

MATERIAL SAFETY DATA SHEET

Introductory Details

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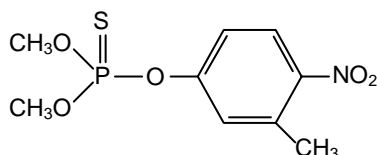
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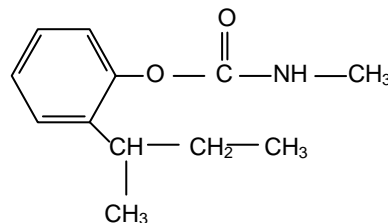
SECTION 1 : CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Details

Product Name	: Fenitrothion 20% + Fenobucarb 20% EC
Trade Name	: SUMIBASSA 40% EC
Chemical Name	: (1) O,O-Dimethyl-O-(3-methyl-4-nitrophenyl) phosphorothioate V (Fenitrothion) (2) 2-Sec-Butylphenyl-N-methylcarbamate (Fenobucarb / BPMC)
Chemical Formula	: (1) $C_6H_3OPS(OCH_3)_2NO_2CH_3$ (2) $C_{12}H_{17}NO_2$
Molar Mass	: (1) 277 (2) 207.3
Chemical Family	: (1) Organophosphorus (2) Carbamate
Manufacturer's Code	: -
Use	: Insecticide
Structural Formula	:



Fenitrothion



Fenobucarb / BPMC

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
O,O-Dimethyl-O-(3-methyl-4-nitrophenyl) phosphorothioate	122-14-5	20 %	Refer to Section 9	Refer to Section 11
2-Sec-Butylphenyl-N-methylcarbamate	3766-81-2	20 %		
Emulsifier	-	< 10 %		
Inert ingredients	-	Balance		

SECTION 3 : PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Yellowish brown liquid
Odour	: Characteristic odour
Solubility	: Miscible with water
Boiling Point (Technical)	: 140 - 145°C at 0.1 mmHg with decomposition (Fenitrothion) 115 - 116°C / 0.02 mmHg (Fenobucarb)
Melting Point (Technical)	: 28 - 32°C (Fenobucarb)
Vapour Pressure (Technical)	: 1.37×10^{-4} mmHg at 20°C (Fenitrothion) 7.4×10^{-5} mmHg at 20°C (Fenobucarb)
Percentage Volatiles	: No data available
Evaporation Rate	: No data available
Vapour Density	: No data available
Specific Gravity	: No data available
Flash Point	: 40°C
Autoignition temperature	: No data available
Flammable Limit	: No data available

SECTION 4 : HAZARD IDENTIFICATION

Flammable
Harmful by inhalation, in contact with skin and if swallowed
Irritating to eyes, respiratory system and skin
May cause sensitisation by skin contact

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SECTION 5 : FIRST AID MEASURES

- Ingestion : Induce vomiting after drinking warm salt water. Get prompt medical attention.
If patient is unconscious, DO NOT induce vomiting.
- Eye contact : Immediately flush with plenty of water for at least 15 minutes. Get medical attention.
- Skin contact : Remove contaminated clothing and wash skin thoroughly with soap and water.
- Inhalation : Remove patient from exposure, keep warm and at rest. Obtain medical attention as a precaution.
- Notes to physician :
- Poisoning symptoms : Perspiration, dizziness, headache, nausea, vomiting, excessive salivation, blurred vision, pupillary constriction, stomachache, diarrhoea, abdominal cramps, muscle twitching, muscular fibrillation, respiratory difficulties, impediment in speech and walking, clouding of consciousness and convulsion.
- Medical treatment : An intravenous injection with Atropine sulphate is repeated at regular interval until the throat and skin of patient are fully atropinised, then administer pralidoxime intramuscularly, if necessary.
(Caution : An injection of PAM delays recovering.)

SECTION 6 : FIRE FIGHTING MEASURES

- Extinguishing Media : CO₂, foam, dry powder.
- Fire fighting instruction : Fire fighters should wear full-faced self contained breathing apparatus and protective clothing.
- Special hazards : No data available

SECTION 7 : ACCIDENTAL RELEASE MEASURE

Leak and/or Spill :

Wear protective clothing. Eliminate ignition source. Ventilate area. Absorb spills with inert material such as clay, sand, earth, sawdust etc. and collect in a drum. Cover up the contaminated area with household detergent and small amount of water. Brush the slurry and spread inert absorbents on the slurry liquid and collect the absorbed material in a drum. Seal drum and dispose of. Do not contaminate water resources.

