



INDOFIL INDUSTRIES LIMITED
PLOT NO: Z-8, SEZ-1,
DAHEJ, TAL. VAGRA, DIST. BHARUCH-392130
GUJARAT, INDIA

TEL NO: 02641-282659

MATERIAL SAFETY DATA SHEET

2-R&D-MSDS- AGRO-FP- 421

SECTION 1. PRODUCT IDENTIFICATION		
Chemical Name	Metalaxyl 8% + MANCOZEB 64% WP	Company Identification INDOFIL INDUSTRIES LIMITED PLOT NO: Z-8, SEZ-1, DAHEJ, TAL. VAGRA, DIST. BHARUCH-392130 GUJARAT, INDIA TEL NO: 02641-282659
Trade Name		
Synonyms		Chemical classification: Phenyl Alanine + EBDC
IUPAC	Methyl N-(2-methoxyacetyl)-N-(2,6-xylyl) -DL-alaninate; Manganese ethylenebis(dithiocarbamate) (polymeric) complex with zinc salt	
CAS Number	57837-19-1 & 8018-01-7	
Formula	$C_{15}H_{21}NO_4 + C_4H_6MnN_2S_4)_xZn_y$	

SECTION 2. COMPOSITION / INFORMATION OF INGREDIENTS

COMPONENT NAME	CAS REGISTRY NO	CONCENTRATION
Mancozeb	8018-01-7	64%
Metalaxyl	57837-19-1	8%
Other Ingredients		28%

SECTION 3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

Physical state : Solid
Colour : Yellow Powder
Odor : Musty Odor

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	
Inhalation	Inhalation of vapors 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 checked="" type="checkbox"/>	Highly Toxic <input type="checkbox"/>	Flammable <input checked="" 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	

SECTION 5 : FIRE FIGHTING MEASURES	
NFPA Flammability Classification	-----
NFPA RATINGS	Health: 1 Flammability :1 Reactivity: 1
OSHA classification	
Flash point	146°C (Open Cup) (°C)
Flammability (Explosive limits)	4
Auto ignition Temperature (°C)	132
Hazardous Combustion products	Hydrogen Sulfide, Carbon, Nitrogen and Sulfur
Extinguishing Media	Dry chemical powder, CO ₂ , Water, Water Spray
Protection of Fire Fighters	
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	
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 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: Wear suitable respirators where exposure limits are</p>

	<p>exceeded. An air-supplied respiratory protection must confirm to OSHO rules as specified in 29 CFR1910.134.</p> <p>Skin Protection: Wear insulated neoprene gloves for handling the material select in accordance with OSHO 29 CFR 1910.133.</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		
Mancozeb	NA		
Metalaxyl	NA		
Related reaction products	NA		

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid	Appearance	Yellow Powder
Odor	Musty odour	PH as such	NA
Specific gravity (Water = 1)	0.35 -0.50	Solubility in water @	Dispersible
Vapor pressure @ (mm Hg)	NA	Vapor density	NA
Viscosity	--	Boiling point	NA
Melting point (°C)	Not Applicable		

SECTION 10: STABILITY AND REACTIVITY

Chemical stability	Stable
Conditions to Avoid	Keep dry and avoid excessive heat (< 49°C) 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	<u>Mancozeb</u> : LD50 = >5000 mg/kg <u>Metalaxyl</u> : LD 50: 664 mg/kg
Acute Dermal toxicity	<u>Mancozeb</u> : LD50 = >10,000 mg/kg <u>Metalaxyl</u> : LD 50: 3100 mg/kg
Acute Inhalation toxicity	<u>Mancozeb</u> : LC50 = >5.14 mg/L <u>Metalaxyl</u> : LC 50 = >3600 mg/m3
Eye irritation: This material is irritating to the eyes Skin irritation: This material is irritating to the skin	

SECTION 12: ECOLOGICAL INFORMATION	
Ecotoxicity	Contamination of both terrestrial and marine environments should be avoided
Environmental fate	No data

SECTION 13: DISPOSAL CONSIDERATIONS	
Waste Disposal Method Container disposal : triple rinse puncture and dispose off in accordance with state regulation.	

SECTION 14 : TRANSPORT INFORMATION IATA	
IATA P.S.NAME	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.* (MANCOZEB TECHNICAL AND METALAXYL TECHNICAL)
IATA HAZARDS CLASS	9
IATA UN NO	UN 3077
IATA PACKING GROUP	III

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

Name of Firm: INDOFIL INDUSTRIES LIMITED	
PLOT NO: Z-8, SEZ-1, DAHEJ, TAL. VAGRA, DIST. BHARUCH-392130 GUJARAT, INDIA TEL NO: 02641-282659	
Local Bodies Involved	Collector of Thane

DISCLAIMER

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