



Safety Data Sheet

SDS No.:
SDS-P/EC-S/02

Satunil

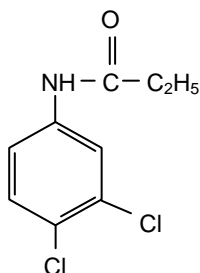
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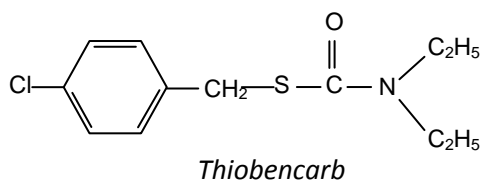
Section 1: Identification of the Hazardous Chemical and of the Supplier

1.1 Product Identifier

Product Name: Propanil 20% + Thiobencarb 40%
Trade Name: Satunil
Active Ingredient: Propanil + Thiobencarb
CAS No.(AI): 709-98-8 28249-77-6
Structural Formula:



Propanil



Thiobencarb


Recommended Usage: Herbicide

1.2 Supplier's Information

Address: Agricultural Chemicals (M) Sdn. Bhd.
962, Lorong Perusahaan 8
Taman Perindustrian Perai
13600 Perai, Pulau Pinang
Malaysia
Tel.: +6-04-3907988
Fax: +6-04-3905703
Web: www.agrichem.com.my
Emergency Phone: +6-04-3907988

Section 2: Hazard Identification

Classification: Flammable Liquid, Category 3
Acute Toxicity, Oral Category 4
Skin Irritation, Category 2
Eye Irritation, Category 2
Specific Target Organ Toxicity (Single Exposure) – Category 3
Respiratory tract irritation
Aspiration Hazard – Category 1
Hazardous to the Aquatic Environment – Acute Hazard, Category 1
Hazardous to the Aquatic Environment – Chronic Hazard, Category 1

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Pictogram:



Signal Word: Danger

Hazard Statement:

H226: Flammable liquid and vapour
H302: Harmful if swallowed
H315: Causes skin irritation
H319: Causes serious eye irritation
H335: May cause respiratory irritation
H304: May be fatal if swallowed and enters airways
H400: Very toxic to aquatic life
H410: Very toxic to aquatic life with long lasting effects

Precautionary Statement:

P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
P243: Take precautionary measures against static discharge
P264: Wash exposed body part thoroughly after handling
P261: Avoid breathing vapours
P280: Wear rubber gloves, protective clothing, safety goggles and face protection
P273: Avoid release to the environment

Section 3: Composition and Information of the Ingredients of the Hazardous Chemical

Component	CAS No.	Weight, %	Hazard Code
Propanil	709-98-8	20%	H302
Thiobencarb	28249-77-6	40%	H302, H400, H410
Surfactant 1	-	10% to < 30%	H319, H351, H335
Surfactant 2	-	5% to < 10%	H315, H319, H318
Solvent	-	10% to < 30%	H226, H312, H332, H315, H319, H335, H304

Section 4: First-aid Measures

Call a POISON CENTER or doctor/physician if you feel unwell.

Inhalation: Remove victim to fresh air and keep at rest in a



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Skin Contact:	position comfortable for breathing. Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse
Eye Contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion:	Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Do NOT induce vomiting.
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.
Notes to Physician:	Inject atropine sulphate (2 - 4 mg) subcutaneously or intravenously, repeat every 30 minutes until patient is fully atropinised.

Section 5: Fire-fighting Measures

Suitable Extinguishing Media:	Carbon dioxide (CO ₂), chemical foam, dry chemical, aqueous film forming foam
Specific Hazard During Fire:	Noxious fumes may form. Hydrogen chloride, organic acids and chloroanilines may evolve at high temperature
Special Protective Equipment:	Fire fighters should wear full-faced self-contained breathing apparatus and protective clothing

Section 6: Accidental Release Measures

Personal Precautions:	Do not handle until all safety precautions have been read and understood. Wear appropriate protective equipment as required
Environmental Precautions:	Avoid release to the environment
Method for Cleaning Up:	Wear protective clothing as indicated in Section 8. Evacuate non essential personnel. Collect the spill into waste container for disposal. Wash the contaminated area with a little water and detergent. Adsorb with inert material such as clay or earth. Collect into the same container for disposal. Prevent the spillage from entering local drainage system.

