



## SAFETY DATA SHEET MANCOZEB 80% WP

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Issued: 31/07/2007  
Revision No: 4  
Reviewed: 12/07/2011  
Ref: Aceto/JHBP/GG3

### 1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

**Product name:** MANCOZEB 80% WP  
**Use / description of product:** Use as an agricultural/horticultural fungicide  
**Company name:** INDOFIL INDUSTRIES LIMITED  
Kalpataru Square,  
Kondivita Road,  
Off Andheri Kurla Road,  
Andheri [East],  
Mumbai – 400-059.  
Tel.: +91 (22) 66637373  
Fax: +91 (22) 28322275  
E-mail: mkt-icc@modi.com

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

**Hazardous ingredients:** MANCOZEB  
EINECS 235 654 - 8 CAS: 8018-01-7  
[Xi], N, R37; R50/53

### 3. HAZARDS IDENTIFICATION

**Main hazards:** Irritating to respiratory system. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Other hazards:** Ingestion. Based on animal studies, long-term exposure to high levels of mancozeb may cause abnormal thyroid function. Individuals with pre-existing diseases of the thyroid may have increased susceptibility to the toxicity of excessive exposure. Chronic. Inhalation: The effects in animals from repeated high doses of mancozeb dust equivalent to 150-250 times the AEL include reduced body weight, inflammation of the lungs and abnormal thyroid function. Ingestion Toxic effects in animals from repeated ingestion of high doses include reduced body weight and thyroid effects. Increased incidence of thyroid tumours and ocular lesions (retinopathy) were observed in rats administered 750 ppm of mancozeb in their diet for two years. This compound is considered to show weak carcinogenic activity. Tests in some animals indicate that the compound may produce embryo and foetal toxicity, but only at maternally toxic doses. Multi-generation studies in animals demonstrate no reproductive toxicity. Although there have been isolated reports in the scientific literature of mutagenic activity of mancozeb, in general it has not been found to be genotoxic in animals or in cell cultures. Mancozeb has tested negative for herbicidal gene mutation.

### 4. FIRST AID MEASURES (SYMPTONS)

**Skin contact:** There may be mild irritation at the site of contact.  
**Eye contact:** There may be irritation and redness. The vision may become blurred.  
**Ingestion:** There may be soreness and redness of the mouth and throat.

[cont...]



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### 4. FIRST AID MEASURES (ACTION)

<b>Skin contact:</b>	Wash immediately with plenty of soap and water. Seek medical attention if ill effects or irritation develops
<b>Eye contact:</b>	Bathe the eye with running water for 15 minutes. Seek medical attention if ill effects or irritation persist
<b>Ingestion:</b>	Do not induce vomiting. If conscious, give half a litre of water to drink immediately. Get medical attention immediately
<b>Inhalation:</b>	Remove victim to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. Get professional medical attention immediately

### 5. FIRE-FIGHTING MEASURES

<b>Extinguishing media:</b>	Water spray. Carbon dioxide. Dry chemical powder. Alcohol or polymer foam.
<b>Exposure hazards:</b>	May form flammable / explosive dust-air mixture. In combustion emits toxic fumes of sulphur oxides. In combustion emits toxic fumes of nitrogen oxides. In combustion emits toxic fumes of carbon dioxide / carbon monoxide.
<b>Protection of fire-fighters:</b>	Wear self-contained breathing apparatus. Run-off from fire control may be a pollution hazard. If area is not too heavily exposed to fire, and if conditions permit, let fire burn itself out, since water may increase the contamination hazard.

### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions:</b>	Eliminate all sources of ignition. Do not create dust.
<b>Environmental precautions:</b>	Do not discharge into drains or rivers. Contain the spillage using bunding.
<b>Clean-up procedures:</b>	Transfer to a closable, labelled salvage container for disposal by an appropriate method. Do not use equipment in clean-up procedure which may produce sparks.

### 7. HANDLING AND STORAGE

<b>Handling requirements:</b>	Ensure there is sufficient ventilation of the area. Smoking is forbidden. Use non-sparking tools. When handling do not eat, drink or smoke.
<b>Storage conditions:</b>	Store in cool, well ventilated area. Keep away from sources of ignition. Keep container tightly closed. Keep in original containers, out of reach of children Never allow the product to become wet during storage. This may lead to chemical changes, which will reduce the effectiveness as a fungicide and could create flammable vapours.
<b>Suitable packaging:</b>	Must only be kept in original packaging.

