



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-AGRO-FP-400

MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT IDENTIFICATION		
Chemical Name	MYCLOBUTANIL 10% WP IUPAC : 2-p-chlorophenyl-2-(1 H-1,2,4-triazol-1-ylmethyl) hexanenitrile	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	BOON	
Synonyms	MYCLOBUTANIL	GROUP: Conazole fungicide
CAS Number	088671-89-0	CLASS: FUNGICIDE
Formula	C ₁₅ H ₁₇ Cl N ₄	
SECTION 2: COMPOSITION / INFORMATION OF INGREDIENTS		
COMPONENT NAME	CAS REGISTRY NO	CONCENTRATION
MYCLOBUTANIL	088671-89-0	10%
Other ingredients	----	90%
SECTION 3: HAZARDS IDENTIFICATION		
EMERGENCY OVERVIEW		
Physical state: Powder		
Colour: White to Off-white		
INGESTION: Harmful if swallowed.		
INHALATION: Harmful		
EYE CONTACT: May cause eye irritation.		
SKIN CONTACT: May cause irritation.		
DELAYED EFFECTS: No delayed effects known.		

IMMEDIATE HEALTH EFFECTS

Eye contact	This product may be mildly irritating to eyes. However, it is unlikely to cause any more than mild transient discomfort. It is also unlikely to cause any lasting effects,
Skin contact	May irritate skin. The dermal toxicity of this product is low. However, skin contact should be avoided. This product is not a skin sensitizer.
Ingestion	The acute toxicity of this product is low, but it may be harmful if a large amount is swallowed.
Inhalation	May be a slight respiratory irritant.

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	Flush with plenty of water for atleast 15 minutes. Seek medical attention if irritation begins and / or persists.
Skin	Promptly wash the contaminated skin using soap or water, remove the affected clothing and wash the skin with soap and water.
Ingestion	If swallowed, repeatedly induce vomiting by giving victim a tablespoon of salt in glass of warm water. Until vomiting fluid is clear.
Inhalation	Remove the exposed person from the area to the fresh air, perform artificial respiration.
Notes to physician	No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: FIRE FIGHTING MEASURES	
NFPA Flammability Classification	-----
NFPA RATINGS	Health: 1 Flammability : -- Reactivity:----
OSHA classification	No data
Flash point	Not applicable
Flammability (Explosive limits)	Non flammable
Auto ignition Temperature	Not applicable
Hazardous Combustion products	During a fire, irritating and possibly toxic gases like carbon dioxide, carbon monoxide, nitrogen oxides, sulfur dioxide, hydrogen chloride, may be generated by thermal decomposition or combustion
Extinguishing Media	Dry chemical, CO ₂ , Water spray, standard foam. For larger fire, use water spray, fog or standard foam.
Protection of Fire Fighters	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Special Properties	Contain run-off. Remain upwind. Avoid breathing smoke. Use water spray to cool container exposed to fire.
SECTION 6: ACCIDENTAL RELEASE MEASURES	
Protective Measures	Ensure suitable personal protection during removal of Spillages. Good standards of industrial and personal hygiene are recommended. This means wearing a facemask that gives protection against organic vapours, eye protection, chemically resistant gloves, boots and coveralls.
Spill Management	Absorb the material in the sand, soil, diatomaceous earth or suitable absorbent. Place in suitable material and remove to safe place or dispose of in an incinerator approved for chemicals.
SECTION 7: HANDLING AND STORAGE	
Handling & Storage procedure	Store in a cool, dry location. Do not store near food, feed or fertilizers. Do not store above 35°C. Do not contaminate ponds, lakes, streams or any source of water. Keep out of reach of children. Handle in a well-ventilated area. Local exhaust recommended. Use personal protective equipment to prevent contact with skin and eyes. Do not drink, eat or smoke while handling. Wash hands before eating, drinking or smoking. Impervious rubber. The minimum recommended storage temperature required for this material is 1°C. The maximum recommended storage temperature for this material is 49°C.
Protective Gloves	Chemical safety goggles.
Eye Protection	Local exhaust strongly recommended. Wear respiratory protection in the absence of adequate ventilation.
Ventilation	NIOSH/MSHA approved for organic vapours and dust/mist/fume
Respiratory Protection	

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	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: Wear suitable mask.

