A18160/02/AUS

Date of Issue: JULY 01 1999
PRODUCT NAME: Tugon 100WP Fly & Litter Beetle Insecticide

Statement of Hazardous Nature:
"Hazardous according to criteria of the National Occupational Health and Safety Commission"

BAYER AUSTRALIA LIMITED
875 PACIFIC HIGHWAY
PYMBLE NSW 2073
PH. (02) 9391-6000
EMERGENCY TEL NO: 1800 033 111 24H Emergency Service Australia Wide, Toll Free

1. IDENTIFICATION

1.11 Proper Shipping Name: PESTICIDE, SOLID, TOXIC, N.O.S.

1.12 Other names: No other names.

1.13 UN Number: 2588

1.14 Hazchem Code: 2X

1.15 Dangerous Goods Class: 6.1 Subsidiary Risk: None Allocated

1.16 Poisons Schedule Number: S5

1.17 Manufacturer’s Product Code: 65868

1.18 Use: Insecticide for pest control use.

1.2 Ingredients

1.20 Chemical Entity | CAS No. | Proportion
Cyfluthrin | 68359-37-5 | 100 g/kg
Inert constituents | - | V.high

Chemical Characterisation:
CYFLUTHRIN
Cyano-(4-fluoro-3-phenoxyphenyl)-methyl-3-(2,2-dichloroethenyl)-2,2
dimethyl-cyclopropane carboxylate id
Chemical group: Synthetic pyrethroid

Proportion (% w/w) V.high = >60%
1.3 Physical Description / Properties
1.3.0 Form: Wettable powder
Colour: Off white to beige
Odour: Slight characteristic smell
Change in physical state:
Melting point: >200 degrees C
Density:

Bulk volume fluffed approx 380 mL/100g
Bulk volume jolted approx 300 mL/100g
Vapour Pressure: Not relevant.
Viscosity: Not relevant.
Solubility in water: Insoluble, water-dispersible
pH value: 6.0-7.5 (at 10% in water)
Flash point: Not relevant.
Ignition temperature: Not relevant.
Explosive limits: Not relevant.

1.5 Other Properties
1.5.1 Further information:
No other information.

2. HEALTH HAZARD INFORMATION
2.10 Health effects:
Symptoms of overexposure: No specific symptoms.
Tingling sensations may be felt in skin and mucous membranes exposed to the chemical. Exposure to spray mist may cause nasal irritation. The effects of chronic human exposure to this chemical have not been determined, however cyfluthrin has been shown to be non-carcinogenic, non-mutagenic, and non-teratogenic in laboratory species. The product will irritate the skin and eyes.

2.11 First aid:
If poisoning occurs contact a doctor or Poisons Information Centre. Phone 131126.
If material is in eyes hold eyes open and flood with water for at least 15 minutes.
If material is on skin wash off with soap and water.

2.12 Advice to Doctor:
Apply basic aid and decontamination procedures. Treat symptomatically. There is no specific antidote. The primary presenting signs of overexposure usually relate to hyperaesthesia of nerve endings in skin and mucous membranes exposed to the chemical. These signs can only be treated symptomatically and resolve spontaneously within 24-48 hours. The skin and mucous membrane hyperaesthesia results from direct contact, not from systemic distribution of the chemical.

3. PRECAUTIONS FOR USE
3.1 Safety Precautions
3.10 Exposure standards:
NOHSC has not determined exposure standards for cyfluthrin or any of the other ingredients in the product.
3.11 Engineering controls:
No engineering controls are required for the normal use of this product according to label.

3.2 Personal Protection
3.20 Personal protective measures:
May irritate the eyes and skin.
Avoid inhalation of dust while preparing the spray.

3.21 Personal protective equipment:
When preparing spray and using the prepared spray wear elbow-length PVC gloves.

3.22 Industrial hygiene:
After each day's use wash gloves and contaminated clothing.

3.3 Flammability
3.31 Protection against fire and explosion:
Product is stable. Avoid strong oxidising agents.

4. SAFE HANDLING INFORMATION

4.1 Storage and Transport
4.10 Storage
Keep out of reach of children.
Store away from food, drink or animal feeding stuffs.
Store below 30 degrees C.
Keep away from heat or moisture.

