

MATERIAL SAFETY DATA SHEET

Introductory Details

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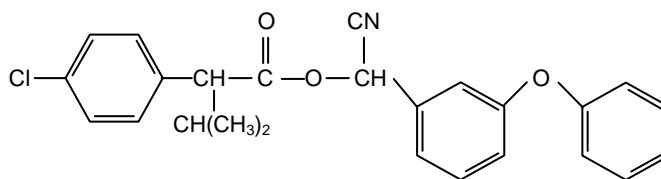
Date of preparation : 20 October 2004

Date revised : 16 June 2008

SECTION 1 : CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Details

Product Name : Fenvalerate 10% FL
Trade Name : WAZARY 10FL / ACM WAZARY 10SC
Chemical Name : "-Cyano-3-phenoxybenzyl 2-(4-chlorophenyl) isovalcrate
Chemical Formula : $C_{25}H_{22}ClNO_3$
Molar Mass : 419.9
Chemical Family : Synthetic pyrethroid
Manufacturer's Code : -
Use : Insecticide (termiticide)
Structural Formula :



Fenvalerate

1.2 Company Identification

Manufacturer

Name and Address : Agricultural Chemicals (M) Sdn. Bhd.
962, Lorong Perusahaan 8, Taman Perindustrian Perai,
13600 Perai, Pulau Pinang, Malaysia.
Telephone Number : 604-390 7988
Emergency Telephone Number : 604-390 7988

1.3 Contact Point

Designation : Ms. Cheong Wai Ching, Product Support Manager /
En. Ahmad Labib bin Yusof, Administrative Assistant
Tel. No. : 604-390 7988

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SECTION 2 : COMPOSITION/INFORMATION ON INGREDIENT

Chemical Name	CAS No.	Proportion	Exposure Limit	Toxicity Data
"-Cyano-3-phenoxybenzyl-2-(4-chlorophenyl) isovalcrate	51630-58-1	10%	No exposure limit have been established for this material.	Refer to Section 11
Solvent	(*)	10%		

(*) = All components are registered in EINECS/ELINCS

SECTION 3 : PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: White to pale yellowish brown flow emulsion
Odour	: Slightly characteristic
Solubility	: Dispersible in water
Boiling Point	: No data available
Melting Point	: Not applicable
Vapour Pressure (Technical)	: 0.037 mPa at 25°C
Percentage Volatiles	: No data available
Evaporation Rate	: No data available
Vapour Density	: No data available
Specific Gravity	: No data available
Flash Point	: > 150°C (estimated)
Autoignition temperature	: No data available
Flammable Limit (%)	: No data available
Flammability	: Not flammable
Density	: 1.00 - 1.02 g/ml at 20°C
pH value	: 6 - 8
Partition coefficient (Technical)	: log P _{ow} 6.2
Viscosity	: 1000 - 3000 mPa.s (25°C)

SECTION 4 : HAZARD IDENTIFICATION

Harmful if swallowed
Toxic to aquatic organisms
May cause long term adverse effects in the aquatic environment

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SECTION 5 : FIRST AID MEASURES

- Ingestion : Induce vomiting after drinking water. Do not induce vomiting or give anything by mouth to an unconscious patient. Get medical attention.
- Eye contact : Flush with plenty of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get medical attention if irritation persist.
- Skin contact : Remove contaminated clothing and wash skin thoroughly with soap and water.
- Inhalation : Remove patient to fresh air. Get medical attention if symptoms persist.
- Notes to physician :
- Poisoning symptoms : May cause a transient itching and / or burning sensation on exposed human skin. Harmful if swallowed.
- Medical treatment : Treatment is symptomatic.

SECTION 6 : FIRE FIGHTING MEASURES

- Extinguishing Media : Dry chemical powder
Water with full water jet is NOT suitable.
- Fire fighting instruction : Fire fighters should wear full-faced self-contained breathing apparatus and protective clothing.
- Special hazards : May emit toxic and irritating fumes under fire conditions.

SECTION 7 : ACCIDENTAL RELEASE MEASURE

Leak and/or Spill :

Wear protective clothing as stated in Section 9. Eliminate ignition source. Ventilate area. Adsorb spills with inert material such as clay, sand, earth, sawdust etc. and collect in a drum. Clean up the contaminated area with household detergent and small amount of water. Adsorb with inert material such as clay or earth. Collect into the same container for disposal. Seal drum and dispose of. Do not allow to escape into sewage system or water resources.

SECTION 8 : HANDLING AND STORAGE

- Handling : Read the label before use. Wear protective clothing, protective gloves and safety goggles or face shield while handling.
- Storage : Keep in original containers, tightly closed, in a cool, dry and well-ventilated place. Avoid direct sunlight. Avoid elevated temperatures. Do not store with animal feeds or foodstuff. Keep out of reach of children or farm animals.