Occupational exposure limits (exposure limit information)

Component	Limit	TWA	STEL	Ceiling	Notation
Myclobutanil	OSHA ACGIH	1 mg/m ³	3 mg/m ³	No data	No data

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid Powder	Colour	White to Off-white
Odor	Characteristics odour	pH (1%)	6 To 7.5
Bulk density	0.3 to 0.35 g/cc	Solubility in water	Forms Suspension in water
Vapor pressure	NA	Vapor density	NA
Knematic viscosity (Temp. 40°C)	NA	Boiling point	NA
Melting / Freezing point	NA	Evaporation rate	NA

SECTION 10: STABILITY AND REACTIVITY

Chemical stability	This material is chemically stable under normal condition of use. Incompatible with alkaline materials. Oxides of carbon and nitrogen may be given off when exposed to extreme heat or fire.
Conditions to Avoid	Excessive temperatures.
Material Incompatibility	Open flames, sparks, ignition sources, dampness.
Hazardous Decomposition Products	Toxic and flammable fumes produced: oxides of nitrogen and carbon.
Hazardous Polymerization	Not known to occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Oral toxicity	Not Available
Acute Dermal toxicity	Not Available
Acute Inhalation toxicity	Not Available
Eye irritation: Non-irritant	
Skin irritation: Mild irritant	

SECTION 12: ECOLOGICAL INFORMATION	
Ecotoxicity	Myclobutanil 10% WP is toxic to aquatic organisms. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds or rivers.
Environmental fate	Persistence (Half-life): Soil: 66 days In animals undergoes oxidation at the butyl group to a ketone and an alcohol with partial conjugation to a glucoside. Following administration, rapidly in the faeces and urine. In plants, metabolism is the same as in animals.

SECTION 13: DISPOSAL CONSIDERATIONS	
WASTE DISPOSAL PROCEDURES: The product is suitable for burning in an enclosed system. The product is suitable for processing by an approved recycling facility or can be disposed of at any licensed waste disposal site or can be removed by approved waste contractors. Use of these methods is subjected to user compliance with applicable laws and regulations and consideration of product characteristics at time of disposal.	

SECTION 14: TRANSPORT INFORMATION	
	Marine pollutant: Yes
DOT Shipping Name	DOT Technical Name: Myclobutanil Technical
DOT Hazard class	Class : 9 UN Number : 3077
DOT identification number	No data
DOT Packing Group	III
DOT additional information	No data

SECTION 15: REGULATORY INFORMATION	
Work place classification	Hazard categories under criteria of SARA Title III rules (40 CFR part 370) Immediate acute health Y Delayed chronic health N Fire N Reactive N Sudden Release of pressure N
SARA TITLE 3: SECTION 311/312 Hazard Identification	Harmful, Toxic
SARA TITLE 3: SECTION 302/304 Emergency planning and notification	-----
SARA TITLE 3: SECTION 313 Toxic chemical notification and Release reporting	This product does contain chemicals which are defined as toxic chemicals under and subject to the reporting requirements of, Section 313 of title III of the superfund amendments and reauthorization act of 1986 and 40 CFR part 372
CERCLA (40 CFR 302.4)	-----
Waste classification	No data
Clean Air Act	No data

SECTION 16: OTHER INFORMATION

NFPA RATINGS	Health : 1	Flammability : --	Reactivity :---
HMIS RATINGS	Health : ----	Flammability :----	Reactivity :---
	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 2589 8357	Telegraphic Code		Fax 22767 5083	
Local Bodies Involved	Collector of Thane			

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