Section 7: Handling and Storage

Precautions for Safe Handling:	Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Avoid release to the environment.
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Conditions for Safe Storage: Keep in original container, tightly closed, out of reach of children. Keep away from food, drinks and animal feeding stuffs. Read the label before use. Do not contaminate water. Open dumping is prohibited.

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

Section 8: Exposure Control and Personal Protection

Exposure Limit:

Source	Component	CAS No.	Limit	
ACGIH	Solvent	-	STEL	150ppm
			TWA	100ppm
TWA			434mg/m ³ , 100ppm	
STEL			651mg/m ³ , 150ppm	
SG OEL				

Engineering Control: Local exhaust or general dilution ventilation

Individual Protection Measure: Avoid inhalation. Wash thoroughly after handling and before eating or drinking. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin and eyes.

Personal Protective Equipment:

Eye Protection: Protective goggles

Skin Protection: PVC gloves and clothing

Respiratory Protection: Pesticide respiratory masks

Section 9: Physical and Chemical Properties

Appearance: Brownish black liquid

Odour: Characteristic odour

Odour Threshold: No data available

pH: No data available

Melting/Freezing Point: 85°C to 89°C (Propanil)

3.3°C (Thiobencarb)

Initial Boiling Point: > 400°C (Propanil)

126°C to 129°C at 0.008 mmHg (Thiobencarb)

Boiling Range: No data available

Flash Point: 34°C

Evaporation Rate: No data available

Flammability: 205°C

Upper Flammability Limit: No data available

Lower Flammability Limit: No data available

Vapour Pressure: 9 x 10⁻⁵ mmHg at 60°C (Propanil)

2.82 x 10⁻⁵ mmHg at 23°C (Thiobencarb)

Vapour Density: No data available

Relative Density: 1.1 (S.G)



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Solubility in Water: Miscible with water
Partition Coefficient $P_{o/w}$: No data available
Auto-ignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available

Section 10: Stability and Reactivity

Reactivity: No data available
Chemical Stability: Stable under normal conditions
Hazardous Reaction: None
Condition to Avoid: High humidity, direct sunlight, heat and extreme temperature
Incompatible Material: Some pesticides, carbamates, some liquid fertilizers, strong oxidizing agents, strong acid and alkali
Hazardous Decomposition Product: Hydrogen chloride, organic acids and chloroanilines may evolve at high temperatures. May produce CO and CO₂

Section 11: Toxicological Information

11.1 Acute Toxicity

Component: Propanil			
Ingestion, Oral LD ₅₀ :			
	Rat	367mg/kg	
Skin Contact, Dermal LD ₅₀ :			
	Rabbit	4830mg/kg	
Component: Thiobencarb			
Ingestion, Oral LD ₅₀ :			
	Rat (male)	920mg/kg	
	Rat (female)	960mg/kg	
	Mouse	560mg/kg	
Skin Contact, Dermal LD ₅₀ :			
	Rat	>5000mg/kg	
Inhalation, LC ₅₀ :			
	Mist	>2.43mg/L	
Component: Solvent			
Ingestion, Oral LD ₅₀ :		>2000 to ≤ 5000mg/kg	
Skin Contact, Dermal LD ₅₀ :		>1000 to ≤ 2000mg/kg	
Inhalation, LC ₅₀ :		>10 to ≤ 20mg/L	

11.2 Chronic Effect from Short and Long Term Exposure

Skin Contact: Causes skin irritation
Eye Contact: Causes serious eye irritation



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Inhalation:	May cause respiratory irritation
Ingestion:	Harmful if swallowed
Carcinogenicity:	No data available
Mutagenicity:	No data available
Teratogenicity:	No data available

11.3 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.