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SECTION 9 : EXPOSURE CONTROL AND PERSONAL PROTECTION

Exposure Limit : No data available
Engineering measures : Local exhaust ventilation and general ventilation
Personal protection : Wear protective clothing, protective gloves and safety goggles or face shield.

SECTION 10 : STABILITY AND REACTIVITY

Conditions to avoid : Direct sunlight, heat and extreme temperature
Incompatible : No data available
Decomposition Products : Emits toxic and corrosive fumes under fire conditions.
Hazardous polymerization : No data available
Stability : Stable under normal conditions.

SECTION 11 : TOXICOLOGICAL INFORMATION

Toxicity Data :

Acute Oral LD₅₀ (Rat) : (male) 2300 mg/kg
(female) 2600 mg/kg
Acute Dermal LD₅₀ (Rat) : > 2000 mg/kg
Irritation - Skin (Rabbit) : Slight irritant
- Eye (Rabbit) : Slight irritant
- Sensitisation : Not sensitising

Active component (Fenvalerate, technical grade) - Not mutagenic and not teratogenic

Carcinogenicity : No data available.

Reproductive Effect : No data available.

Effects of overexposure : No data available.

Chronic effects : No data available.

Target organs : No data available.

Medical Conditions Generally Aggravated by exposure : No data available.

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SECTION 12 : ECOLOGICAL INFORMATION (TECHNICAL)

Mobility & Bioaccumulation	:	Bioconcentration factors range from 120 to 4700 for various organisms. As material taken up by aquatic organisms is rapidly lost on transfer to clean water, in practice the compound can be regarded as having no tendency to bioaccumulate.	
Biodegradability	:	Not readily biodegradable	
Aquatic Toxicity	:		
LC ₅₀ (96 h)	:	(Rainbow trout)	0.0036 F g/L (flow-through)
		(Tilapia)	200 F g/L (flow-through)
		(Algae)	> 1000 F g/L
28 day exposure (Sheepshead minnow)	:	Concentration (NOEC) = 0.56 F g/L	
Life cycle tests (<i>Daphnia galeata mendotae</i>)	:	Concentration (NOEC) = < 0.005 F g/L	

SECTION 13 : DISPOSAL INFORMATION

Dispose of according to local regulation.

SECTION 14 : TRANSPORT INFORMATION

Land transport (ADRI RID)			
ADR class	9	ADR/RID item No.	11c / 11c
RID class	9	ADR/RID packing group	III
Hazard identification No.	90	Substance identification No.	3082
TREM-Card	CEFIC TEC(R)-90G01	UN Number	3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. (Contains:10% Fenvalerate)		
Sea transport (IMDG-code / IMO)			
IMO / IMDG code		Class	9
Packing group	III, page 9028	UN Number	3082
EMS	None	MFAG	None
Marine pollutant	Yes		
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. (Contains:10% Fenvalerate)		
Air transport (ICAO-TI / IATA-DGR)			
ICAO-TI / IATA-DGR		UN Number	3082
Class	9	Packing group	III
Cargo	914 (unlimited)	Passengers	914 (unlimited)
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. (Contains:10% Fenvalerate)		

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SECTION 15 : REGULATORY INFORMATION

Pesticides Act : Class IV

CPL Regulations : No significant hazard under CPL regulations.

Risk Phrases : R22 Harmful if swallowed
R51 Toxic to aquatic organisms
R53 May cause long term adverse effects in the aquatic environment

Safety Phrases : S2 Keep out of reach of children
S13 Keep away from food, drink and animal feeding stuff
S20/21 When using do not eat, drink or smoke
S23 Do not breathe vapour or spray
S24/25 Avoid contact with skin and eyes
S36/37 Wear suitable protective clothing and gloves
S46 If swallowed seek medical advice immediately (show the container or label)
S49 Keep only in the original container
S61 Avoid release to the environment. Refer to special instructions / safety data sheets

SECTION 16 : OTHER INFORMATION

Reference : (a) Material Safety Data Sheet - Wazary 10FL (Doc. No. SCEA 2003-02-nms)
Date of last issue : 31/01/2003

(b) Guidelines for The Classification of Hazardous Chemicals, DOSH 1997

(c) Guidelines for The Formulation of A Chemical Safety Data Sheet, DOSH 1997

(d) Guidelines for Labelling of Hazardous Chemicals, DOSH 1997

To the best of our knowledge, the information contained herein is accurate. However, we cannot assume any liability whatsoever for the accuracy or completeness of the information contained herein.