



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

MATERIAL SAFETY DATA SHEET

2-R&D-MSDS- AGRO-FP- 424

SECTION 1: PRODUCT IDENTIFICATION		
Chemical Name	Companion MANCOZEB 63% + CARBENDAZIM 12% 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	Companion	
Synonyms	Mancozeb, Carbendazim	GROUP: Alkylene Bis Dithiocarbamate Benzimidazole
IUPAC	Manganese ethylenebis(dithiocarbamate) (polymeric) complex with zinc salt + Methyl benzimidazol-2-ylcarbamate	CLASS: Fungicide
CAS Number	8018-01-7 & 10605-21-7	
Formula	Mancozeb- $C_4H_6MnN_2S_4$) $_x$ Zn $_y$ Carbendazim- $C_9H_9N_3O_2$	

SECTION 2: COMPOSITION / INFORMATION OF INGREDIENTS

COMPONENT NAME	CAS REGISTRY NO	CONCENTRATION
Carbendazim	10605-21-7	12%
Mancozeb	8018-01-7	63%
Other Ingredients		25%

SECTION 3: HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

Physical state : Solid
 Colour : Pale Yellow 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. 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	Dust can irritate the 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 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 not known

SECTION 5: FIRE FIGHTING MEASURES

NFPA Flammability Classification	-----
NFPA RATINGS	Health: 1 Flammability :1 Reactivity: 1
OSHA classification	--
Flash point	Not applicable
Flammability (Explosive limits)	Not applicable
Auto ignition Temperature (°C)	No data
Hazardous Combustion products	No data
Extinguishing Media	Dry chemical powder, CO2, 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 Mancozeb. Contain water run-off.
Special Properties	Use Water spray to cool container. Wear self contained breathing apparatus.
Unusual Hazards	Sulfur combines with all metal except gold and platinum.

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	<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: Wear suitable respirators where exposure limits are exceed. 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>

Occupational exposure limits

Component	Limit		
Mancozeb	ACGIH	Not determined (threshold limit	

		value	
Mancozeb	OSHA	Not determined (Permissible exposure limit)	
Carbendazim	OSHA	Not determined	
Carbendazim	ACGIH	Not determined	

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid Powder	Appearance	Pale Yellow Powder
Odor	Musty odour	pH (1%)	6 to 7.5
Specific gravity (Water = 1)	0.4 to 0.5 g/cm ³	Solubility in water @	Forms Suspension in water
Vapor pressure @ (mm Hg)	NA	Vapor density	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 (> 49°C) and ignition sources.
Hazardous Decomposition Products	May react with strong oxidizing agents.
Hazardous Polymerization	Data not available.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Oral toxicity	LD 50 (oral – rat): > 2000 mg/kg
Acute Dermal toxicity	> 2000 mg/kg
Acute Inhalation toxicity	> 3.60 mg/L
Eye irritation: This material is slightly irritating to the eyes	
Skin irritation: This material is non-irritant 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: Incinerate in approved equipment in accordance with local regulations.

SECTION 14: TRANSPORT INFORMATION

Not regulated as a hazardous material by any mode of
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	transportation. Marine Pollutant: Yes Export water (IMO) : Not regulated Air (ICAO / IATA) : Not regulated
DOT Shipping Name	DOT Technical Name: Mancozeb Technical and Carbendazim Technical
DOT Hazard class	Class: 9 UN Number: 3077
DOT identification number	No data
DOT packing Group	Packing Group: 3
DOT additional information	Classified as Non Dangerous goods for transport by road and rail

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				
Mailing Address: Kolshet, Off Swami Vivekanand Road, Azad nagar, Sandoz Baug P.O. Thane – 400 607.		Gat No. 194, Village – Gahunje, Tal. Maval, Dist. Pune.		
Telephone 6799 9100	Telex		Telephone 22767 5084	
Fax 2589 8357	Telegraphic Code		Fax 22767 5083	
Local Bodies Involved	Collector of Thane			

DISCLAIMER

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