



# Safety Data Sheet

SDS No.:  
SDS-P/EC-S/03

Saturn 50EC

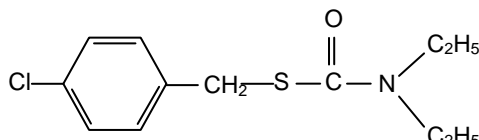
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## Section 1: Identification of the Hazardous Chemical and of the Supplier

### 1.1 Product Identifier

Product Name: Thiobencarb 50%EC  
Trade Name: Saturn 50EC  
Active Ingredient: Thiobencarb  
CAS No.(AI): 28249-77-6  
Structural Formula:



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](http://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  
Carcinogenicity, 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

Pictogram:



Signal Word: Danger



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## 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
H351:	Suspected of causing cancer
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
Thiobencarb	28249-77-6	50%	H302, H400, H410
Surfactant 1	-	10% to < 30%	H319, H351, H335
Solvent	-	30% to 60%	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 position comfortable for breathing.
Skin Contact:	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:	No data available



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## Notes to Physician:

The active ingredient in this product is a cholinesteras inhibitor. 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<sub>2</sub>), chemical foam, dry chemical, aqueous film forming foam  
Specific Hazard During Fire: No data available  
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.  
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: Strong acid and alkaline.

## Section 8: Exposure Control and Personal Protection

### Exposure Limit:

Source	Component	CAS No.	Limit	
JSOH(2013)	Surfactant	-	OEL (as 1,2,4-Trimethylbenzene)	25ppm, 120mg/m <sup>3</sup>
ACGIH (2005) TLV-TWA			TWA (as Trimethylbenzene)	25ppm



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

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: Yellowish brown liquid  
Odour: Pungent odour  
Odour Threshold: No data available  
pH: No data available  
Melting/Freezing Point: 3.3°C (Thiobencarb)  
Initial Boiling Point: 126°C to 129°C at 0.008 mmHg (Thiobencarb)  
Boiling Range: No data available  
Flash Point: 35°C  
Evaporation Rate: No data available  
Flammability: 205°C  
Upper Flammability Limit: No data available  
Lower Flammability Limit: No data available  
Vapour Pressure:  $2.82 \times 10^{-5}$  mmHg at 23°C (Thiobencarb)  
Vapour Density: No data available  
Relative Density: No data available  
Solubility in Water: Miscible with water  
Partition Coefficient P<sub>o/w</sub>: 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 for 2 years if stored at cool, dark and dry place  
Hazardous Reaction: None  
Condition to Avoid: Direct sunlight, heat and extreme temperature  
Incompatible Material: Strong acid and alkaline  
Hazardous Decomposition Product: May produce CO and CO<sub>2</sub>



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## Section 11: Toxicological Information

### 11.1 Acute Toxicity

Component: Thiobencarb			
Ingestion, Oral LD <sub>50</sub> :			
	Rat (male)	920mg/kg	
	Rat (female)	960mg/kg	
	Mouse	560mg/kg	
Skin Contact, Dermal LD <sub>50</sub> :			
	Rat	>5000mg/kg	
Inhalation, LC <sub>50</sub> :			
	Mist	>2.43mg/L	
Component: Solvent			
Ingestion, Oral LD <sub>50</sub> :		>2000 to ≤ 5000mg/kg	
Skin Contact, Dermal LD <sub>50</sub> :		>1000 to ≤ 2000mg/kg	
Inhalation, LC <sub>50</sub> :		>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
Inhalation:	May cause respiratory irritation
Ingestion:	Harmful if swallowed
Carcinogenicity:	Suspected of causing cancer
Mutagenicity:	No data available
Teratogenicity:	No data available

### 11.3 Symptoms

No data available

## Section 12: Ecological Information

### Ecotoxicity:

Component: Thiobencarb			
Acute Aquatic Toxicity			
	Carp, LC <sub>50</sub> , 96 hr	0.98mg/L	
	Rainbow Trout, LC <sub>50</sub> , 96 hr	1.1mg/L	
	Daphnia magna, LC <sub>50</sub> , 48 hr	1.1mg/L	
	Algae, ErC <sub>50</sub> , 72 hr	0.026mg/L	
	Honeybee, LD <sub>50</sub> , 48 hr	>100µg/bee	
	Earthworm, LC <sub>50</sub> , 14 day	874mg/kg	
	Bobwhite quail, LD <sub>50</sub> ,	>5000mg/kg	
Chronic Aquatic Toxicity			
	Carp, LC <sub>50</sub> , 96 hr	0.98mg/L	
	Rainbow Trout, LC <sub>50</sub> , 96 hr	1.1mg/L	
	Daphnia magna, LC <sub>50</sub> , 48 hr	1.1mg/L	



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	Algae, ErC <sub>50</sub> , 72 hr	0.026mg/L	
	Honeybee, LD <sub>50</sub> , 48 hr	>100µg/bee	
	Earthworm, LC <sub>50</sub> , 14 day	874mg/kg	
	Bobwhite quail, LD <sub>50</sub> ,	>5000mg/kg	
	Log P <sub>ow</sub> = 4.23, Bioconcentration Factor(BCF) = 302		
	Biodegradability = Not readily biodegradable		
Component: Solvent			
Acute Aquatic Toxicity LL/EL/ IL <sub>50</sub> :			
	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

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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
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  
 Carcinogenicity, 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 3

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.