

MATERIAL SAFETY DATA SHEET

Introductory Details

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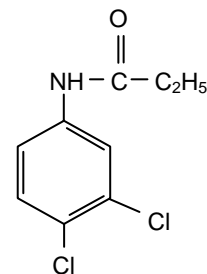
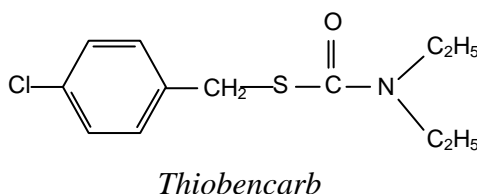
Date of preparation : 24 June 2005

Date revised : 12 June 2008

SECTION 1 : CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Details

Product Name : Propanil 20% + Thiobencarb 40%
Trade Name : SEEGENIL
Chemical Name : (1) N-(3,4-Dichlorophenyl) propanamide (Propanil)
(2) S-4-chlorobenzyl diethylthiocarbamate (Thiobencarb)
Chemical Formula : (1) C₉H₉OC₂N
(2) C₁₂H₁₆ClNOS
Molar Mass : (1) 218.08
(2) 257.5
Chemical Family : (1) Anilide compound
(2) Thiocarbamate
Manufacturer's Code : -
Use : Herbicide
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
N-(3,4-Dichlorophenyl) propanamide	709-98-8	20%	Refer to Section 9	Refer to Section 11
S-4-chlorobenzyl diethylthiocarbamate	28249-77-6	40%		
Surfactant	-	< 5%		
Defoamer	-	< 1%		

SECTION 3 : PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: White viscous liquid
Odour	: Characteristic odour
Solubility	: Miscible with water
Boiling Point	: > 400°C (Propanil Technical) 126 - 129°C at 0.008 mmHg (Pure Thiobencarb)
Melting Point	: 85 - 89°C (Propanil Technical) 3.3°C (Pure Thiobencarb)
Vapour Pressure	: 9×10^{-5} mmHg at 60°C (Propanil Technical) Approx. 2.2×10^{-5} mmHg at 23°C (Pure Thiobencarb)
Percentage Volatiles	: No data available
Evaporation Rate	: No data available
Vapour Density	: No data available
Specific Gravity	: 1.1
Flash Point	: Not applicable
Autoignition temperature	: No data available
Flammable Limit	: No data available

SECTION 4 : HAZARD IDENTIFICATION

Irritating to eyes, respiratory system and skin.
May cause long term adverse effects in the aquatic environment.

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SECTION 5 : FIRST AID MEASURES

Ingestion	: Induce vomiting after drinking 1 or 2 glasses of water. As soon as vomit is clear, give as much milk as can be tolerated. Sodium or magnesium may be given as a saline laxative (15 - 30g in water). If patient is unconscious or having convulsion, never give fluids nor induce vomiting. Get prompt medical attention. General medical treatment for chemical toxication should be followed.
Eye contact	: Immediately flush with plenty of water. Get medical attention.
Skin contact	: Remove contaminated clothing and wash skin thoroughly with soap and water. Get medical attention if irritation persist.
Inhalation	: Remove patient to fresh air, keep warm and at rest. Get medical attention as a precaution.
Notes to physician	:
Poisoning symptoms	: Perspiration, dizziness, headache, nausea, vomiting, salivation, eye irritation, blurred vision, respiratory difficulties, convulsions, diarrhoea, excessive urination, lassitude, weakness, local irritation, CNS depression, drowsiness, confusion.
Medical treatment	: Inject atropine sulphate (2 - 4 mg) subcutaneously or intravenously, repeat every 30 minutes until patient is fully atropinised.

SECTION 6 : FIRE FIGHTING MEASURES

Extinguishing Media	: CO ₂ , foam, dry powder.
Fire fighting instruction	: Fire fighters should wear full-faced self-contained breathing apparatus and protective clothing.
Special hazards	: Noxious fumes may form. Hydrogen chloride, organic acids and chloroanilines may evolve at high temperatures.

SECTION 7 : ACCIDENTAL RELEASE MEASURE

Leak and/or Spill :

Wear protective clothing. 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 to avoid breathing vapour; goggles, protective gloves and clothing to avoid contact with eyes and skin. Do not contaminate water supplier.

Storage : Keep in original container, tightly closed, in a cool, dry and well-ventilated place, out of reach of children and farm animals. Keep away from foodstuffs and animal feeds. Keep away from heat and open flame.

SECTION 9 : EXPOSURE CONTROL AND PERSONAL PROTECTION

Exposure limit :

Propanil Technical : No occupational limits established by OSHA, ACGIH or NIOSH.

