



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&D-MSDS- AGRO-FP- 420

MATERIAL SAFETY DATA SHEET

SECTION 1. PRODUCT IDENTIFICATION		
Chemical Name	Zineb 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: 00-91-22-67999100 FAX NO: 00-91-22-2589 83 57 / 59
Trade Name	Winner Z-78 75 WP	
Synonyms	Zineb 75% WP	Chemical classification: Ethylene Bis Dithiocarbamate Fungicide
IUPAC	zinc ethylene bis (dithiocarbamate) (polymeric)	
CAS Number	12122-67-7	
Formula	C ₄ H ₆ N ₂ S ₄ Zn	
SECTION 2. COMPOSITION / INFORMATION OF INGREDIENTS		
COMPONENT NAME	CAS REGISTRY NO.	CONCENTRATION
Zineb	12122-67-7	75%
Other ingredients	-----	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

Eye contact	Moderately irritation to eyes.
Skin contact	Repeated or prolonged contact can cause irritation or dermatitis.
Ingestion	Swallowing this material may be harmful.
Inhalation	Dust can irritate the nose and throat.
Emergency Treatment	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

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

SECTION 5 : FIRE FIGHTING MEASURES

NFPA Flammability	-----
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Classification	
NFPA RATINGS	Health: 1 Flammability :1 Reactivity: 1
OSHA classification	
Flash point	Not applicable
Flammability (Explosive limits)	No data
Auto ignition Temperature	No data
Hazardous Combustion products	Hydrogen Sulfide, Carbon Disulfide, and oxides of carbon, nitrogen and sulphur
Extinguishing Media	Dry chemical powder, CO ₂ , Water, Water Spray
Protection of Fire Fighters	Wear NIOSH / MSHA approved self-contained breathing apparatus and full protective clothing. Water can release flammable carbon disulfide from Zineb. Contain water run-off.
Special Properties	Use Water spray to cool container. Wear self contained breathing apparatus.
Unusual Hazards	Fire produces toxic and flammable products. Hydrogen sulfide, CS ₂ , Oxides of Sulfur, Nitrogen and Carbon.
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	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.

SECTION 7 : HANDLING AND STORAGE

Handling	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.
Storage	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.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls	Provide exhaust ventilation or other engineering controls. An emergency eye wash station and safety shower should be located near the work-station.
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</p>

	<p>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>
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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

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

SECTION 10: STABILITY AND REACTIVITY

Chemical stability	Stable.
Conditions to Avoid	Keep dry and avoid excessive heat and ignition sources.
Hazardous Decomposition Products	Hydrogen Sulfide, Carbon Disulfide, Oxides of carbon, Nitrogen and Sulphur.
Hazardous Polymerization	Data not available.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Oral toxicity LD ₅₀	>2000 mg/kg rats
Acute Dermal toxicity LD ₅₀	>2000 mg/kg rats
Acute Inhalation toxicity LC ₅₀	3.08 mg/l
Skin irritation (Rabbits): Slight irritant to skin	
Eye irritation (Rabbits): Minimal irritant to eyes	
Skin Sensitization (Guinea Pig): Not a skin sensitizer	

SECTION 12: ECOLOGICAL INFORMATION	
(Assessment largely or completely based on data for Zineb Active Substance)	
Eco-toxicity:	
Fish LC₅₀	For perch 2, roach 6-8 mg/l
Bees LD₅₀	100 mg/bee (oral and contact)
Environmental fate	Plants: Ethylenethiourea is the major metabolite in plants. Ethylenethiuram monosulfide and presumably ethylenethiuram disulfide and sulfur are also formed.

SECTION 13: DISPOSAL CONSIDERATIONS
<p>Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR part 261) or other state and local regulations.</p> <p>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.</p> <p>Disposal should be in accordance with local state or national legislation. Remove to a safe location and bury on an authorized landfill site. Do not burn empty containers or Product.</p>

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

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

DISCLAIMER

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