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### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Engineering measures:</b>	Ensure there is sufficient ventilation of the area. Ensure lighting and electrical equipment are not a source of ignition.
<b>Respiratory protection:</b>	Wear dual cartridge respirator for dusts and mists
<b>Hand protection:</b>	Protective gloves. (recommended material e.g.: Natural Latex, Chloropren, Nitrile, Viton, Butyl, permeation time: 480 min, penetration level: 3) Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves.
<b>Eye protection:</b>	Safety goggles.
<b>Skin protection:</b>	Mixers and loaders must wear overalls , protective goggles and chemical-resistant apron. Applicators and other handlers must wear overalls, goggles and waterproof gloves. Any clothing or other absorbent material which has been drenched or heavily contaminated must be discarded.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>State:</b>	Solid
<b>Colour:</b>	Yellow
<b>Odour:</b>	Sulphurous
<b>Solubility in water:</b>	6.2 ppm (pH 7.5, 25 °C)
<b>Flash point°C:</b>	146

### 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under normal conditions.
<b>Conditions to avoid:</b>	Acids and moisture (in storage)
<b>Hazardous decomp. products:</b>	Elevated temperature or free water promotes decomposition, which may cause spontaneous combustion. In combustion emits toxic fumes. In combustion emits toxic fumes of sulphur oxides. In combustion emits toxic fumes of carbon dioxide / carbon monoxide. In combustion emits toxic fumes of nitrogen oxides.

### 11. TOXICOLOGICAL INFORMATION

<b>Hazardous ingredients:</b>	MANCOZEB WP ACUTE ORAL RAT LD50 >2000 mg/kg ACUTE DERMAL RAT LD50 >2000 mg/kg ACUTE INHALATION RAT LD50 > 2.72 mg/kg In EYE irritancy tests has been shown to be slightly irritant In SKIN irritancy tests has been shown to be non irritant Not sensitizing to Guinea pig skin
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12. ECOLOGICAL INFORMATION

**Ecotoxicity:** MANCOZEB WP  
Acute fish, rainbow trout LC50 96 hrs : 0.11 mg/L  
Acute fish, bluegill LC50 96 hrs : 7.24 mg/L  
Algae EC50, 72 hrs : 1.16 mg as/L  
Acute Daphnia 24 h, EC50 : 0.01 mg/L

13. DISPOSAL CONSIDERATIONS

**Disposal operations:** Do not contaminate water, food or feed by disposal. Wastes resulting from the use of this product may be disposed of at an approved waste disposal facility.  
**Disposal of packaging:** Dispose of in a regulated landfill site or other method for hazardous or toxic wastes.  
**NB:** The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

14. TRANSPORT INFORMATION

ADR / RID

**UN no:** 3077 **ADR Class:** 9  
**Packing group:** III  
**Shipping name:** Environmentally Hazardous Substance, solid, n.o.s. (mancozeb)

IMDG / IMO

**UN no:** 3077 **Class:** 9  
**Packing group:** III **Marine pollutant:** Yes  
**Labelling:** Environmentally Hazardous Substance, solid, n.o.s. (mancozeb)

IATA / ICAO

**UN no:** 3077 **Class:** 9  
**Packing group:** III **Packing instructions:** 911  
**Labelling:** Environmentally Hazardous Substance, solid, n.o.s. (mancozeb)

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15. REGULATORY INFORMATION

**Hazard symbols:**



Irritant. [Xi]

Dangerous for the environment. [N]

**Risk phrases:**

R37: Irritating to respiratory system.

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Safety phrases:**

S1/2: Keep locked up and out of the reach of children.

S13: Keep away from food, drink and animal feedstuffs.

S29: Do not empty into drains.

S35: This material and its container must be disposed of in a safe way.

S37: Wear suitable gloves.

**Note:**

The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

**Risk phrases used in s.2:**

R37: Irritating to respiratory system.

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Legal disclaimer:**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

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