



Mancozeb Technical

Preparation Date 22-Nov-2011

Revision date 08-Sep-2016

Revision Number: 1

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

Identification of the product

Substance name	Mancozeb
CAS-No	8018-01-7
Synonyms	Mancozeb Technical

Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Recommended use	Fungicide
Sector of use	Agricultural applications
Uses advised against	Activities contrary to label recommendation

Details of the Supplier of the Safety Data Sheet

Supplier

Uniphos Colombia Plant Limited
Via 40 No. 85-85
Barranquilla, Colombia
Tel.: 5-3616200

E-mail address info@uniphos.com

1.4 Emergency Telephone Number

Emergency telephone number Tel: 02646-251223, 250336, 251249

2. Hazards Identification

Classification

Human Health	
Skin sensitization	Category 1 - (H317)
Reproductive toxicity	Category 2 - (H361)

Environment	
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)

2.2 Label elements

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Signal word

WARNING

Hazard statements

H317 - May cause an allergic skin reaction
 H361 - Suspected of damaging fertility or the unborn child
 H400 - Very toxic to aquatic life
 H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements

Prevention

P201 Obtain special instruction before use.
 P280 Do not handle until all safety precautions have been read and understood
 P261 Avoid breathing dust/fume/gas/mist/vapors/spray
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P273 Avoid release to the environment.

Response

P302+P352 IF ON SKIN: Wash with plenty of water and soap.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P321 Specific treatment(see... on this label)
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P308+P313 IF exposed or concerned : Get medical advice/attention
 P391 Collect spillage.

Storage

P405 Store locked up

Prevention

P501 Dispose of contents/container to an approved waste disposal plant.

Other Information

No Other hazards known

Chemical name	CAS-No	Weight %
Mancozeb	8018-01-7	80 - 90

4. First aid measures

Description of first-aid measures



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General advice	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)
Eye contact	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists, consult a specialist
Skin contact	Wash off immediately with plenty of water. If symptoms persist, call a physician
Ingestion	Rinse mouth with water. Call a POISON CENTER or doctor if you feel unwell
Inhalation	Move to fresh air. Call a POISON CENTER or doctor if you feel unwell

Most Important Symptoms and Effects, Both Acute and Delayed

The most important known symptoms and effects are described in labeling see section (2) and/or in section 11.

Indication of immediate medical attention and special treatment needed

Treat symptomatically and supportively.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media Dry chemical, CO2, Water spray or regular foam

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire

Special hazards arising from the substance or mixture

Special Hazard Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition. Hazardous decomposition products formed under fire conditions: Carbon disulphide, Carbon oxides, Hydrogen sulphide, Nitrogen oxides (NOx)

Advice for Firefighters

In the event of fire, wear self-contained breathing apparatus. Use personal protection equipment. Avoid runoff to waterways and sewers

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Avoid contact with skin and eyes. Avoid dust formation. Use personal protective equipment
Wear protective gloves/protective clothing and eye/face protection.

Environmental Precautions



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Prevent product from entering drains. Do not allow material to contaminate ground water system

Methods and materials for containment and cleaning up

Sweep up and shovel into suitable containers for disposal

7. Handling and Storage

Precautions for Safe Handling

Handling

Avoid dust formation in confined areas. Remove and wash contaminated clothing before re-use. Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product

Hygiene Measures

Use only outdoors or in a well-ventilated area

Conditions for safe storage, including any incompatibilities

Maintain air gap between stacks/pallets. Decomposes by reaction with strong acids. Keep away from food, drink and animal feeding stuffs

Specific end uses

Fungicide

8. Exposure Controls/Personal Protection

Control Parameters

Exposure Limits

Apply technical measures to comply with occupational exposure limits.

Chemical name	France
Mancozeb	5 mg/m ³

Exposure Controls

Engineering controls

Ensure adequate ventilation, especially in confined areas. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment

Eye protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH(US) or EN 166(EU).

Skin/Hand protection

Long-sleeved clothing. Preventative skin protection is recommended. Wear suitable protective glove/clothing. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory

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practices. Wash and dry hands.

Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Environmental exposure controls

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. Local authorities should be advised if significant spillage cannot be contained.

