



# Safety Data Sheet

SDS No.:  
SDS-P/EC-S/01

Sarzorin

Revision: 0, 1<sup>st</sup> Issue

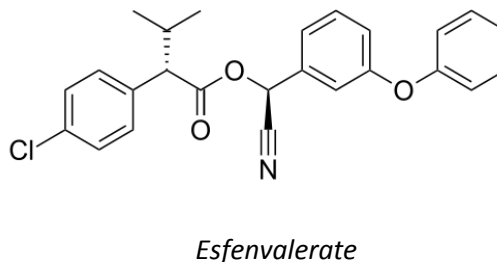
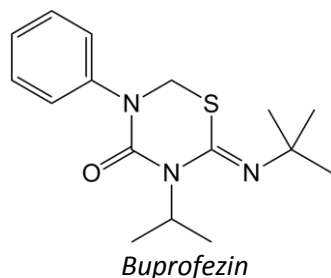
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## Section 1: Identification of the Hazardous Chemical and of the Supplier

### 1.1 Product Identifier

Product Name: Buprofezin 5% + Esfenvalerate 5% EC  
Trade Name: Sarzorin  
Active Ingredient: *Buprofezin*  
(E<sub>Z</sub>) -2-tert-butylimino-3-isopropyl-5-phenyl-1,3,5-thiadiazinan-4-one  
*Esfenvalerate*  
(S)-cyano (3-phenoxyphenyl) methyl-(S)-4-chloro-alpha-(1-methylethyl) benzene acetate  
CAS No.(AI): Buprofezin: 69327-76-0  
Esfenvalerate: 66230-04-4

### Structural Formula:



Recommended Usage: Insecticide

### 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, inhalation category 3  
Acute toxicity, oral category 4  
Acute toxicity, dermal category 4  
Skin irritation category 2  
Eye irritation category 2  
Skin sensitization category 1

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Aspiration hazard category 1  
 Specific target organ toxicity – single exposure category 3  
 Acute aquatic toxicity category 1  
 Chronic aquatic toxicity category 1

Pictogram:



Signal Word: Danger

Hazard Statement:

H226	Flammable liquid and vapour
H331	Toxic if inhaled
H302+H312	Harmful if swallowed or in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H317	May cause allergic skin reaction
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.
P233	Keep container tightly closed.
P271	Use only outdoors or in a well ventilated area.
P264	Wash exposed body parts thoroughly after handling.
P280	Wear nitrile 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
Buprofezin	69327-76-0	5.0%	H412
Esfenvalerate	66230-04-4	5.0%	H301, H330, H317, H400, H410
Surfactant 1	-	< 10%	H226
Surfactant 2	-	< 5%	H315, H318, H319
Xylene	1330-20-7	Balance	H226, H312, H332, H315, H319, H304



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## 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. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing 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:	DO NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.
Symptoms:	Muscular fibrillation, tremor, ataxia, limb paralysis, irregular respiration, salivation, urinary incontinence, hyperexcitability, choreoathetotic syndrome and decrease of spontaneous activity.
Notes to Physician:	Treatment is symptomatic

## 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:	Evolves toxic and corrosive gases such as NO <sub>x</sub> , HCl, HCN, CO <sub>x</sub> .
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. Use personal 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. 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 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. Do not breathe vapours. Do not eat, drink or smoke when using this product. Avoid release to the environment.

**Conditions for Safe Storage:** Store in a well ventilated place. Keep away from heat/sparks/open flames/hot surfaces - No smoking. Keep container tightly closed.

**Incompatibles:** Incompatible with strong oxidizing agents, strong acids and alkaline materials.

## Section 8: Exposure Control and Personal Protection

Exposure Limit:

Source	Component	CAS No.	Limit
JAIH	Buprofezin	69327-76-0	2mg/m <sup>3</sup>
ACGIH	Xylene	1330-20-7	TWA 100ppm (434mg/m <sup>3</sup> )

**Engineering Control:** Local exhaust ventilation

**Individual Protection Measure:** Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not breathe vapours. Wash exposed body parts thoroughly after handling.

