

MATERIAL SAFETY DATA SHEET

Introductory Details

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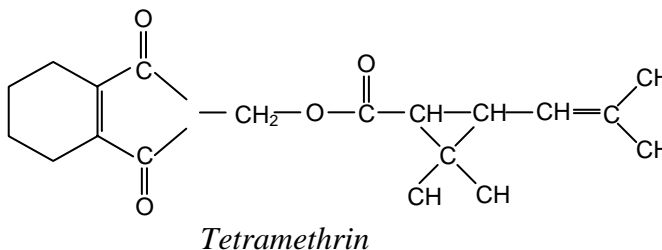
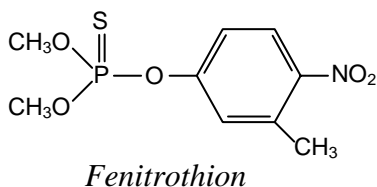
Date of preparation : 24 May 2004

Date revised : 12 June 2008

SECTION 1 : CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Details

Product Name	: Fenitrothion 40% + Tetramethrin 1% ULV Liquid
Trade Name	: SUMITHION L-40
Chemical Name	: (1) O,O-Dimethyl-O-(3-methyl-4-nitrophenyl) phosphorothioate (2) 3,4,5,6-tetrahydrophthalimidomethyl (1RS)-cis,trans-chrysanthemate
Chemical Formula	: (1) $C_6H_3OPS(OCH_3)_2NO_2CH_3$ (2) $C_{19}H_{25}NO_4$
Molar Mass	: (1) 277 (2) 331
Chemical Family	: (1) Organophosphorus (2) Synthetic-pyrethrum derivative
Manufacturer's Code	: -
Use	: Insecticide
Structural Formula	:



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	40%	Refer to Section 9	Refer to Section 11
3,4,5,6-tetrahydrophthalimido-methyl (1RS)-cis,trans-chrysanthemate	7696-12-0	1%		
Solvent	-	Balance		

SECTION 3 : PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Light brownish liquid
Odour	: Characteristic odour
Solubility	: Not miscible with water
Boiling Point (technical)	: 140 - 145°C at 0.1 mmHg with decomposition (Fenitrothion) 185°C at 0.013kPa (Tetramethrin)
Melting Point (technical)	: 60 - 80°C (Tetramethrin)
Vapour Pressure (technical)	: 1.37 x 10 ⁻⁴ mmHg at 20°C (Fenitrothion) 0.0021 Pa at 25°C (Tetramethrin)
Percentage Volatiles	: No data available
Evaporation Rate	: No data available
Vapour Density	: No data available
Specific Gravity	: 1.03 g/ml
Flash Point	: 96°C
Autoignition temperature	: No data available
Flammable Limit (%)	: No data available

SECTION 4 : HAZARD IDENTIFICATION

Harmful by inhalation and in contact with skin.
Irritating to eyes, respiratory system and skin.

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SECTION 5 : FIRST AID MEASURES

- Ingestion : Induce vomiting after drinking 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 victim to fresh air. Get medical attention.
- Notes to physician :
- Poisoning symptoms : Perspiration, dizziness, headache, nausea, vomiting, blurred vision, salivation, diarrhoea, abdominal cramps, respiratory difficulties, muscular fibrillation. May cause hypersensitivity, tremor, clonic convulsion etc. (Based on the results from acute toxicity studies in rats for Tetramethrin technical)
- Medical treatment : Inject atropine sulphate (2-4 mg) subcutaneously or intravenously. Repeat every 30 minutes until patient is fully atropinised then administer pralidoxime (1g) intramuscularly, if necessary.

SECTION 6 : FIRE FIGHTING MEASURES

- Extinguishing Media : CO₂, dry chemical 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 : With conventional household aerosol spraying or mosquito coil fumigation, the aerial levels of tetramethrin and its 1R isomer are unlikely to exceed 0.5 mg/m³.

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 : Alkaline material

Decomposition Products : No data available

Hazardous polymerization : No data available

Stability : Stable under normal conditions.

SECTION 11 : TOXICOLOGICAL INFORMATION

Toxicity data :

Acute Oral LD ₅₀	: (Rat) male	1540 mg/kg
	female	1570 mg/kg
Acute Dermal LD ₅₀	: (Rat)	> 5000 mg/kg
Acute Inhalation LC ₅₀ (4h)	: (Rat)	> 1600 mg/m ³

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Fenitrothion Technical

Acute Oral Toxicity LD ₅₀	: (Rat)male	1,700 mg/kg
	(Rat) female	1,720 mg/kg
Acute Dermal Toxicity LD ₅₀	: (Rabbit) male	810 mg/kg
	(Rabbit) female	840 mg/kg
Acute Inhalation LC ₅₀ (4h)	: (Rat)	> 2,210 mg/m ³

Tetramethrin Technical

Acute Oral LD ₅₀	: (Rat)	> 5,000mg/kg
Acute Dermal LD ₅₀	: (Rat)	> 2,000 mg/kg
Acute Inhalation LC ₅₀	: (Rat)	> 2,730 mg/m ³ (4hr, using an artificially produced mist)

Solvent

Irritating to eyes, skin and respiratory tract.

Carcinogenicity :

Tetramethrin Technical

2 year feeding study, rat (Sprague-Dawley and Long-Evans) : Benign testicular interstitial cell tumors in rats at dose level 3000ppm.

Genotoxicity :

Tetramethrin Technical

Ames test, unscheduled DNA synthesis in mammalian cells in vitro, in vivo bone marrow cytogenicity : Negative

In vitro chromosome aberration in CHO cells : Positive

Tetragenicity : Negative (Tetramethrin Technical)

Reproductive effect : No data available

Effects of overexposure

Fenitrothion Technical

Eye Irritation	: (Rabbit)	Not irritant
Skin Irritation	: (Rabbit)	Not irritant
Sensitisation	: (Guinea pig)	Not sensitizer

Tetramethrin Technical

Skin Irritation	: Non irritating
Eye Irritation	: Minimal eye irritation
Sensitization	: Not sensitizing

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)

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Target organs : No data available
Medical conditions generally aggravated by exposure : No data available

SECTION 12 : ECOLOGICAL INFORMATION (TECHNICAL)

Mobility & Bioaccumulation : No data available
Biodegradability : No data available
Aquatic Toxicity :

Fenitrothion Technical

TLm (48h) : (Carp) 4.1 ppm

Tetramethrin Technical

Acute Toxicity (96hr) : LC₅₀ (fish - *Oncorhynchus mykiss*) 0.0037 mg/l
Acute Toxicity (48hr) : EC₅₀ (*Daphnia pulex*) 0.0035 mg/l
Other information : Log P_{o/w}: 4.58

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 Regulations : Class - Harmful

Risk Phrases : R20/21 Harmful by inhalation and in contact with skin.
R36/37/38 Irritating to eyes, respiratory system and skin.

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Safety Phrases : S2 Keep out of reach of children
S13 Keep away from food, drink and animal feeding stuff
S36/37/39 Wear suitable protective clothing, gloves, eye/face protection.

SECTION 16 : OTHER INFORMATION

- Reference : (a) Material Safety Data Sheet - Sumithion L-40S
Date : 2-1-2002
(b) Material Safety Data Sheet - Sumithion Technical
Date : 16 May 2008
(c) Material Safety Data Sheet - Neo-Pynamin Technical
Date : 5 November 2007
(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.