



FarmAg Mancozeb 800 WP (mancozeb 800 g/kg)

Safety Data Sheet

According to Regulations for Hazardous Chemical Agents, 2021 and United Nations GHS revision 8
Issue date: 9/1/2022 Revision date: 2/19/2024 Supersedes: 2/19/2024 Version: 2.0

SECTION 1: Identification of the substance/mixture and of the supplier/undertaking

1.1. GHS product identifier

Product form	: Mixture
Trade name	: FarmAg Mancozeb 800 WP (mancozeb 800 g/kg)
Type of product	: Fungicide
CAS-No.	: 8018-01-7
Product group	: End product

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended Use:	An organic wettable powder fungicide for the preventive control of diseases as listed on a wide range of crops.
Restricted use:	Only for commercial farm use. Not for use with any handheld equipment and/or in residential areas and aerial application.

1.4. Supplier's details

Supplier

Farm-Ag International (Pty) Ltd
Old Mill Industrial Park
61, Marshall Drive
P.O. Box 1523
4300 Mount Edgecombe – Durban KwaZulu Natal
South Africa
T 031 003 3486

1.5. Emergency phone number

Emergency number	: 24 Hr Emergency Number: In case of Poisoning: Poison Information Helpline : 0861 555 777 In case of Spillage: HAZMAT:0800 147 112
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SECTION 2: Hazard identification

2.1. GHS classification of the substance/mixture and any national or regional information

Classification according to the United Nations GHS

Skin sensitisation, Category 1	H317
Carcinogenicity, Category 2	H351
Reproductive toxicity, Category 2	H361
Specific target organ toxicity – Repeated exposure, Category 2	H373
Hazardous to the aquatic environment – Acute Hazard, Category 1	H400

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects	: Suspected of causing cancer,Suspected of damaging fertility or the unborn child,May cause damage to organs through prolonged or repeated exposure,May cause an allergic skin reaction,Very toxic to aquatic life.
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2.2. GHS label elements, including precautionary statements

Labelling according to the United Nations GHS

Hazard pictograms (GHS ZA)

:



Signal word (GHS-ZA)

: Warning

Hazardous ingredients

: Mancozeb TC, Alkyl aryl sulphonate

Hazard statements (GHS ZA)

: H317 - May cause an allergic skin reaction

H351 - Suspected of causing cancer

H361 - Suspected of damaging fertility or the unborn child

H373 - May cause damage to organs through prolonged or repeated exposure

H400 - Very toxic to aquatic life

Precautionary statements (GHS ZA)

: P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

P103 - Read carefully and follow all instructions.

P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P260 - Do not breathe dusts or mists.

P261 - Avoid breathing dust.

P272 - Contaminated work clothing should not be allowed out of the workplace.

P273 - Avoid release to the environment.

P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P302+P352 - IF ON SKIN: Wash with plenty of soap and water

P308+P313 - If exposed or concerned: Get medical advice/attention

P314 - Get medical advice/attention if you feel unwell

P321 - Specific treatment (see supplemental first aid instruction on this label).

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention

P362+P364 - Take off contaminated clothing and wash it before reuse.

P391 - Collect spillage.

P405 - Store locked up.

P501 - Dispose of container to an approved waste disposal plant.

2.3. Other hazards which do not result in classification or are not covered by the GHS

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to the United Nations GHS
Mancozeb TC	CAS-No.: 8018-01-7	≥ 80 – < 85	Skin Sens. 1, H317 Carc. 2, H351 Repr. 2, H361 STOT RE 2, H373 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 3, H412
Kaolin	CAS-No.: 1332-58-7	≥ 15 – < 20	Not classified

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Name	Product identifier	%	Classification according to the United Nations GHS
Alkyl aryl sulphonate	CAS-No.: 26264-05-1	≥ 0.1 – < 1	Acute Tox. 5 (Oral), H303 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317 Aquatic Acute 2, H401

SECTION 4: First aid measures

4.1. Description of necessary first aid measures

First-aid measures general	: There are not expected to be any reactions unless the absorbed doses are extraordinary. Symptoms of exposure to this product are: itching, scratchy throat, sneezing, coughing, nausea, vomiting, diarrhea, and headaches. . IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. This is not likely to occur. Move victim to a source of fresh air and remove source of contamination. Monitor patient for respiratory distress. Administer 100 % humidified supplemental oxygen with assisted ventilation as required.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Flush eyes immediately with flowing, fresh, clean water or sodium bicarbonate solution for 15 to 30 minutes, lifting the upper and lower eyelids. If necessary seek medical attention. Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Should mancozeb be ingested seek medical advice immediately. Do not induce vomiting. Two glasses water should be given to drink. Do not give anything via the mouth to an unconscious person. Medical personnel should administer gastric lavage or oxygen. Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms/effect, acute and delayed