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SECTION 8 : HANDLING AND STORAGE

- Handling : Read the label before use. Wear pesticide respiratory masks, protective gloves and clothing while handling. After handling, wash thoroughly with soap and water before eating, drinking or smoking and change to clean clothing.
- Storage : Keep in original container, tightly closed, in a cool dry and well-ventilated place, out of reach of children. Keep away from foodstuffs and animal feeds.

SECTION 9 : EXPOSURE CONTROL AND PERSONAL PROTECTION

- Exposure Limit : TLV 5 mg/m³ (Fenobucarb Technical)
- Engineering measures : Local exhaust ventilation
- Personal protection : Wear pesticide respiratory masks, protective gloves and clothing.

SECTION 10 : STABILITY AND REACTIVITY

- Conditions to avoid : Direct sunlight, heat and extreme temperature
- Incompatible : Decomposed in alkali and strong acid.
- Decomposition Products : No data available
- Hazardous polymerization : No data available
- Stability : Stable under normal conditions.

SECTION 11 : TOXICOLOGICAL INFORMATION

Toxicity Data :

Fenitrothion Technical

- Acute Oral LD₅₀ : (Rat) male 1,700 mg/kg
(Rat) female 1,720 mg/kg
- Acute Dermal LD₅₀ : (Rabbit) male 810 mg/kg
(Rabbit) female 840 mg/kg
- Inhalation Toxicity LD₅₀ : (Rat) male, female > 2,210 mg/m³ (4h exposure)

Fenobucarb Technical

- Acute Oral LD₅₀ : (Rat) male 623 mg/kg
(Rat) female 657 mg/kg
(Mouse) male 182 mg/kg
(Mouse) female 173 mg/kg
- Acute Dermal LD₅₀ : (Mouse) 4200 mg/kg
- Acute Inhalation LC₅₀ : (Rat) > 0.366 mg/l air

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Carcinogenicity : No data available

Reproductive effect : No data available

Effects of overexposure :

Fenitrothion Technical

Eye Irritation : (Rabbit) Not irritant

Skin Irritation : (Rabbit) Not irritant

Sensitization : (Guinea pig) Not sensitizer

Fenobucarb Technical

Skin Irritant : Repeated exposure may cause dermal sensitization.

Eye Irritant : Irritating to eyes.

Chronic effects :

Fenitrothion Technical

Muscular fibrillation, miosis, decrease of spontaneous activity, limb paralysis, ataxia, salivation, exophthalmos, lacrimation, urinary incontinence and irregular respiration. (Based on the results from acute oral toxicity study in rats 600 mg/kg dose)

Target organs : No data available

Medical Conditions Generally Aggravated by Exposure :

Fenobucarb Technical

Headache, dizziness, nausea, vomiting, excessive salivation, pupil constriction, stomachache, muscle twitching, impediment in speech and walking, clouding of consciousness and convulsion.

SECTION 12 : ECOLOGICAL INFORMATION

Mobility & Bioaccumulation :

Fenobucarb Technical

Fish studies indicate residues remain in 0 - 4 in. layer with half-life of 1-2 months. After 183 days, residues were at negligible or undetectable levels. Confined and field rotational crop data show residues likely to occur in root crops at intervals of < 9 months.

Biodegradability : No data available

Aquatic Toxicity :

Fenitrothion Technical

Fish Toxicity TLm (48h) : (Carp) 4.1 ppm

Fenobucarb Technical

Fish toxicity TLm (48 hr) : (Carp)12.6 ppm

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SECTION 13 : DISPOSAL INFORMATION

Dispose of according to local regulation.

SECTION 14 : TRANSPORT INFORMATION

Follow the precaution indicated in the storage and handling section. Follow all regulations in your country.

SECTION 15 : REGULATORY INFORMATION

Pesticides Act : Class II

CPL Regulation : Class - Flammable, Harmful

Risk Phrases : R10 Flammable
R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed
R 36/37/38 Irritating to eyes, respiratory system and skin
R43 May cause sensitisation by skin contact

Safety Phrases : S2 Keep out of reach of children
S13 Keep away from food, drinks and animal feeding stuffs
S16 Keep away from sources of ignition - No Smoking
S36/37/39 Wear suitable protective clothing, gloves and eyes/face protection

SECTION 16 : OTHER INFORMATION

Reference : (a) Material Safety Data Sheet - Sumibassa 40% EC, Date : 13-10-1998
(b) Material Safety Data Sheet - Sumithion Technical, Date : 16 May 2008
(c) Material Safety Data Sheet - Bassa Technical, Date : 2 January 2008
(d) Guidelines for The Classification of Hazardous Chemicals, DOSH 1997
(e) Guidelines for The Formulation of A Chemical Safety Data Sheet, DOSH 1997
(f) 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.