

**MATERIAL SAFETY DATA SHEET**

Product Name	Mancozeb 80 WP
Revision	01
Preparation Date	September 14, 2014
Revision Date	May 27, 2016
MSDS No.	UPL/A/F/010

UPL LIMITED

MANCOZEB 80% WP

MATERIAL SAFETY DATA SHEET**SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION**

Company	: UPL Limited Corporate office: Uniphos House Madhu Park 11 th Road Khar (West) Mumbai – 400 052 India
Telephone	: +91 22 26468000
Telefax	: +91 22 26040467
Emergency	: +91 22 26468000
Telephone Number	
Manufacturing Site	: UPL LIMITED, 11, GIDC, Vapi Gujarat, - 393002
Telephone	: 0091 - 0260 – 243276
Telefax	: 0091- 0260 – 2431823
PRODUCT NAME	: MANCOZEB 80 WP
SYNONYM	: Unizeb M - 45 80 WP – Agricultural Fungicide
CHEMICAL NAME	: Manganese ethylenebis (dithiocarbamate) (polymeric) Complex with Zinc salt.
RECOMMENDED USE	: Fungicide
USED ADVISED AGAINST	: Activities contrary to label information
CHEMICAL FAMILY:	Dithiocarbamate
CHEMICAL FORMULA:	[SCSNHCH ₂ CH ₂ NHCSSMn-] _x (Zn) _y
MOLECULAR WEIGHT:	Not applicable

**SECTION 2 – COMPOSITION, INFORMATION OF INGREDIENTS
COMPONENT**

	Percent Purity	CAS NO.
Mancozeb A.I.	80%	8018-01-7
Other ingredients	20%	

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SECTION 3 – HAZARDS IDENTIFICATION SUMMARY

Emergency Overview

Yellowish green powder with musty odor.
Can cause slight to moderate skin irritation.
Avoid breathing dust or spray mist.
Keep out of reach of children.

Potential Health Hazards:

May cause allergic skin reaction. Suspected of damaging the unborn child. Very toxic to aquatic life.

UPL LIMITED**MANCOZEB 80% WP****SECTION 4 – FIRST AID MEASURES**

IF INHALED: Remove person from exposure area to fresh air, Keep patient at most comfort level and keep warm. Get medical attention.

IF ON SKIN: Remove contaminated clothing and wash skin with plenty of soap and water.

IF SWALLOWED: rinse mouth with water. Avoid giving alcohol. If vomiting occurs give more water. Seek medical attention.

IF IN EYES: Wash eyes with fresh water for 15 minutes. If irritation continues, see a doctor.

ANTIDOTE & NOTE TO PHYSICIAN: Treat symptomatically.

SECTION 5 – FIRE FIGHTING MEASURES

FLASH POINT - Not applicable

SPECIFIC HAZARDS: Thermal decomposition giving flammable and toxic products.

FIRE AND EXPLOSION HAZARD: On burning may emit toxic fumes.

EXTINGUISHING INSTRUCTION: Use foam, Water fog/water spray, dry agents (Carbon dioxide, dry chemical powder).



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FIRE FIGHTING EQUIPMENT: Wear self-contained breathing apparatus pressure –demand, MSHA/NIOSH and full protective gear.

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SECTION 6 – ACCIDENTAL RELEASE MEASURES

Clean up spills immediately, observing precautions. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Vacuum or sweep up material and place in properly labeled disposal container. Large spills may be neutralized with dilute solutions of soda ash or lime. After removal, flush contaminated area thoroughly with water. Do not allow any material to run off in soil, drainage systems or bodies of water. Notify and consult with proper regulatory authorities.

SECTION 7 – HANDLING AND STORAGE

Handling: Use only in well ventilated area. Avoid dust formation in confined area. Follow all MSDS/label precautions even after container is emptied because they may retain product residues.

Storage: Store in a cool dry place in original container and protect from sunlight. Keep away from food, animal feed and drinking water.

SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION

ENGINEERING CONTROL: Local exhaust ventilation may be necessary to control any air contaminants to within their TLV's during the use of this product. Facilities storing or utilizing this material should be equipped with eyewash facility and safety shower.

