



INDOFIL INDUSTRIES LIMITED
KOLSHET, OFF SWAMI VIVEKANAND ROAD,
AZAD NAGAR, SANDOZ BAUG P.O.,
THANE – 400 607. MAHARASHTRA (INDIA)
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MATERIAL SAFETY DATA SHEET

2-R&D-MSDS- AGRO-FP- 450

SECTION 1. PRODUCT IDENTIFICATION		
Chemical Name	TRICYCLAZOLE 75% WP	Company Identification INDOFIL INDUSTRIES LIMITED KOLSHET, OFF SWAMI VIVEKANAND ROAD, AZAD NAGAR, SANDOZ BAUG P.O., THANE – 400 607. MAHARASHTRA (INDIA) TEL. NO. : 00-91-22-6799 9100 FAX NO. : 00-91-22-2589 83 57 / 59
Trade Name	BAAN`	
Synonyms		Chemical classification: Fungicide
IUPAC	5-methyl-1,2,4,-triazolo[3,4-b] [1,3] benzothiazole.	
CAS Number	41814-78-2	
Formula	C ₉ H ₇ N ₃ S	

SECTION 2. COMPOSITION / INFORMATION OF INGREDIENTS

COMPONENT NAME	CAS REGISTRY NO	CONCENTRATION
Tricyclazole Technical	41814-78-2	75%
Inert Material		25%

SECTION 3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

Physical state : Solid
Colour : Light tan
Odor : Odourless

Harmful or fatal if swallowed - can enter lungs and cause damage
Contact can cause eye or skin irritation

IMMEDIATE HEALTH EFFECTS

Eye contact	This material can cause eye irritation with tearing, redness or a stinging or burning feeling. .
Skin contact	Prolonged or repeated skin contact may cause irritation.
Ingestion	Swallowing this material may be harmful. Swallowing this material may cause stomach or intestinal upset with pain , nausea , and / or diarrhea. This material can get into the lungs during swallowing or vomiting. Ingestion can cause temporary CNS depression, drowsiness, and changes in the liver and weight loss.
Inhalation	Breathing high concentrations may be harmful. Inhalation can cause irritation of nose and throat

DELAYED OR OTHER HEALTH EFFECTS

Target organs	-----
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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
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Toxic <input checked="" 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 eyes with water immediately while holding with eyelids open. Get medical attention if irritation persists.
Skin	Wash skin with water immediately and remove contaminated clothing and shoes. Get medical attention if any symptoms develop. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion	Call a physician or the poison control center immediately. Drink one or two glasses of water and induce vomiting by touching the back of the throat with finger. Repeat until vomit fluid is clear. Do not induce vomiting or give anything by mouth to an unconscious person.
Inhalation	Immediately move victim to fresh air . If victim is not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention if breathing difficulties continue.
Notes to physician	Antidote not known

SECTION 5 : FIRE FIGHTING MEASURES

NFPA Flammability Classification	-----
NFPA RATINGS	Health: 1 Flammability :1 Reactivity: 1
OSHA classification	
Flash point	
Flammability (Explosive limits)	
Auto ignition Temperature	
Hazardous Combustion products	
Extinguishing Media	Small fire : Use dry chemicals , carbon dioxide , foam, Large fire : Use Foam , dry chemicals, carbon dioxide
Protection of Fire Fighters	Wear NIOSH / MSHA approved self-contained breathing apparatus and full protective clothing.
Special Properties	Unusual fire and explosion hazards In fire situations, toxic oxides of nitrogen, ethylene thiourea.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Protective Measures	Eliminate all sources of ignition in the vicinity of the spill. If this material is released into the work area, evacuate the area immediately.
Spill Management	Wear a NIOSH/MSHA approved dust respirator and all appropriate protective equipment . Do not touch or walk through spilled material . prevent spilled material from entering waterways , sewers, basements or confined areas. Clean up spill as soon as possible. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations

