

# MATERIAL SAFETY DATA SHEET

## Introductory Details

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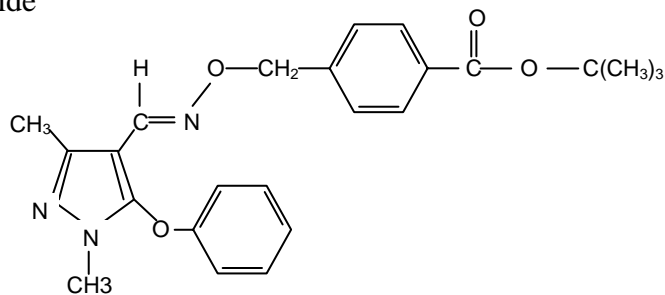
Date of preparation : 19 April 2003

Date revised : 5 June 2008

## SECTION 1 : CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### 1.1 Product Details

Product Name : Fenpyroximate 5% SC  
Trade Name : Ortus 5% SC  
Chemical Name : tert-Butyl (E)-"-(1,3-dimethyl-5-phenoxy-pyrazol-4-ylmethylene aminoxy)-p-toluate  
Chemical Formula :  $C_{24}H_{27}N_3O_4$   
Molar Mass : 421  
Chemical Family : Cyclic compound  
Manufacturer's Code : -  
Use : Acaricide  
Structural Formula :



*Fenpyroximate*

### 1.2 Company Identification

Manufacturer : Available upon request

#### **Importer/Distributor**

Name and Address : Agricultural Chemicals (M) Sdn. Bhd.  
962, Lorong Perusahaan 8, Taman Perindustrian Perai,  
13600 Perai, Pulau Pinang, MALAYSIA.

Telephone Number : 604-3907988

Emergency Telephone Number : 604-3907988

### 1.3 Contact Point

Designation : Ms. Cheong Wai Ching, Product Support Manager /  
En. Labib bin Yusof, Administrative Assistant

Tel. No. : 604-3907988

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## SECTION 2 : COMPOSITION/INFORMATION ON INGREDIENT

Chemical Name	CAS No.	Proportion	Exposure Limit	Toxicity Data
Tert-butyl (E)-"-(1,3-dimethyl-5-phenoxy-pyrazol-4-ylmethylene aminoxy)-p-toluate	134098-61-6	5 %	Refer Section 9	Refer Section 11

## SECTION 3 : PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: White suspensible liquid
Odour	: Characteristic odour
Solubility	: Miscible with water
Boiling Point	: No data available
Melting Point (°C) (Technical)	: 101.1 - 102.4 °C
Vapour Pressure (Technical)	: $5.6 \times 10^{-8}$ mmHg at 25°C
Percentage Volatiles	: No data available
Evaporation Rate	: No data available
Vapour Density	: No data available
Specific Gravity (H <sub>2</sub> O = 1)	: 1.03 / 20°C
Flash Point	: No data available
Autoignition Temperature	: No data available
Flammable Limit (%)	: No data available
pH Value	: 5.8 (1% suspension)
Viscosity	: 250 cps / 20°C

## SECTION 4 : HAZARD IDENTIFICATION

Toxic by inhalation.

## SECTION 5 : FIRST AID MEASURES

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- Ingestion : If swallowed, give large quantities of water and induce vomiting carefully, not to drawn into lung. Get prompt medical attention.
- Eye Contact : Immediately flush eye with plenty of water. If irritation persists, get medical attention.
- Skin Contact : Wash with plenty of water and soap. Remove contaminated clothing and launder before use. If irritation persist, get medical attention. Sensitized persons should avoid further contact and reuse of clothing.
- Inhalation : Remove individual to fresh air. If not breathing, give artificial respiration. Give medical attention immediately.
- Notes to Physician : No data available

## **SECTION 6 : FIRE FIGHTING MEASURES**

- Extinguishing Media : Water spray, foam, dry chemical or carbon dioxide.
- Fire Fighting Instruction : Firefighters should wear full protective clothing and self breathing apparatus. Avoid extinguisher media such as water, foam and dry chemical flow into pond, river and lake due to danger of acute toxicity to aquatic organisms.
- Special Hazards : No data available

## **SECTION 7 : ACCIDENTAL RELEASE MEASURE**

### Leak and/or Spill :

Liquid spills on floor or other impervious surface should be contained or diked and then absorbed with sawdust, sand, bentonite or other absorbent clays. Collect contaminated absorbent into a metal drum for disposal. Scrub the floor thoroughly with a strong industrial type detergent and rinse with water. When large amount of spill and leakage is found, wear protective clothing and self breathing apparatus to avoid surplus contact. Avoid contaminated absorbents or water flow into pond, river and lake due to danger of acute toxicity to aquatic organisms.