General hygiene considerations

Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

appearance	Greyish-yellow	
Physical state	solid powder	
Odor	slight amine	
<u>Property</u>	<u>VALUES</u>	<u>Remarks/ Method</u>
pH	6.5-7.5	CIPAC MT 75 (1% aq)
Melting point/freezing point	No information available	(decomposes)
Boiling Point/Range	No information available	
Flash Point	No information available	
flammability (solid, gas)	Not highly flammable	CE A.10
vapor pressure	<5.6 10E-7 hPa (25)	
Bulk density	0.5 kg/l	Pour density / Tap density 0.4 kg/l / 0.6 kg/l
Water solubility	dispersible	
Solubility in Other Solvents	Practically insoluble	
Partition coefficient: n-octanol/water	No information available	
Autoignition temperature	152 °C	CE A.16
decomposition temperature	No information available	
viscosity	No information available	
Oxidizing properties	Non oxidizing (according to A17 test)	
Explosive properties	According to the chemical structure no explosion reaction is expected	

9.2 OTHER INFORMATION

VOC Content No information available

10. Stability and Reactivity

Reactivity

None under normal use.

Chemical stability



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Stable under normal conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Do not store near strong acids. Keep away from children. Avoid creating dusty conditions. Do not expose to extreme temperatures.

Incompatible Materials

Alkaline, Strong acids, Strong oxidizing agents, Quaternary ammonium salts, Sequestering agents

Hazardous Decomposition Products

Oxides of carbon and nitrogen, Hydrogen sulfide, Oxides of sulfur, Carbon disulfide, Ethylenethiourea

11. Toxicological Information

Information on Toxicological Effects

Acute toxicity

Local effects

Inhalation

Based on available data, the classification criteria are not met.

Eye contact

No eye irritation

Skin contact

No skin irritation

Ingestion

Based on available data, the classification criteria are not met.

LD50 Oral

LD50 Oral > 5000 mg/kg (rat)

LD50 Dermal

LD50 Dermal > 2000 mg/kg (rabbit)

LC50 Inhalation:

LC50 Inhalation: 5.2 mg/L (rat) (4-hr)

Chronic toxicity

Skin Corrosion/Irritation

No skin irritation.

Eye damage/irritation

No eye irritation

sensitization

Repeated or prolonged contact may cause allergic reactions in very susceptible persons

Mutagenic effects

Based on available data, the classification criteria are not met.

Carcinogenic effects

Based on available data, the classification criteria are not met.

Reproductive effects

Suspected of damaging fertility or the unborn child

STOT - Single Exposure

Based on available data, the classification criteria are not met.

STOT - repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

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12. Ecological Information

Toxicity

Very toxic to aquatic life with long lasting effects

EC50/72h/algae = 1.18 mg/l

LC50/48h/daphnia = 0.47 mg/l

LC50/fish/96 h = 0.2 mg/l

Persistence and Degradability

No information available

Bioaccumulative Potential

No information available

Chemical name	Log Pow
Mancozeb	1.38

Mobility in Soil

No information available.

Results of PBT and vPvB Assessment

No information available

Other Adverse Effects

No information available.

13. Disposal Considerations

Waste Treatment Methods

Waste from Residues / Unused Products

Dispose of in accordance with local regulations.

Contaminated packaging

Empty containers should be taken for local recycling, recovery or waste disposal.



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14. Transport Information

ADR/RID

14.1 UN-No	UN3077
14.2 Proper shipping name	Environmentally hazardous substance, solid, n.o.s. (Mancozeb)
14.3 Hazard class	9
14.4 Packing group	III
14.5 Environmental Hazard	Yes
14.6 Special Provisions	274, 335, 375, 601
Tunnel restriction code	(E)

IMDG/IMO

14.1 UN-No	UN3077
14.2 Proper shipping name	Environmentally hazardous substance, solid, n.o.s. (Mancozeb)
14.3 Hazard class	9
14.4 Packing group	III
14.5 Environmental Hazard	Marine pollutant
14.6 Special Provisions	274, 335, 966, 967, 969

IATA/ICAO

14.1 UN-No	UN3077
14.2 Proper shipping name	Environmentally hazardous substance, solid, n.o.s. (Mancozeb)
14.3 Hazard class	9
14.4 Packing group	III
14.5 Environmental Hazard	Yes
14.6 Special Provisions	A97, A158, A179, A197

15. Regulatory Information

Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

- To avoid risks to man and the environment, comply with the instructions for use

International Inventories

TSCA	Complies
EINECS/ ELINCS	Complies
DSL/NDSL	Complies
PICCS	Complies
ENCS	Complies
China	-
AICS	Complies
KECL	Complies

Legend

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
PICCS - Philippines Inventory of Chemicals and Chemical Substances



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ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
AICS - Australian Inventory of Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances

16. Other Information

Full text of H-Statements referred to under sections 2 and 3

H317 - May cause an allergic skin reaction
H361d - Suspected of damaging the unborn child
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

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Revision note	Not applicable

Disclaimer

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End of Safety Data Sheet