



**INDOFIL INDUSTRIELS 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&amp;D-MSDS- AGRO-FP- 420

MATERIAL SAFETY DATA SHEET

**SECTION 1. PRODUCT IDENTIFICATION**

<b>Chemical Name</b>	Zineb 75% WP	<b>Company Identification</b> 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
<b>Trade Name</b>	Indofil Z-78 75 WP	
<b>Synonyms</b>	Zineb 75% WP	<b>Chemical classification:</b> EBDC Fungicide
<b>IUPAC</b>	zinc ethylene bis (dithiocarbamate) (polymeric)	
<b>CAS Number</b>	12122-67-7	
<b>Formula</b>	C <sub>4</sub> H <sub>6</sub> N <sub>2</sub> S <sub>4</sub> Zn	

**SECTION 2. COMPOSITION / INFORMATION OF INGREDIENTS**

COMPONENT NAME	CAS REGISTRY NO.	CONCENTRATION
Zineb	12122-67-7	75%
Other ingredients (Surfactants)	-----	25%

**SECTION 3. HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW**

Physical state : Powder  
 Colour : Grey colour Powder  
 Odor : Musty Odour

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

**IMMEDIATE HEALTH EFFECTS**

<b>Eye contact</b>	Moderately irritation to eyes.
<b>Skin contact</b>	Repeated or prolonged contact can cause irritation or dermatitis.
<b>Ingestion</b>	Swallowing this material may be harmful.
<b>Inhalation</b>	Dust can irritate the nose and throat.
<b>Emergency Treatment</b>	Move the subject to fresh air, rest and seek medical aid.

**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 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**

<b>Eye</b>	Flush eyes with plenty of water for at least 15 minutes and see doctor.
<b>Skin</b>	Remove contaminated clothes, wash skin with soap and water.
<b>Ingestion</b>	If swallowed dilute by giving 2 glasses of water to drink and call a doctor. Never give any by mouth to an unconscious person.
<b>Inhalation</b>	Move subject to fresh air and rest.
<b>Notes to physician</b>	Antidote none known.

<b>SECTION 5 : FIRE FIGHTING MEASURES</b>	
<b>NFPA Flammability Classification</b>	-----
<b>NFPA RATINGS</b>	Health: 1      Flammability :1      Reactivity: 1
<b>OSHA classification</b>	
<b>Flash point</b>	Not applicable
<b>Flammability (Explosive limits)</b>	No data
<b>Auto ignition Temperature</b>	No data
<b>Hazardous Combustion products</b>	Hydrogen Sulfide, Carbon Disulfide, and oxides of carbon, nitrogen and sulphur
<b>Extinguishing Media</b>	Dry chemical powder, CO <sub>2</sub> , Water, Water Spray
<b>Protection of Fire Fighters</b>	Wear NIOSH / MSHA approved self-contained breathing apparatus and full protective clothing. Water can release flammable carbon disulfide from Zineb. Contain water run-off.
<b>Special Properties</b>	Use Water spray to cool container. Wear self contained breathing apparatus.
<b>Unusual Hazards</b>	Fire produces toxic and flammable products. Hydrogen sulfide, CS <sub>2</sub> , Oxides of Sulfur, Nitrogen and Carbon.
<b>SECTION 6 : ACCIDENTAL RELEASE MEASURES</b>	
<b>Protective Measures</b>	Eliminate all sources of ignition in the vicinity of the spill. If this material is released into the work area, evacuate the area immediately.
<b>Spill Management</b>	Scoop or shovel solid material into a suitable container. Keep dust to minimum. Flush cleaned area with water to chemical sewers. Keep spills and cleaning runoffs of municipal sewers and open bodies of water.

<b>SECTION 7 : HANDLING AND STORAGE</b>	
<b>Handling</b>	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.
<b>Storage</b>	Store in a dry shaded, well ventilated area. Do not allow it to become wet or over heated in storage because degradation of the material may occur and fire may be result. Provide plenty of ventilation to dissipate heat.

