



CROWNBRIDGE MANAGEMENT L.P.
SUITE 260,2323 - 32 AVENUE N.8
CALGARY, ALBERTA T2E623
CANADA
WWW.CROWNBRIDGETRADING.COM

MATERIAL SAFETY DATA SHEET

1. SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade Name: Malzeb

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Fungicide

Uses advised against: You must not use for other purposes other than those described in the product.

1.3. Details of the supplier of the safety data sheet

Supplier: Crownbridge Management L.P

Address:

Suite 260,2323 - 32 Avenue N.8.,
Calgary, Alberta T2E623,
Canada

E-mail address: info@crowbridge trading.com

1.4. Emergency telephone number 8004249300

2. SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

CLP Classification table

Hazard Classes/ categories	Hazard statement(s)	M-Factors
Skin Sens. Cat.1	H317: May cause an allergic skin reaction.	No information available.
Repr. Tox. Cat.2	H361d: Suspected of damaging the unborn child.	
Aquatic chronic Tox. Cat.2	H411: Toxic to aquatic life with long lasting effects.	

2.2. Label elements

Pictograms and Signal word





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Hazard statement(s)

H317 May cause an allergic skin reaction.
H361 Suspected of damaging fertility or the unborn child .
H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P261: Avoid breathing dust and spray.
P280: Wear nitrile gloves and protective clothing. P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P308+P313: IF exposed or concerned: Get medical advice/attention.
P501: Dispose of contents/container to an authorised hazardous waste collection site in accordance with national regulation.

EUH 401: To avoid risks to human health and the environment, comply with the instructions for use.

Authorisation REACH number(s) : Not applicable

2.3. Other hazards

Other hazards which do not result in classification : The substance/mixture is not classified as SVHC.

2.4. Phrases for special risks. : SP1: Do not contaminate water with the product or its container (Do not clean

3. SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical name	Content (%)	EC number	CAS Number	Classification Regulation (EC) 1272/2008	Hazard statement(s)*
MANCOZEB (ISO)	64		80 18- 01- 7	Skin Sens. 1 Repr. 2 Aquatic Acute 1	H317 H361 H400
METALAXYL TECHNICAL	8	26 0- 9 79- 7	57837-19-1	Acute Tox. 4 Skin Sens. 1 Aquatic Chronic 3	H302 H317 H412

(*) See the full text of the hazard statements in section 16.



Composition (%) : Mancozeb (64% exp. as Mancozeb pure w/w)
 Metalaxyl (8% exp. as Metalaxyl pure w/w)

4. SECTION 4: First aid measures

4.1. Description of first aid measures

General notes	If symptoms persists, call a physician.
In case of inhalation:	If symptoms are experienced remove source of contamination or move victim to fresh air. Obtain medical advice.
In case of contact with skin:	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation develops.
In case of contact with eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Do not forget to take off contact lenses Get medical attention if irritation occurs.
In case of ingestion:	Check breathing; If necessary artificial respiration. Keep the patient at rest. Maintain body temperature. Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting. If the person is unconscious lay her on her side with the head lower than the rest of the body and semiflexed knees. Request attention medical and show this tab or label.
Recommendations for first aid responders:	NEVER LEAVE THE VICTIM ALONE. Use suitable protective clothing
4.2. Most important symptoms and effects, both acute and delayed	Not determined
4.3. Indication of any immediate medical attention and special treatment needed	Not determined



5. SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Non inflammable product.
Only the container and packing may ignite.
Use dry chemical, CO₂, water spray (fog) or foam.
Collect contaminated fire-fighting water separately. It must not enter the sewage system.

Unsuitable extinguishing media:

Water jet from high flow (due to risk of contamination).

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products:

Not known.

Other specific hazards:

Not known.

5.3. Advice for firefighters

Advice for firefighters:

Wear suitable protective clothing and dust mask with filter for chemicals.

6. SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

Do not breath the powder.
Avoid contact with mouth, eyes and skin.
Keep unauthorised people, children and animals away from the spillage area
Wear suitable protective clothing and gloves to prevent contamination.

For emergency responders:

Not available.

6.2. Environmental precautions

Environmental precautions:

Keep out of waterways.

6.3. Methods and material for containment and cleaning up

Containment:
methods.

Construction of barriers of protection, drains and coating

Cleaning:

Cover the product with sawdust, sand or dry land, sweep it, insert it into a dry container.



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Do not clean the area contaminated with water.
Other information: Do not use brushes or compressed air to clean surfaces or clothing

6.4. Reference to other sections

Reference to other sections:

No information available.

7. SECTION 7: Handling and storage

7.1. Precautions for safe handling

Containment and measures to prevent fire:

The job and the methodology should be organized in such a way that direct contact with the product is minimized or prevented. Handle with care. Workspaces Use with adequate ventilation and safety showers presence next.