PERSONAL PROTECTIVE EQUIPMENT:

EYE PROTECTION - Safety glasses

CLOTHING – Long sleeved shirt and long pants, shoes plus socks, chemical resistant headgear for overhead exposures.

GLOVES – Waterproof gloves.

USER SAFETY RECOMMENDATIONS – Wash hands before eating, drinking, and 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 the outside of gloves before removing. As soon as possible, wash thoroughly and change in to clean clothing.

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SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**PHYSICAL DESCRIPTION:** Yellowish powder.**ODOR:** Musty odor**CHEMICAL FORMULA:** $[\text{SCSNHCH}_2\text{CH}_2\text{NHCSSMn}]_x (\text{Zn})_y$ **MOLECULAR WEIGHT:** Not applicable**MELTING POINT:** 192 –204 °C**DENSITY:** 1.92 g/cc**VAPOR PRESSURE:** Negligible at 20 °C**WATER SOLUBILITY:** Practically insoluble**SECTION 10 – STABILITY AND REACTIVITY****CHEMICAL STABILITY:** Stable**CONDITIONS TO AVOID:** May cause explosive reaction on contact with oxidizing agents.**INCOMPATIBILITY WITH OTHER CHEMICALS:** Finally divided metals, alkaline metals and mineral acids.**HAZARDOUS DECOMPOSITION PRODUCTS:** Nitrogen oxide, Carbon dioxide, Carbon disulfide, Oxides of Sulfide, Hydrogen sulfide, Ethylenethiourea**HAZARDOUS POLYMERISATION:** Product may undergo polymerization.**SECTION 11 – TOXICOLOGICAL INFORMATION**

ACUTE TOXICITY: Oral LD ₅₀ (rat,)	– >5000 mg/kg body weight
Dermal LD ₅₀ (rat)	- >4000mg/kg body weight
Inhalation LC ₅₀ (rat)	- > 5.14 mg/l of air
Eye Irritation (rabbit)	– Moderate- irritant
Skin Irritation (rabbit)	– Slight irritant
Sensitization (guinea pig)	– Weak-sensitizer
Mutagenic effects	-- NOAEL = 60 mg/kg oral rats
Reproductive effects	-- NOAEL = 150 mg/kg oral rats

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SECTION 12 – ECOLOGICAL INFORMATION**ECOTOXICITY**

EC50/72h/algae : 1.18 mg/l
LC50/48h/daphnia : 0.47 mg/l
LC50/fish/96 h : 0.2 mg/l

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste – Dispose of in accordance with applicable Federal, State, local laws and regulations.

Container – Empty the container with equipment. Do not re-use the container. Dispose of empty containers in a sanitary landfill or incineration so as to avoid environmental or water pollution.

SECTION 14 – TRANSPORT INFORMATION**IATA**

UN-No : 3077
Hazard Class : 9
Packaging Group : III
Proper Shipping Name : Environmentally hazardous substances, solid n.o.s. (Mancozeb)
Marine Pollutant : Yes

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IMDG

UN-No : 3077
Hazard Class : 9
Packaging Group : III
Proper Shipping Name : Environmentally hazardous substances, solid n.o.s. (Mancozeb)
Marine Pollutant : Yes
EMS No. : F-A,S-F

UPL LIMITED**MANCOZEB 80% WP****SECTION 15 - MANUFACTURE'S / SUPPLIER'S DATA****International Inventory**

(CAS- 52315-07-8)

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Listed
Canada	Domestic Substances List (DSL)	Listed
Canada	Non-Domestic Substances List (NDSL)	Listed
China	Inventory of Existing Chemical Substances in China (IECSC)	Not Listed
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Listed
Europe	European List of Notified Chemical Substances (ELINCS)	Listed
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Listed
Korea	Existing Chemicals List (ECL)	Listed
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Listed
United States	Toxic Substances Control Act (TSCA) Inventory	Listed

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

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SECTION 16 - DISCLAIMER**Abbreviation and acronyms:**

CAS	:	Chemical Abstracts Service (division of the American Chemical Society)
LD50	:	Lethal dose
LC50	:	Lethal Concentration
EC50	:	Effective Concentration
IMDG	:	International Maritime Code for Dangerous Goods
IATA	:	International Air Transport Association

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Date: 27/05/2016