



INDOFIL INDUSTRIES LIMITED
 KOLSHET, OFF SWAMI VIVEKANAND ROAD,
 AZAD NAGAR, SANDOZ BAUG P.O.,
 THANE – 400 607. MAHARASHTRA (INDIA)
 TEL. NO. : 00-91-22- 67999100
 FAX NO. : 00-91-22-2589 83 57 / 59

2-R&D-MSDS-FP- 429

MATERIAL SAFETY DATA SHEET

SECTION 1. PRODUCT IDENTIFICATION		
Chemical Name	PROPICONAZOLE 25% EC	Company Identification INDOFIL INDUSTRIES LIMITED KOLSHET, OFF SWAMI VIVEKANAND ROAD, AZAD NAGAR, SANDOZ BAUG P.O., THANE – 400 607. MAHARASHTRA (INDIA) TEL. NO. : 00-91-22- 67999100 FAX NO. : 00-91-22-2589 83 57 / 59
Trade Name	Indofine	
Synonyms	Propiconazole	GROUP: Triazole Fungicide
IUPAC Name	1-[[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]-Methyl]-1H-1,2,4-triazole	
CAS Number	60207-90-1	CLASS: Fungicide
Formula	C ₁₅ H ₁₇ Cl ₂ N ₃ O ₂	
SECTION 2. COMPOSITION / INFORMATION OF INGREDIENTS		
COMPONENT NAME	CAS REGISTRY NO	CONCENTRATION
PROPICONAZOLE	60207-90-1	25%
Inert Ingredients	----	75%
SECTION 3. HAZARDS IDENTIFICATION		
EMERGENCY OVERVIEW		
Physical state: Liquid		
Colour: Pale yellow to Brown Liquid		
INGESTION: Harmful if swallowed.		
INHALATION: Harmful if inhaled.		
EYE CONTACT: May cause eye irritation.		
SKIN CONTACT: May cause irritation.		
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.		
IMMEDIATE HEALTH EFFECTS		
Eye contact	Slightly irritation to eyes	
Skin contact	Moderately irritating	
Ingestion	Harmful if swallowed.	
Inhalation	Harmful if inhaled.	
Abdominal pain, nausea, gastritis, breathing difficulty or diarrhoea can also occur if swallowed. May cause an allergic skin reaction. Vapours may cause drowsiness and dizziness. May be harmful if swallowed and enters airway.		

DELAYED OR OTHER HEALTH EFFECTS

Target organs	No data.
An "X" in the box adjacent to the hazard title indicates OSHA Hazard classification. If no "X" is present, the product does not exhibit the hazard as defined in the OSHA Hazard Communication standard (29 CFR 1910.1200)	
OSHA Health Hazard Classification	OSHA Physical Hazard Classification

Toxic <input type="checkbox"/>	Highly Toxic <input type="checkbox"/>	Flammable <input type="checkbox"/>	Oxidizer <input type="checkbox"/>
Irritant <input type="checkbox"/>	Sensitizer <input type="checkbox"/>	Combustible <input type="checkbox"/>	
Corrosive <input type="checkbox"/>	Carcinogenic <input type="checkbox"/>	Explosive <input type="checkbox"/>	Organic Peroxide <input type="checkbox"/>
		Pyrophoric <input type="checkbox"/>	unstable <input type="checkbox"/>
		Organic peroxide <input type="checkbox"/>	water-reactive <input type="checkbox"/>

SECTION 4 : FIRST AID MEASURES

Eye	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye.
Skin	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call doctor for treatment advice.
Ingestion	Do not give any liquid to the person. Do not induce vomiting unless told to do so after calling by doctor. Do not give anything by mouth to an unconscious person.
Inhalation	Move person to fresh air. If person is not breathing, call an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call doctor for further treatment advice.
Notes to physician	Treat symptomatically and supportively as and when required. Gastric lavage may be indicated. Administer charcoal slurry, aqueous or mixed with saline cathartic or sorbitol.

SECTION 5 : FIRE FIGHTING MEASURES

NFPA Flammability Classification	-----
NFPA RATINGS	Health: 1 Flammability: -- Reactivity: --
OSHA classification	No data

Flash point	40°C
Flammability (Explosive limits)	-----
Auto ignition Temperature	Not established
Hazardous Combustion products	-----
Extinguishing Media	Media suitable to extinguish the supporting or surrounding area.
Protection of Fire Fighters	Wear NIOSH / MSHA approved self-contained breathing apparatus and full protective clothing.
Special Properties	Avoid breathing fumes from fire exposed material

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Protective Measures	Ensure suitable personal protection during removal of spillages. This means wearing a face mask that gives protection against organic vapours, eye protection, chemically resistant gloves, boots and coveralls.
Spill Management	Warning: flammable vapours may be present. Eliminate sources of ignition and ventilate spill area. Use non-sparking cleanup equipment to prevent vapour ignition. Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions in Protective Equipment Section. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent. Pick up wash liquid with additional absorbent and place into compatible disposal container and arrange for disposition.