Measures to prevent aerosol and dust generation:

Avoid spills and leaks.

Measures to reduce the release of the substance or mixture to the environment:
Advice on general occupational hygiene:

No information available.
No information available.

7.2. Conditions for safe storage, including possible incompatibilities

Technical measures and storage conditions:

Store the product in its original container, closed and tagged, in cool, dry, ventilated and away from food, beverages and feed. Keep out of reach of children, animals and unauthorized personnel

Packaging materials:

-

Requirements for storage rooms and vessels:

Storage Keep container closed after use. Avoid high temperatures and frost.

Further information on storage conditions:

No data available

7.3. Specific end use(s)

Recommendations:

The product is for plant protection use.



8. SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No DNEL data.

Information on monitoring procedures:

Not available

Currently recommended monitoring methods:

Not available

Specific monitoring standards:

No information available.

There are not data of PNEC

Control banding approach ("control banding"):

Good industrial hygiene practices

8.2. Exposure controls

Appropriate engineering controls:

-

Appropriate exposure control measures related to the identified use(s) of the substance or mixture:

-

Structural measures to prevent exposure:

No information available.

Organisational measures to prevent exposure: No information available.

Technical measures to prevent exposure:

No information available.

8.2.2. Individual protection measures, such as personal protective equipment

Eye/Face protection:

Avoid contact. Safety glasses with side-shields.

Hand Protection:

Wear gloves. After use, wash with soap and water.

Others:

Mittens, boots or coverall depending on the hazards associated with the substance or mixture and the possibilities of contact.

Respiratory Protection:

In case of insufficient ventilation use respiratory equipment while preparing the mixture.
(Affinity FR FFP1 D - CE 0121 according to EN 149:2001)

Do not breathe dust.

Full-face mask.



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Thermal hazards:
Skin Protection

Not available.
Wear suitable clothing to avoid repeated or delayed contact with skin. Thoroughly wash working clothes daily. After use, wash with soap and water.

8.2.3. Environmental exposure controls

Appropriate exposure control measures related to the identified use(s) of the substance or mixture:
Structural measures to prevent exposure:
Organisational measures to prevent exposure:
Technical measures to prevent exposure:

No information available.
No information available.
No information available.
No information available.

9. SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	Yellow powder
Odour:	odourless
Odour threshold:	No data available
pH-value at 1%:	6 - 8 (20 °C)
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point:	>61 °C
Evaporation Rate:	No data available
Flammability (solid, gas):	Non-flammable
Upper/lower flammability or explosive limits:	No data available
Vapour pressure:	No data available
Vapour density:	No data available
Relative density:	0.45 - 0.55 g/ml (20 °C)
Solubility (is):	Water solubility: Mancozeb: 6.2 ppm (pH 7.5; 25°C) Metalaxyl: 8.4 g/l (22°C). Fat solubility: Mancozeb: Insoluble in common. Metalaxyl: Etanol: 400 g/l. (25°C).



Partition coefficient: noctanol/water: No data available
Decomposition temperature: No data available
Viscosity: No data available
Explosive properties: Non-explosive
Oxidising properties: No data available

9.2. Other information

Other information: No data available

10. SECTION 10: Stability and reactivity

10.1. Reativity

Reactivity: No data available

10.2. Chemical stability

Chemical stability: Stable under normal conditions of storage for a period of 2 years, as minimum.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions: No data available

10.4. Conditions to Avoid

Conditions to Avoid: Moisture and temperatures above 40 ° C

10.5. Incompatible materials

Incompatible materials: Acids and oxidizing agents

10.6. Hazardous decomposition products

Hazardous decomposition products: Carbon disulfide and hydrogen sulfide

11. SECTION 11: Toxicological information

11.1. Information on toxicological effects

11.1.2. Mixtures		Results
Acute toxicity	Ingestion: LD50	Rat > 2000 mg/kg
	Inhalation: LC50	Rat > 5.07 mg/l (4h)
	Skin: LD50	Rat > 2000 mg/kg
Irritation:		Skin: Slight skin irritation. No animals with mean score \geq 2.3
Corrosivity:		No information available.
Sensitisation:		Skin sensitizer.
Repeated dose toxicity:		No information available.
Toxicity for reproduction:		[a.s.mancozeb] > 3%. Reproductive toxicant cat. 2



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Information on likely routes of exposure:	There is no evidence of symptoms associated with this substance/mixture
Main effects: Delayed and immediate effects as well as chronic effects from short and long-term exposure:	No data available
Interactive effects:	No information available.

12. SECTION 12: Ecological information

Degradability: Data as for Mancozeb.

Strongly adsorbed to soil. The product is rapidly degraded in the environment by hydrolysis, oxidation, photolysis, and metabolism. The half-life in soil is 6-15 days.

Mobility: Data as for Mancozeb.

The product has low mobility and is not likely to leach.