<b>SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION</b>	
<b>Engineering controls</b>	Provide exhaust ventilation or other engineering controls. An emergency eye wash station and safety shower should be located near the work-station.
<b>Personal Protective Equipment</b>	<b>Eye Protection:</b> 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><b>Hand protection:</b> 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><b>Body protection:</b> 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><b>Respiratory Protection:</b> Dust/mist filtering respirator or a NIOSH approved respirator .</p> <p><b>Work practices:</b> 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>
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#### Occupational exposure limits

Component	Limit		
Zineb	ACGIH	Not determined (threshold limit value)	
Zineb	OSHA	Not determined (permissible exposure limit)	

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state</b>	Solid	<b>Appearance</b>	Yellow to grey colour Powder
<b>Odor</b>	Musty odour	<b>pH (1%)</b>	5 to 7
<b>Specific gravity (Water = 1)</b>	NA	<b>Solubility in water @</b>	Dispersible
<b>Vapor pressure @ (mm Hg)</b>	NA	<b>Vapor density (Air=1)</b>	NA
<b>Viscosity</b>	--	<b>Boiling point</b>	NA
<b>Melting point (°C)</b>	NA		

### SECTION 10: STABILITY AND REACTIVITY

<b>Chemical stability</b>	Stable.
<b>Conditions to Avoid</b>	Keep dry and avoid excessive heat (> 49°C) and ignition sources.
<b>Hazardous Decomposition Products</b>	Hydrogen Sulfide, Carbon Disulfide, Oxides of carbon, Nitrogen and Sulphur.
<b>Hazardous Polymerization</b>	Data not available.

<b>SECTION 11: TOXICOLOGICAL INFORMATION</b>	
Acute Oral toxicity	Zineb LD 50 > 5000 mg/kg for rats
Acute Dermal toxicity	
Acute Inhalation toxicity	
Eye irritation: This material is irritating to the eyes.	
Skin irritation: This material is irritating to the skin.	

<b>SECTION 11: TOXICOLOGICAL INFORMATION</b>	
Acute Oral toxicity (Rat)	LD 50 > 2000 mg/kg
Acute Dermal toxicity (Rat)	LD 50 > 2000 mg/kg
Acute Inhalation toxicity (Rat)	LC 50 > 2.752 mg/l
Eye irritation (Rabbit)	Irritant
Skin irritation (Rabbit)	Non-irritant

<b>SECTION 12: ECOLOGICAL INFORMATION</b>	
<b>Eco-toxicity</b>	Contamination of both terrestrial and marine environments should be avoided.
<b>Environmental fate</b>	No data.

<b>SECTION 13: DISPOSAL CONSIDERATIONS</b>	
Contamination of both terrestrial and marine environments should be avoided.	
No data.	

<b>SECTION 14 : TRANSPORT INFORMATION</b>	
	Not regulated as a hazardous material by any mode of transportation. It is not a marine pollutant. <b>Export water (IMO)</b> : Not regulated <b>Air (ICAO / IATA)</b> : Not regulated
<b>DOT Shipping Name</b>	DOT Technical Name: Zineb Technical
<b>DOT Hazard class</b>	Class: 9 UN Number: 3077
<b>DOT identification number</b>	No data
<b>DOT packing Group</b>	Packaging Group : 9
<b>DOT additional information</b>	Drum to be placed in a well ventilated area and in a secure position.

<b>SECTION 15: REGULATORY INFORMATION</b>	
<b>TSCA Inventory</b>	No data
<b>SARA 311/312 Hazard Identification</b>	No data
<b>SARA 302/304 Emergency planning and notification</b>	No data
<b>SARA 313 Toxic chemical</b>	No data

<b>notification and Release reporting</b>	
<b>CERCLA</b>	No data
<b>Clean air act (CAA)</b>	Not applicable

## SECTION 16: OTHER INFORMATION

<b>NFPA RATINGS</b>	Health : 1	Flammability :1	Reactivity :1
<b>HMIS RATINGS</b>	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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