SECTION 7 : HANDLING AND STORAGE

Handling & Storage procedure	Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.
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SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls	Ventilation: Investigate engineering techniques to reduce exposures. Provide ventilation if necessary to minimize exposures. Use mechanical exhaust ventilation at sources of air contamination such as open process equipment.
Personal Protective Equipment	Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Eye / face Protection: Safety Glasses or goggles. Skin protection: Avoid skin contact. Rubber gloves should be worn whenever this material is handled. Wash hands with clean water. Body protection: Avoid skin contact Wear impervious clothing and closed foot ware. Respiratory Protection: Use a NIOSH approved respirator with an organic vapour (OV) cartridge or canister with an HE pre-filter.

Occupational exposure limits (exposure limit information)

Component	Limit	TWA	STEL	Ceiling	Notation
Propiconazole	OSHA ACGIH	No data	No data	No data	No data

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid	Colour	Pale yellow to brown
Odor	Aromatic	pH (1%)	4.5 To 7.2
Specific gravity	0.98-1.00 g/ml	Solubility in water	Emulsifiable
Vapor pressure @ 20°C	No data	Vapor density	No data
Viscosity	Not applicable	Boiling point	95°C
Melting / Freezing point	Not applicable	Evaporation rate	No data

SECTION 10: STABILITY AND REACTIVITY

Chemical stability	This material is chemically stable under normal and anticipated storage and handling conditions.
Conditions to Avoid	Excessive temperatures.
Material Incompatibility	Incompatible with strong acids and alkaline material.
Hazardous Decomposition Products	Thermal decomposition may generate: Carbon dioxide, carbon monoxide, chlorides, nitrogen oxides
Hazardous Polymerization	Will not occur

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Oral toxicity LD ₅₀	GHS Category 5
Acute Dermal toxicity LD ₅₀	>2000 mg/kg
Acute Inhalation toxicity LD ₅₀	>2.16 mg/L of air.
Eye irritation (Rabbit)	Nn-irritating
Skin irritation (Rabbit)	Non-irritating
Skin Sensitization (Guinea Pig)	Non skin Sensitizer

SECTION 12: ECOLOGICAL INFORMATION

Eco-toxicity:	
(Assessment largely or completely based on data for Propiconazole Active Substance)	
Fish LC ₅₀ (96 h)	Rainbow Trout 4.3-5.3 mg/l ; Bluegill sunfish 6.4 mg/l
Algae EC ₅₀ (5 d)	<i>Scenedesmus subspicatus</i> 0.76 mg/l
Daphnia EC ₅₀ (48 hr)	10.2 mg/l
Bird	
Acute Oral, LD ₅₀	Japanese quail 2223 mg/kg
	Mallard duck > 2510 mg/kg
Honey Bee	Non-toxic to bees
LD ₅₀ (Oral)	> 100 µg/bee;

LD ₅₀ (Contact)	>1 00 µg/bee.
Earth worm	
LC ₅₀ (14 d)	848.39 mg/kg
Environmental Fate	After oral administration to rats, it is rapidly absorbed and also rapidly and almost completely eliminated with urine and faeces. Residues in tissues were generally low and there was no evidence for accumulation or retention of Propiconazole or its metabolites.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL PROCEDURES: waste disposal should be in accordance with existing federal, state and local environmental regulations. Dispose of empty, used containers in approved incineration plant in approved land filling area or in a disposal pit away from desirable plants and their roots and water courses. On-site disposal of undiluted product is unacceptable

SECTION 14: TRANSPORT INFORMATION

UN number	3082
Shipping Name	Environmentally Hazardous Substance, Liquid, N.O.S. (Propiconazole)
Class	9
Packaging group	III
Marine pollutant	Yes

SECTION 15: REGULATORY INFORMATION

TSCA Inventory	No data
SARA 311/312 Hazard Identification	Immediate (acute) health effects: yes Delayed (chronic) health effects : yes Reactive: yes This product contains the substances subject to the reporting requirements of SARA title 3 , section 313 and 40 CFR part 372.
SARA 302/304 Emergency planning and notification	No data
SARA TITLE 3: SECTION 313 Toxic chemical notification and Release reporting	This product contains the following components in concentrations above that are listed as toxic chemicals in 40 CFR part 372 pursuant to the requirements of section 313 of SARA.
CERCLA (40 CFR 302.4)	No data
Waste classification	No data
Clean Air Act	Not applicable

SECTION 16: OTHER INFORMATION

NFPA RATINGS	Health : 1	Flammability : 2	Reactivity :0
HMIS RATINGS	Health : 1	Flammability : 2	Reactivity : 0
	0 = Least 1= slight 2= Moderate 3= High 4=Extreme		

ABBREVIATIONS

STEL	Short term exposure limit
ACGIH	American conference of Government Industrial Hygienists
NIOSH	National institute of safety and health
SARA	Super fund Amendments and Reauthorization Act
TWA	Time weighted average
OSHA	Occupational safety and health
NFPA	National Fire protection agency
HMIS	Hazardous Materials information system
RCRA	Resource conservation Recovery act
TSCA	Toxic substance Control Act
WHMIS	Work place Hazardous Materials information system
IRAC	International Agency for Research on Cancer

MANUFACTURE'S / SUPPLIER'S DATA

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Fax	022-2589 8357	Telegraphic Code		
Local Bodies Involved	Collector of Thane			

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