## **SECTION 8 : HANDLING AND STORAGE**

- Handling : Handle and open container with care. Avoid contact with skin and eye. Read the label before use. Wash thoroughly with soap and water after handling.
- Storage : Keep in original container, tightly closed, out of reach of children. Keep container under room temperature, avoid sunlight and freezing.

## **SECTION 9 : EXPOSURE CONTROL AND PERSONAL PROTECTION**

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Exposure Limit (Technical): 0.07 mg/m<sup>3</sup> (NICHINO)\*\*  
\*\* Nihon Nohyaku Exposure limit

Engineering Measures : If practical, use local ventilation at the sources of air contamination such as process equipment.

Personal Protection :

Respiratory Protection : Avoid breathing mist. Used approved respiratory protection equipment when airborne exposure limits are exceeded.

Eye Protection : Wear suitable goggles where there is significant potential for eye contact

Skin Protection : Wear appropriate protective clothing and gloves to prevent skin contact.  
Wash contaminated skin promptly. Launder contaminated clothing and clean protective equipment. Wash thoroughly after handling.

## SECTION 10 : STABILITY AND REACTIVITY

Stability : Stable for at least 3 years under normal warehouse conditions.

Conditions to Avoid : No data available

Incompatibles : No data available

Decomposition Products : No data available

Hazardous Polymerization : No data available

Hazardous Combustion Products : Carbon dioxide, carbon monoxide, nitrogen oxides.

## SECTION 11 : TOXICOLOGICAL INFORMATION

### Toxicity Data :

Acute Oral LD <sub>50</sub>	: (Rat) male	7,193 mg/kg
	female	6,789 mg/kg
Acute Dermal LD <sub>50</sub>	: (Rat) male	> 4,000 mg/kg
	female	> 4,000 mg/kg
Inhalation LD <sub>50</sub>	: (Rat) male	1.9 mg/l
	female	2.4 mg/l

Carcinogenicity : No data available

Reproductive Effect : No data available

Effects of Overexposure :

Eye Irritation : Moderate irritating

Skin Irritation : Not irritant

Chronic Effects : No data available

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Target Organs : No data available

Medical Conditions Generally Aggravated by Exposure : No data available

### Experimental Data of Fenpyroximate :

In repeated dosing studies for 13 weeks, rats fed fenpyroximate exhibited body weight depression, organ weight effects and slight enlargement of hepatocytes, while dogs fed higher concentration of fenpyroximate exhibited diarrhea, vomiting and body weight depression.

Rats and mice fed fenpyroximate for 2 years showed only body weight depression. Any clinical parameters showing organ toxicity were not observed. Fenpyroximate did not produce tumors in both of sexes of rats and mice. No birth defects were noted in rats and rabbits given fenpyroximate orally during pregnancy, even at amount which produced toxic effects on the mothers. No effects were seen on the ability of male and female rats to produce when fed fenpyroximate for 2 successive generations.

Fenpyroximate did not produce genetic changes in standed tests bacterial or animal cells and animal.

In safety pharmacology studies, fenpyroximate inhibited the electron transport system in mitochondria conforming complex of NADPH-coenzyme Q reductase. Any other specific pharmacological effects were not found.

### Potential Health Effects :

Eye Contact : May cause eye irritation but temporary injury.

Skin Contact : Prolonged contact with this product may cause slight rash in susceptible individual.  
Repeated contact may cause allergic reaction in susceptible individual.

Ingestion : Ingestion of large amount of this product may cause oral discharge fecal staining, soft stool and/or hypoactivity. Characteristic symptoms were not found.

Inhalation : Inhalation of high concentration of this product causes signs of secretory, respiratory irritations and fine tremors. Relative high acute inhalation toxicity.

## SECTION 12 : ECOLOGICAL INFORMATION

Mobility & Bioaccumulation : No data available

Biodegradability : No data available

Aquatic Toxicity : No data available

## SECTION 13 : DISPOSAL INFORMATION

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Dispose of waste in accordance with government or local regulations. Repealing liquid containing fenpyroximate should be avoided to flow into pond, river and lake due to danger of acute toxicity to aquatic organisms.

## SECTION 14 : TRANSPORT INFORMATION

Follow the precaution indicated in the handling and storage section. Follow local regulations.

## SECTION 15 : REGULATORY INFORMATION

Pesticides Act :  
Class : IV

CPL Regulations :  
Class : Toxic  
Risk Phrases : R23 Toxic by inhalation.  
Safety Phrases : S36/39 Wear suitable protective clothing, eye/face protection.  
S 38 In case of insufficient ventilation, wear suitable respiratory equipment.

## SECTION 16 : OTHER INFORMATION

Reference :

- a. MSDS - Ortus 5% SC, date : 5 April 1999  
Agricultural Chemicals (M) Sdn. Bhd.
- b. Farm Chemicals Handbook '99
- c. Guidelines for The Classification of Hazardous Chemicals, DOSH 1997
- d. Guidelines for The Formulation of A Chemical Safety Data Sheet, DOSH 1997
- e. 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.