TWA/TLV : 5 mg/m³ (Recommended by Cedar Chemical Corporation)

STEL : 10 mg/m³ (Recommended by Rohm Haas)

Subject to SARA Section 313 Annual Toxic Chemical Release Reporting.

Engineering measures : Local exhaust ventilation

Personal protection : Wear pesticide respiratory masks, goggles, protective gloves and clothing.

SECTION 10 : STABILITY AND REACTIVITY

Conditions to avoid : High humidity, direct sunlight, heat and extreme temperature

Incompatible : Some pesticides, carbamates, some liquid fertilizers, strong oxidizing agents, strong acid and alkali.

Decomposition Products : Hydrogen chloride, organic acids and chloroanilines may evolve at high temperatures. May produce CO and CO₂.

Hazardous polymerization : No data available.

Stability : Stable under normal conditions.

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SECTION 11 : TOXICOLOGICAL INFORMATION (TECHNICAL)

Toxicity Data :

Propanil Technical

Acute Oral LD ₅₀ :	(Rat) male	840 mg/kg
	(Rat) female	930 mg/kg
	(Mouse) male	2,680 mg/kg
	(Mouse) female	2,300 mg/kg
Acute Dermal LD ₅₀ :	(Rabbit)	> 7,080 mg/kg
	(Rat)	> 5,000 mg/kg
Acute Inhalation LC ₅₀ :	(Rat)	> 1,239 mg/kg

Thiobencarb Technical

Acute Oral LD ₅₀ :	(Rat) male	1,033mg/kg
	(Rat) female	1,130mg/kg
	(Mouse) male	1,102mg/kg
	(Mouse) female	1,402mg/kg
Acute Dermal LD ₅₀ :	(Rat/mice)	> 2,000mg/kg
Acute Inhalation LC ₅₀ :	(Rat)	>42.8mg/kg

Subchronic Toxicity :

Thiobencarb Technical

NOEL (Rat) male	2.5mg/kg/day
NOEL (Rat) female	2.8mg/kg/day

Mutagenic Effect :

Propanil Technical

Negative

Thiobencarb Technical

Negative (Ames test / Chromosome aberration test)

Carcinogenicity : No data available

Reproductive Effect : No data available

Effects of overexposure :

Propanil Technical

Local irritation and CNS depression. Gagging, coughing, nausea, and vomiting followed by headache, dizziness, drowsiness, and confusion.

Irritant Properties

Eye Irritation	: May cause irritation
Skin Irritation	: May cause moderate irritation
Inhalation	: May be irritating
Sensitising Effect	: Not sensitizing

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Thiobencarb Technical

Eye Irritation (Rabbit) : No irritation (10 mg/eye)

Skin Irritation (Rabbit) : No irritation (1,000 mg/9cm²)

Sensitizing Effect : No data available. However, Kumiai formulated products containing thiobencarb have no sensitizing potential.

Kumiai Chemical has never faced poisoning problem attributed to thiobencarb on laboratory researchers, factory workers and users, however, over-exposure experiments on animals showed that administration of an extra-ordinary large quantity of thiobencarb may cause hypoactivity, abnormal walking and prostration.

Chronic effects : No data available.

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 :

Propanil Technical

Static acute LC₅₀ : (Carp) 15 ppm
(Daphnia) 4.8 mg/l

Thiobencarb Technical

LC₅₀ (48 hours) : (Carp) 3.4ppm
(*Daphnia magna*) 0.1012ppm

Avian Toxicity :

Thiobencarb Technical

Oral LD₅₀ : (Bobwhite quail) 7,800mg/kg
(Mallard duck) > 10,000mg/kg

Toxicity of Beneficial Insect :

Thiobencarb Technical

Oral LC₅₀ : (Honeybee) > 100µg/bee

SECTION 13 : DISPOSAL INFORMATION

Dispose of according to local regulation.

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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 :
CPL Regulation : Class - Irritant

Risk Phrases : R36/37/38 Irritating to eyes, respiratory system and skin
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
S36/37/39 Wear suitable protective clothing, gloves and eyes/face protection
S56 Do not discharge into drain or the environment, dispose of to an authorised waste collection point

SECTION 16 : OTHER INFORMATION

- Reference : (a) Material Safety Data Sheet - Satunil
Date : 25-6-1996
- (b) Material Safety Data Sheet - DCPA Technical (Propanil)
Date : 16 May 2008
- (c) Material Safety Data Sheet - Saturn Technical (Thiobencarb)
Date : 26 February 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.