ECOTOXICOLOGY:

Birds:

Data as for Mancozeb.

Practically non-toxic.

Acute oral LD50 : > 2000 mg/kg (japanese quail)

Fish:

Very toxic to fish.

LC50 (96 hr) is 19 mg/L for the common carp (*Cyprinus carpio*)

LC50 (96 hr) is 0,3 mg/L for rainbow trout.

Bees:

Non-toxic to bees.

Daphnia:

Toxic to *Daphnia magna*.

EC50 (48h): 0, 900 mg/L

Algae (*Selenastrum capricornutum*):

EbC50 (0-72h; biomass): 0.49 mg/L

ErC50 (0-72h; growth rate): 5,74 mg/L

Breakdown in soil and groundwater: Mancozeb is of low soil persistence, with a reported field half-life of 1 to 7 days. Mancozeb rapidly and spontaneously degrades to ETU in the presence of water and oxygen. ETU may persist for longer, on the order of 5 to 10 weeks. Because Mancozeb is practically insoluble in water, it is unlikely to infiltrate groundwater.

Breakdown in water: Mancozeb degrades in water with a half-life of 1 to 2 days in slightly acidic to slightly alkaline conditions.

Breakdown in vegetation: When used as directed, Mancozeb is not poisonous to plants.



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13. SECTION 13: Disposal considerations

Appropriate methods of waste treatment of both substance or mixtures:

Waste should not be removed through the sewer. The elimination will be followed according to local, State or national provisions, either by incineration or recycling.

Appropriate methods of waste treatment of contaminated packaging:

The elimination will be followed according to local, State or national provisions. Either by incineration or recycling.

Community/national/regional provisions relating to waste:

The elimination will be followed according to local, State or national provisions.

Pesticide disposal: Contaminated absorbents, used containers, surplus product, etc., should be burnt in an incinerator, preferably designed for pesticide disposal, or buried in an approved landfill. Comply with local legislation applying to waste disposal.

Package product wastes: Emptied containers retain product residues. Observe all labelled safeguards until container is cleaned, reconditioned, or destroyed. Combustible containers should be disposed of in pesticide incinerators or buried in an approved landfill. Non-combustible containers must first be triple-rinsed with water. Containers that are not to be reused and should be punctured and transported to a scrap metal facility for recycling or disposal.

14. SECTION 14: Transport information

ADR/RID

UN Number:

UN3077

Proper Shipping Name:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
SOLID, N.O.S. (contains MANCOZEB TECHNICAL,
METALAXYL TECHNICAL)

Class:

9



ADR/RID Classification:

M7

Packing group:

III

Label:

9

Special Provisions:

274,335,601

Limited Quantities:

5 kg

Packing Instructions:

P002,IBC08,LP02,R001

Special Packing Provisions::

VV1

Hazard identification number:

90

Kemler Code:

000



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IMDG

Marine Pollutant:	Yes
UN Number:	UN3077
Packing group:	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains MANCOZEB TECHNICAL, METALAXYL TECHNICAL)
Class:	9
Label:	9
EmS Guide:	F-A, S-F

IATA

UN Number:	UN3077
Packing group:	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains MANCOZEB TECHNICAL, METALAXYL TECHNICAL)
Class:	9
Label:	9

15. SECTION 15: Regulatory information

Hazard Classification:

Risk Phrases:

R 22 Harmful if swallowed

R 36/38 Irritating to eyes and skin

R 37 Irritating to respiratory system

R 43 May cause sensitization by skin contact

Safety Phrases:

S 2 Keep out of reach of children

S 8 keep container dry

S 24/25 Avoid contact with skin and eyes

S 36/37 Wear suitable protective clothing and gloves



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16. SECTION 16: Other information

Changes to the previous version: Not applicable

Symbol(s) of danger - Indication(s) of danger

N: Dangerous for the environment

Xn: Harmful



Risk Phrases

R43: May cause sensitisation by skin contact.

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

R63: Possible risk of harm to the unborn child.

Safety Phrases

S 2: Keep out of the reach of children.

S 8: Keep container dry.

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

S23: Do not breathe gas/fumes/vapour/spray

S36: Wear suitable protective clothing.

S37: Wear suitable gloves.

S45: In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).

Abbreviations and acronyms:

SDS: Safety Data Sheet

OEL: Occupational Exposure Limit

TRGS: Real Time Gross Settlement

OECD: Organisation for Economic Co-operation and Development

PBT: Persistent, Bioaccumulative and Toxic

vPvB: Very Persistent and very Bioaccumulative

DNEL: Derived non-effect level

PNEC: Predicted non-effect concentration

LC50: Lethal concentration 50%

LD50: Lethal dose 50%

NOEL: Non-observed effect level

NOAEL: Non observed adverse effect level

NOAEC: Non observed adverse effect concentration

NOAEC: Non observed adverse effect concentration

SVHC: Substances of Very High Concern