SECTION 7 : HANDLING AND STORAGE

Handling	<p>A spill can cause an immediate fire or explosion hazard. Keep containers closed and do not handle or store near heat, sparks or any other potential ignition sources. Use only with adequate ventilation and personal protection. Avoid contact with eyes, skin, and clothing. Prevent contact with food and tobacco products. Do not reuse empty bag</p> <p>When performing repairs and maintenance on contaminated equipment, Keep unnecessary persons away from area. Eliminate all potential ignition sources. Use gloves constructed of impervious materials and protective clothing if direct contact is anticipated. Provide adequate ventilation. Promptly remove contaminated clothing. Wash exposed skin thoroughly with soap and water after handling.</p>
Storage	<p>Store and transport in accordance with all applicable laws. Keep containers tightly closed and store in a cool, dry, well-ventilated place, plainly labeled and out of closed vehicles. Keep away from all ignition sources. All electrical equipment in areas where this material is stored or handled should be installed in accordance with applicable regulatory requirements and the national electrical code.</p>

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls	<p>Provide exhaust ventilation or other engineering controls. An emergency eye wash station and safety shower should be located near the work-station .</p>
Personal Protective Equipment	<p>Eye Protection: Wear eye protection such as safety glasses, chemical goggles, or face shields if engineering controls or work practices are not adequate to prevent eye contact. Contact lenses should not be worn when working with this chemical</p> <p>Hand protection: Avoid skin contact .Use gloves. Wash hands with plenty of mild soap and water before eating, drinking, use of toilet facilities or leaving work.</p> <p>Body protection: Avoid skin contact. Wear long-sleeved fire-retardant garments. Additional chemical-resistant protective gear may be required. This may include an apron, boots and additional facial protection.</p> <p>Respiratory Protection: Dust / mist filtering respirator or a NIOSH approved respirator .</p> <p>Work practices: users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside . Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash outside of gloves before removing. As soon as possible wash thoroughly and change into clean clothing. Deluge safety shower and eye wash station should be located in work area</p>

Occupational exposure limits

Component	Limit		
Tricyclazole Technical	NA		

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid	Colour	Light tan
Odor	Odourless	PH	NA
Specific gravity (Water=1)	NA	Solubility in water	1.6g / Lit.
Vapor pressure@ (mm Hg)	0.203 mPa(25 C)	Vapor density (Air=1)	NA
Viscosity		Boiling point (°C)	NA
Melting point (°C)	187-188°C		

SECTION 10: STABILITY AND REACTIVITY

Chemical stability	This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Conditions to Avoid	Conditions to avoid : Keep dry and avoid excessive heat and ignition.
Material Incompatibility	Materials to avoid : Acids
Hazardous Decomposition Products	Combustion products include carbon monoxide (CO), carbon dioxide (CO ₂), nitrogen oxides (NO _x), sulfur oxides (SO _x), other pyrolysis products typical of burning organic material.
Hazardous Polymerization	Data not available

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Oral toxicity	LC 50 for Tricyclazole is 315 mg/kg. (Oral- Rat)
Acute Dermal toxicity	
Acute Inhalation toxicity	
Eye irritation: This material is irritating to the eyes Skin irritation: This material is irritating to the skin	

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity	This product is toxic to fish and aquatic invertebrates. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters. Dispose of all excess treated seed-pieces and seed packaging by burial away from bodies of water.
Environmental fate	No data

SECTION 13: DISPOSAL CONSIDERATIONS

All waste must be handled in accordance with local, state and federal regulations. Containers may still present a chemical hazard/ danger when empty. Return to supplier for reuse/ recycling if possible. Otherwise:

If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. Where possible retain label warnings and MSDS and observe all notices pertaining to the product.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. In most instances the supplier of the material should be consulted.

DO NOT allow wash water from cleaning or process equipment to enter drains. It may be necessary to collect all wash water for treatment before disposal. In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.

Where in doubt contact the responsible authority.

Recycle wherever possible.

Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.

Dispose of by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus (after admixture with suitable combustible material)

Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

SECTION 14 : TRANSPORT INFORMATION

IATA Shipping Name	Pesticides, solid, toxic, n.o.s.(Tricyclazole)
IATA Hazard class	6.1
IATA identification number	UN 2588
IATA packing Group	II
IATA additional information	No data

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 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	No data
Clean air act (CAA)	Not applicable

SECTION 16: OTHER INFORMATION

NFPA RATINGS	Health : 1	Flammability :1	Reactivity :1
HMIS RATINGS	Health : 1	Flammability :1	Reactivity :1
	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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Local Bodies Involved	Collector of Thane			

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Last updated :01/01/2014.