated equipment with soap or soda solution.

9. PHYSICAL AN CHEMICAL PROPERTIES

Appearance clear to turbid, blue to black VISUAL

Viscous suspension

Physical State liquid. VISUAL

Colour clear. VISUAL

Odour slight. ORGANOLEPTIC

Melting Point Range not applicable (mixture of

Compounds)

Bioling Point / Range not applicable (mixture of

Compounds)

Flash – Point 180 C DIN 51758/1

Methodology Pensky-Martens c.c.

Pressure 985 hPa

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Auto-Ignition Temperature 460 C DIN 51794/1

Methodology DIN 51794

Density (20 C) 1.06 – 1.09 g / cm³

Solubility Range in Water not soluble

PH Value 5-9 CIPAC MT 75.2

Concentration 1 %

Medium in Deionized Water

Dynamic Viscosity 19800 – 23800 mPa.s

Temperature 20 C

Range of Shear RV 15 rps

Dynamic Viscosity 14750 mPa.s

Temperature 20 C

Range of Shear RV 100 rps

Dynamic Viscosity 6000 - 6900 mPa.s

Temperature 40 C

Range of Shear RV 15 rps

Dynamic Viscosity 3500 mPa.s

Temperature 40 C

Range of Shear RV 100 rps

10. STABILITY AND REACTIVITY

Chemical Stability

Stable under standard conditions.

Hazardous Decomposition Products

None when handeld according to instructions.

Air Sensitivity

Not sensitive to air

Sensitivity to light

Not sensitive to light

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Sensitivity to humidity

Not sensitive to humidity.

11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity LD 50 rat

Value > 5050 mg / kg

Acute Dermal Toxicity LD 50 rabbit

Value > 2020 mg / kg

Acute Skin Irritation rabbit

Assessment non-irritant

Acute Eye Irritation rabbit

Assessment non-irritant

12. ECOLOGICAL INFORMATION

Very toxic to aquatic organisms. Toxic to bees.

13. <u>DISPOSAL CONSIDERATIONS</u>

Product Disposal

Pay attention to protective clothing and measures. Cover up product with absorptive material such as sand, soil, diatomaceous earth, etc. Collect material in specially marked, tightly closing containers. Clean dirty areas with carbonated or soapy water. Put washing water in containers too, to avoid any contamination of surface and ground water, water supplies and drains. Hose down the area for a prolonged period. Heavily contaminated soil layers have to be dug out down to clean soil. Spilled product cannot be ussed further and must be disposed of. If safe disposal is not possible, contact the manufacturer, the dealer or the local representative and dispose of in an incinerator approved for chemicals.

Container Disposal

DAMAGED CONTAINERS: Place original containers in specially marked larger ones. Dispose of EMPTY CONTAINERS in an incinerator approved for chemicals. Check possibilities of recycling large empty containers, drums and barrels.

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14. TRANSPORT INFORMATION

Special Conditions for Transportation

Use unbreakable containers, make sure they cannot fail, and label in accordance with regulations.

Transport Classification Swiss PTT

B FREE

Transport Classification with Rail/Road RID/ADR

Class FREE

Transport Classification Sea IMDG-CODE

Class FREE

Transport Classification Air ICAO

Class FREE

15. RELULATORY INFORMATION

EU – Classification

Type of Classification Self – Classification

Labelling Requirement Not Required

WHO Toxicity Classification III: Product unlikely to present acute hazard in nrmal use.

National laws

Weight limit as prescribed by

Accident regulations

200000 kg

16. OTHER INFORMATION

The information contained herein is based on the present state of our knowledge and is intended to describe our product from the piont of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.