4.11 Transport:
Classification according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code)

- Shipping name: PESTICIDE, SOLID, TOXIC, N.O.S.
- Packing group: III
- UN No: 2588
- DG Class: 6.1
- Sub Risk: None
- Hazchem: 2X

4.12 Dangerous Goods / Hazardous Substances Regulation
This product is subject to the following regulations:
- Australian Code for the Transport of Dangerous Goods by Road and Rail
- State/Territory Storage of Dangerous Goods Regulations
- State/Territory Hazardous Substances Regulations
- Standard for the Uniform Scheduling of Drugs and Poisons

4.13 Further Information
No further information.
4.2 Spills and Disposals
4.21 After spillage/leakage/gas leakage:
Prevent spillage from spreading or entering waterways and underground drains. Work from up-wind side of spill. Do not inhale dust. Sweep and shovel up spill. Fill material along with any contaminated soil etc., into sealable containers. Clean affected area with an aqueous detergent and a small amount of water. Absorb this with hydrated lime and place in a sealable drum. Spread hydrated lime over the affected area.
Do not smoke, eat or drink during clean-up operations.

4.22 Disposal:
1) After intended use: Rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemical on-site. Dispose of at a local authority landfill. If not available bury containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, vegetation and roots. Empty containers and product should not be burnt.
2) After spill or accident: Dispose of sealed containers at an approved local waste disposal site.

4.3 Fire/Explosion Hazards
4.30 Dangerous Decomposition or Combustion Products
Thermal decomposition:
Hazardous polymerisation will not occur.

Solid products combustibility: BZ 3 = local burning or glowing with, at the most, only slight spreading (VDI 2263).

Risk of dust explosion: may cause dust explosion.

Impact sensitivity: >40 joules, i.e., not sensitive to impact (in BAM dropping weight test).

Hazardous decomposition products:
If involved in a fire: hydrogen chloride gas, hydrogen fluoride, hydrogen cyanide, carbon monoxide, oxides of nitrogen may be emitted.

Hazardous reactions: None

4.31 Extinguishing media:
Sprayed water jet, foam, extinguishing powder, carbon dioxide, sand.

4.32 Further information:
Special firefighting procedures: Fight fire in the early stages if safe to do so. Wear respiratory protection.
Well ventilated areas: wear full face mask with combination filter, eg., ABEK-P2 (offers no protection from carbon monoxide).
Enclosed premises: wear respirator with independent air supply.
Contain firefighting water.
5. OTHER INFORMATION

5.10 Information on toxicity:
LD50 Oral (ingestion) - rat approx 1400 mg/kg
LD50 Dermal (skin contact) - rat >5,000 mg/kg
Cyfluthrin in non-mutagenic and non-carcinogenic in laboratory tests.
Product is irritating to the eyes and skin.

5.20 Information on ecological effects:
Fish toxicity (active constituent)
Carp (Cyprinus carpio) LC50: 0.022 mg/mL (96 hours)
Golden orfe (Leuciscus idus) LC50: 0.0032 mg/mL (96 hours)
Rainbow trout (Salmo gairdneri) LC50: 0.0006 mg/mL (96 hours)
Lepomis macrochirus LC50: 0.0015 mg/mL (96 hours)
Cyfluthrin is a toxic hazard for honeybees.

5.30 Further Information
No further information.

6. CONTACT POINT (for non-emergency calls)

6.10 Product safety coordinator of Bus.Group: ANIMAL HEALTH
6.20 Telephone Number: PH. (02) 9391-6000

DISCLAIMER

This Material Safety Data Sheet has been developed according to the WORKSAFE
Australia/NOHSC Code of Practice.

The data, information and recommendations herein ("information") are represented in good faith
and believed to be correct as of the date hereof.

The purpose of this Material Safety Data Sheet is to describe product in terms of their safety
requirements.

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or application, or of any other nature with respect to the information or the product to which the
information refers ("the product").

The information is supplied upon the condition that the persons receiving same will make their own
determination as to its suitability for their purposes prior to use of the product.

The physical data shown herein are typical values based on material tested. These values should not
be construed as a guaranteed analysis of any specific lot or as guaranteed specification for the
product or specific lots thereof.

Due care should be taken to make sure that the use or disposal of this product and / or its packaging
is in compliance with relevant Federal, State and Local Government regulations.