



Safety Data Sheet

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

Fujione 40 EC

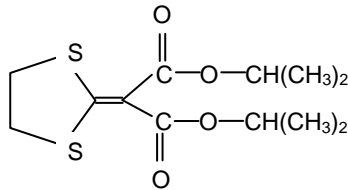
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Section 1: Identification of the Hazardous Chemical and of the Supplier

1.1 Product Identifier

Product Name: Isoprothiolane 40% EC
Trade Name: Fujione 40 EC
Active Ingredient: Diisopropyl 1,3-dithiolan-2-ylidenemalonate
CAS No.(AI): 50512-35-1
Structural Formula:



Recommended Usage: Fungicide

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 liquids, category 3
- Acute Toxicity (Oral), category 4
- Acute Toxicity (Dermal), category 4
- Acute Toxicity (Inhalation), category 4
- Skin Irritation, category 2
- Eye Irritation, category 2
- Skin Sensitization, category 1
- Carcinogenicity, category 2
- Specific Target Organ Toxicity-Single Exposure, category 3
- Aspiration Hazard, category 1
- Hazardous to the Aquatic Environment-Chronic Hazard, category 3

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Pictogram:



Signal Word: Danger

Hazard Statement:

H226	Flammable liquid and vapour
H302 + H312 + H332	Harmful if swallowed, in contact with skin or inhaled
H315	Causes skin irritation
H317	May cause allergic skin reaction
H319	Causes serious eye irritation
H304	May be fatal if swallowed and enters airways
H335	May cause respiratory irritation
H351	Suspected of causing cancer
H412	Harmful to aquatic life with long lasting effects

Precautionary Statement:

P210	Keep away from heat/sparks/open flames/hot surfaces - No smoking.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P270	Do not eat, drink, or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.

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

Component	CAS No.	Weight, %	Hazard Code
Isoprothiolane	50512-35-1	40	H302, H315, H317
Surfactant 1	-	<5	H315, H318
Surfactant 2	-	>5	H351
Solvent	-	Balance	H226, H312, H332, H315, H319, H335, H304

Section 4: First-aid Measures

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

Inhalation: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.



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Skin Contact:	IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.
Eye Contact:	IF IN EYES: 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:	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Do NOT induce vomiting.
Symptoms:	No data available.
Notes to Physician:	No data available.

Section 5: Fire-fighting Measures

Suitable Extinguishing Media:	Carbon dioxide (CO ₂), chemical foam, dry chemical, water spray (mist).
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:	Wear protective gloves/protective clothing/eye protection/face protection.
Environmental Precautions:	Avoid release to the environment.
Method for Cleaning Up:	Evacuate non essential personnel. 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.

Section 7: Handling and Storage

Precautions for Safe Handling:	Wear protective gloves/protective clothing/eye protection/face protection. Wash skin thoroughly after handling. Do not eat, drink, or smoke when using this product. Avoid breathing mist or vapours. Use only outdoors or in a well-ventilated area. Avoid release to the environment.
Conditions for Safe Storage:	Store in a well-ventilated place. Keep cool. Keep away from heat/sparks/open flames/hot surfaces – No smoking. Keep container tightly closed. Ground/bond container and receiving equipment.



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Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Store locked up.

Incompatibles: No data available.

Section 8: Exposure Control and Personal Protection

Exposure Limit:

Source	Component	CAS No.	Limit	
Japan Association of Industrial Health	Fujione Technical	50512-35-1		5 mg/m ³
Nihon Nohyaku exposure limit	Fujione Technical	50512-35-1		2 mg/m ³
ACGIH	Solvent	-	TWA	100ppm (434mg/m ³)
			STEL	150ppm (651mg/m ³)

Engineering Control: Local exhaust ventilation.

Individual Protection Measure: Wash hands thoroughly after handling. Avoid breathing mist or vapours. Use personal protective equipment as required.

Personal Protective Equipment:

Eye Protection: Wear eye protection, goggles.

Skin Protection: Wear protective gloves and protective clothing.

Respiratory Protection: Wear face protection, pesticide respiratory masks.

Section 9: Physical and Chemical Properties

Appearance: Yellow oily liquid
Odour: Characteristic odour
Odour Threshold: No data available
pH: 4 - 7
Melting/Freezing Point: 54.6 – 55.2°C (Technical, pure sample)
Initial Boiling Point: No data available
Boiling Range: No data available
Flash Point: 36°C
Evaporation Rate: No data available
Flammability: No data available
Upper Flammability Limit: No data available
Lower Flammability Limit: No data available
Vapour Pressure: 4.93×10^{-4} Pa at 25°C (Technical, pure sample)
Vapour Density: No data available
Relative Density: 1.00 (Specific Gravity)
Solubility in Water: Miscible with water
Partition Coefficient $P_{o/w}$: 3.3
Auto-ignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available



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Section 10: Stability and Reactivity

Reactivity:	No data available.
Chemical Stability:	Stable for at least 3 years under normal warehouse conditions.
Hazardous Reaction:	No data available.
Condition to Avoid:	Direct sunlight, heat and extreme temperature.
Incompatible Material:	No data available.
Hazardous Decomposition Product:	No data available.

Section 11: Toxicological Information

11.1 Acute Toxicity

Component: Fujione Technical		
Oral LD ₅₀ :		
Rat (female)	300 mg/kg	
Skin Contact, Dermal LD ₅₀ :		
Rat (male, female)	>2000 mg/kg	
Component: Solvent		
Ingestion, Oral LD ₅₀ :	> 2000 - ≤ 5000 mg/kg	
Skin Contact, Dermal LD ₅₀ :	> 1000 - ≤ 2000 mg/kg	
Inhalation, LC ₅₀ :	>10.0 - ≤ 20.0 mg/L	

11.2 Chronic Effect from Short and Long Term Exposure

Skin Contact:	Causes skin irritation and may cause allergic skin reaction.
Eye Contact:	Causes serious eye irritation.
Inhalation:	May cause respiratory irritation (respiratory tract irritation).
Ingestion:	May be fatal if swallowed and enter airways.
Carcinogenicity:	Suspected of causing cancer.
Teratogenicity:	No birth defects were noted in rats and rabbits given isoprothiolane orally during pregnancy. No effects were seen on the ability of male and female rats to reproduce when fed isoprothiolane for 2 successive generations.

11.3 Symptoms No data available.

Section 12: Ecological Information

Ecotoxicity:

Component: Fujione Technical		
Aquatic Organism Toxicity:		
Carp, LC ₅₀ (96h)	11.4 mg/l	
Daphnia, EC ₅₀ (48h)	19.0 mg/l	



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	Algae, Er C ₅₀ (0-72h)	10.8 mg/l	
	* <i>Pseudokirchneriella subcapitata</i>		
Component: Solvent			
Acute Aquatic Toxicity LL/EL/IL ₅₀ :			
	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: 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 or in accordance to local regulation.

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	-

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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:

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Signal Word: Danger

Pictogram:



Pesticides Act: Class III
 Classification: Harmful

Section 16: Other Information

Date of Preparation: 18 November 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.