

INDOFIL CHEMICALS COMPANY
 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	MANCOZEB + CARBENDAZIM	Company Identification INDOFIL CHEMICALS COMPANY 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 63 + Carbendazim 12	Chemical classification: Mixture Thiocarbamate + Benzimidazole
IUPAC	Manganese ethylenebis(dithiocarbamate) (polymeric) complex with zinc salt + Methyl benzimidazol-2-ylcarbamate	
CAS Number	8018-01-7 & 10605-21-7	
Formula	$C_4H_6MnN_2S_4)_xZn_y + C_9H_9N_3O_2$	

SECTION 2. COMPOSITION / INFORMATION OF INGREDIENTS

COMPONENT NAME	CAS REGISTRY NO	CONCENTRATION
Carbendazim	10605-21-7	12%
Mancozeb	8018-01-7	63%
Inerts		
Surface Active Agents		

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	
Inhalation	Dust can irritate the nose and throat

DELAYED OR OTHER HEALTH EFFECTS

Target organs	-----
---------------	-------

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
-----------------------------------	-------------------------------------

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	

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 Disulfide and Oxides of carbon, Nitrogen and Sulfur
Extinguishing Media	Dry chemical powder, CO2, Water, Water Spray
Protection of Fire Fighters	
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	
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	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

Equipment	<p>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 + CARBENDAZIM	NA		

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid	Appearance	Pale Yellow Powder
Odor	Musty odour	PH of Slurry	7.1
Specific gravity (Water = 1)	0.4 to 0.5 G/CC	Solubility in water @	NA
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	Hydrogen Sulfide, Carbon Disulfide, Oxides of carbon, Nitrogen and Sulphur

Products	
Hazardous Polymerization	Data not available

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Oral toxicity	LD 50 (oral – rat): > 5 g/kg mg/kg
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	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 transportation. It is not a marine pollutant. Export water (IMO) : Not regulated Air (ICAO / IATA) : Not regulated
DOT Shipping Name	MANCOZEB 455gm/Lit.
DOT Hazard class	Lowest (Green Hazard Label)
DOT identification number	No data
DOT packing Group	No data
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	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 CHEMICALS COMPANY			
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	Telephone 22712 2302
Fax 589 8357	Telegraphic Code	Fax 22767 5083	Fax 22712 9242
Local Bodies Involved	Collector of Thane		

DISCLAIMER

The Information contained in this material data sheet is believed to be reliable but no representation, guarantee or warranties, of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them. It is however ensured that the information contained in the material safety data sheet is relevant to the product manufactured / handled or sold as the case may be by us. Indofil Chemicals Company makes no warranty expressed or implied in respect of the adequacy of this document for any particular purpose.

Last updated :20/04/2007