Section 12: Ecological Information

Ecotoxicity:

Component: Propanil			
Acute Aquatic Toxicity			
	Daphnia magna, LC ₅₀ , 48 hr	1.2mg/L	
Chronic Aquatic Toxicity			
	Chlamdomonas moewusii, NOEC, 7day	4.36mg/L	
	Chlamdomonas moewusii, LOEC, 7day	6.65mg/L	
	Biodegradability: readily biodegradable		
	Bioaccumulation: Osteichthyes, 10day	200µg/L	
	BCF factor: 10-15		
Component: Thiobencarb			
Acute Aquatic Toxicity			
	Carp, LC ₅₀ , 96 hr	0.98mg/L	
	Rainbow Trout, LC ₅₀ , 96 hr	1.1mg/L	
	Daphnia magna, LC ₅₀ , 48 hr	1.1mg/L	
	Algae, ErC ₅₀ , 72 hr	0.026mg/L	
	Honeybee, LD ₅₀ , 48 hr	>100µg/bee	
	Earthworm, LC ₅₀ , 14 day	874mg/kg	
	Bobwhite quail, LD ₅₀ ,	>5000mg/kg	
Chronic Aquatic Toxicity			
	Carp, LC ₅₀ , 96 hr	0.98mg/L	
	Rainbow Trout, LC ₅₀ , 96 hr	1.1mg/L	
	Daphnia magna, LC ₅₀ , 48 hr	1.1mg/L	
	Algae, ErC ₅₀ , 72 hr	0.026mg/L	
	Honeybee, LD ₅₀ , 48 hr	>100µg/bee	
	Earthworm, LC ₅₀ , 14 day	874mg/kg	
	Bobwhite quail, LD ₅₀ ,	>5000mg/kg	
	Log P _{ow} = 4.23, Bioconcentration Factor(BCF) = 302		
	Biodegradability = Not readily biodegradable		



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Component: Solvent			
Acute Aquatic Toxicity LL/EL/ IL ₅₀ :			
	Fish	> 1 to ≤10mg/L	
	Aquatic crustacea	> 1 to ≤10mg/L	
	Algae/aquatic plants	> 1 to ≤10mg/L	
	Microorganisms	> 100mg/L	
Chronic Toxicity, NOEC/NOEL			
	Fish, 56 days	> 1mg/L	
	Aquatic crustacea, 21 days	> 1mg/L	


Persistence and Degradability: No data available
Bioaccumulative Potential: No data available
Mobility in Soil: No data available
Other Adverse Effect: No data available

Section 13: Disposal Information

Dispose of contents/container to Kualiti Alam / authorized body by DOE (pesticides)

Section 14: Transportation Information

Land (ADR/RID)	
Proper Shipping Name	Pesticide, Liquid, Toxic, Flammable, N.O.S. flashpoint not less than 23°C
Hazard Class	6.1
Hazchem Code	-
UN number	2903
Packing Group	III
Label/Mark	6(3)
Sea (IMDG)	
Proper Shipping Name	Pesticide, Liquid, Toxic, Flammable, N.O.S. flashpoint not less than 23°C
Hazard Class	6.1
UN Number	2903
Packing Group	III
Marine Pollutant	-
Label	6(3)
Transport Document Name	-
Air (IATA)	
Proper Shipping Name	Pesticide, Liquid, Toxic, Flammable, N.O.S. flashpoint not less than 23°C

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Hazard Class	6.1
UN number	2903
Packing Group	III
Label/Mark	6(3)
Transport Document Name	-

Section 15: Regulatory Information

Classification: Flammable Liquid, Category 3
 Acute Toxicity, Oral Category 4
 Skin Irritation, Category 2
 Eye Irritation, Category 2
 Specific Target Organ Toxicity (Single Exposure) – Category 3
 Respiratory tract irritation
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 Hazardous to the Aquatic Environment - Chronic Hazard, Category 1

Signal Word: Danger
 Pictogram:



Pesticides Act: Class III
 Classification: Harmful

Section 16: Other Information

Date of Preparation: 17 December 2015
 Date of Revision: -
 Reference Document: ICOP on Chemicals Classification and Hazard Communication 2014
 GHS Purple Book
 MSDS

Disclaimer: 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.