**Personal Protective Equipment:**

- Eye Protection:** Protective goggles
- Skin Protection:** Face shield, nitrile gloves and boots
- Respiratory Protection:** Respirator

## Section 9: Physical and Chemical Properties

**Appearance:** Yellowish liquid

**Odour:** Characteristic odour

**Odour Threshold:** No data

**pH:** 3 - 7 (10% Emulsion)

**Melting/Freezing Point:** No data

**Initial Boiling Point:** No data

**Boiling Range:** No data

**Flash Point:** 28°C

**Evaporation Rate:** No data

**Flammability:** Flammable liquid

**Upper Flammability Limit:** No data

**Lower Flammability Limit:** No data

**Vapour Pressure:** 4.2 x 10<sup>-5</sup> Pa at 20°C (Buprofezin)

**Vapour Density:** No data



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Relative Density:	0.9
Solubility in Water:	Miscible with water
Partition Coefficient P <sub>o/w</sub> :	4.8 (Buprofezin) 5 (Esfenvalerate)
Auto-ignition Temperature:	No data
Decomposition Temperature:	No data
Viscosity:	No data

## Section 10: Stability and Reactivity

Reactivity:	Combustion evolves toxic and corrosive gases such as NO <sub>x</sub> , HCl, HCN, CO <sub>x</sub> .
Chemical Stability:	The material is stable under normal storage condition
Hazardous Reaction:	No data
Condition to Avoid:	Direct sunlight, heat and extreme temperature
Incompatible Material:	Incompatible with strong oxidizing agents, strong acids and alkaline materials.
Hazardous Decomposition Product:	No data

## Section 11: Toxicological Information

### 11.1 Acute Toxicity

Component: Buprofezin		
Ingestion, Oral LD <sub>50</sub> :		
	Rat (female)	2355mg/kg
	Rat (male)	2198mg/kg
Skin Contact, Dermal LD <sub>50</sub> :		
	Rat (male / female)	> 5000mg/kg
Inhalation, LC <sub>50</sub> :		
	Rat (male / female)	> 4.57 mg/L (4 hours)
Component: Esfenvalerate		
Ingestion, Oral LD <sub>50</sub> :		
	Rat	88.5mg/kg
Skin contact, Dermal LD <sub>50</sub> :		
	Rabbit	> 2000mg/kg
Inhalation, LC <sub>50</sub> :		
	Rat, male	0.48mg/L
	Rat, female	0.57mg/L
Component: Surfactant 2		
Ingestion, Oral LD <sub>50</sub> :		
	Rat	> 16000mg/kg
Component: Xylene		
	Ingestion, Oral LD <sub>50</sub> :	> 2000 - ≤ 5000mg/kg
	Skin Contact, Dermal LD <sub>50</sub> :	> 1000 - ≤ 2000mg/kg
	Inhalation, LC <sub>50</sub> :	> 10.0 - ≤ 20.0mg/L



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## 11.2 Chronic Effect from Short and Long Term Exposure

Skin Contact:	Causes skin irritation. May cause allergic skin reaction.
Eye Contact:	Causes serious eye irritation
Inhalation:	May cause respiratory irritation
Ingestion:	Harmful if swallowed
Carcinogenicity:	No data available
Mutagenicity:	No data available
Teratogenicity:	No data available

## 11.3 Symptoms

Muscular fibrillation, tremor, ataxia, limb paralysis, irregular respiration, salivation, urinary incontinence, hyperexcitability, choreoathetotic syndrome and decrease of spontaneous activity.

## Section 12: Ecological Information

### Ecotoxicity:

#### Component: Buprofezin

Acute Toxicity:		
Bluegill sunfish, LC <sub>50</sub> , 96hr	> 0.33mg/L	
Daphnia EC <sub>50</sub> , 48 hr	> 0.42mg/L	
Algae EbC <sub>50</sub> , 72 hr	49mg/L	

#### Component: Esfenvalerate

Acute Toxicity:		
Fish, Lepomis macrochirus, LC <sub>50</sub> , 96hr	0.31µg/L	
Daphnia magna (water flea), LC <sub>50</sub> , 48hr	0.27µg/L	

#### Component: Xylene

Acute Aquatic Toxicity LL/EL/IL <sub>50</sub> :		
Fish	> 1 - ≤ 10mg/L	
Aquatic crustacea	> 1 - ≤ 10mg/L	
Algae/aquatic plants	> 1 - ≤ 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:

Component:	Esfenvalerate	
	Cyprinus carpio (Carp), 30d	0.36µg/L
	Bioconcentration factor (BCF)	117

Mobility in Soil: No data available

Other Adverse Effect: No data available



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## Section 13: Disposal Information

Dispose of contents/container to Kualiti Alam / authorized body by DOE.

## 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
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  
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Acute toxicity, dermal category 4



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Skin irritation category 2  
Eye irritation category 2  
Skin sensitization category 1  
Aspiration hazard category 1  
Specific target organ toxicity – single exposure category 3  
Acute aquatic toxicity category 1  
Chronic aquatic toxicity category 1

Signal Word:

Danger

Pictogram:



Pesticides Act:

Class III

Classification:

Harmful

## Section 16: Other Information

Date of Preparation:

8 October 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.