Symptoms/effects after inhalation	: Negligible toxicity, inhalation of the dust may be irritating to the nose, throat and lungs.
Symptoms/effects after skin contact	: May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Causes eye irritation.
Symptoms/effects after ingestion	: Harmful if swallowed.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically and supportively. No specific antidotes are available for dithiocarbamate poisoning. Should a large amount of mancozeb have been ingested in the last few hours, and if copious vomiting has already occurred, the stomach must be emptied and steps taken to limit gastrointestinal absorption. If the patient is fully alert and conscious and nervous system depression is not anticipated, oral administration of Syrup of Ipecac is probably the best way to empty the stomach. Should the consumption have been minimal, administration of charcoal without cathartic, with observation of the patient should represent optimal management.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Carbon dioxide. Dry powder. Foam. Water. Water spray.
Unsuitable extinguishing media	: Do not use direct jet of water. Avoid water coming in contact with the product.

5.2. Specific hazards arising from the chemical

Explosion hazard	: There is a slight fire hazard when exposed to heat or flame. Avoid heat and flame. Fine dust in the air may form an explosive mixture if source of ignition is present. The minimum ignition temperature of a dust cloud is 310°C. The minimum ignition temperature of a dust layer is 132°C.
Hazardous decomposition products in case of fire	: Pesticide particle can become airborne. Combustion generates toxic fumes of hydrogen sulphide, carbon disulphide, sulphur oxides, nitrogen oxides and carbon oxides.

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5.3. Special protective actions for fire-fighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
- Personal protection (Emergency response) : Wear respiratory protection, Wear protective gloves, Wear protective clothing, Wear eye protection, Gloves, Face-shield



SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Do not breathe dust, mist. Avoid contact with skin and eyes.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and materials for containment and cleaning up

- For containment : Collect spillage.
- Methods for cleaning up : Mechanically recover the product. For small dry spills, sweep up with damp earth or sand or other suitable absorbents, taking care not to raise a dust cloud. Place the material into a clean, dry container for disposal at a later stage. Where the product has come into contact with water, contain contaminated water for disposal at a later stage. Do not flush spilled material into drains. Keep onlookers away and upwind.
- Large Spills: These should be covered to prevent further dispersal. Vacuum or shove waste into an approved container. To de-contaminate a spill area, tools and equipment, wash with a suitable solution (organic solvent, detergent bleach, or caustic). Add the solution to the containers already collected. Label the containers stating the contents and dispose in accordance to local regulations. Notify authorities if product enters sewers or public waters.
- Other information : Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe dust, mist. Avoid contact with skin and eyes.
- Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.
- Storage area : Store in a dry area. Store in a dark area. Store out of reach of unauthorised persons, children and animals. Keep only in the original container.
- Information on mixed storage : KEEP SUBSTANCE AWAY FROM: Food supplies. Water supplies.
- Special rules on packaging : Do not store bagged product more than 3 pallets high. Loose bags should not be stacked more than 2x2x2 meters. Local regulations should be complied with.
- Storage temperature : 0 – 49 °C

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Kaolin (1332-58-7)

South Africa - Occupational Exposure Limits (Airborne Pollutants)

Local name	Kaolin
OEL TWA	3 mg/m ³ respirable particulate
Regulatory reference	Government Notice No. R 904

8.2. Appropriate engineering controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Environmental exposure controls	: Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Hand protection	: Protective gloves
Eye protection	: Safety glasses
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: In case of inadequate ventilation wear respiratory protection.
Personal protective equipment symbol(s)	



8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Solid
Appearance	: No data available
Colour	: Grey. Yellow.
Odour	: Musty smell.
Odour threshold	: No data available
pH	: No data available
pH solution	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: 192 – 204 °C
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Flammability	: Non flammable.
Vapour pressure	: No data available
Vapour pressure at 50°C	: No data available
Relative vapour density at 20°C	: No data available
Relative density	: 1.92
Relative density of saturated gas/air mixture	: No data available
Density	: No data available
Relative gas density	: No data available
Solubility	: Dispersible.
Partition coefficient n-octanol/water (Log Pow)	: No data available

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Partition coefficient n-octanol/water (Log Kow)	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: Not applicable
Lower explosion limit	: No data available
Upper explosion limit	: No data available
Physical state	: Solid
Appearance	: No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10: Stability and Reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical Stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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Unknown acute toxicity (GHS ZA)Unknown acute toxicity (GHS ZA)	99.4% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 99.4% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 99.4% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))
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Mancozeb TC (8018-01-7)

LD50 oral rat	> 5000 mg/kg (Rat, Oral)
LD50 dermal rat	> 10000 mg/kg (Rat, Dermal)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit, Dermal)
LC50 Inhalation - Rat	> 5.14 mg/l/4h (4 hours)

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Alkyl aryl sulphonate (26264-05-1)

LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), Guideline: EU Method B.1 tris (Acute Oral Toxicity - Acute Toxic Class Method), Guideline: EPA OPPTS 870.1100 (Acute Oral Toxicity)
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Xanthan gum (11138-66-2)

LD50 oral rat	45000 mg/kg
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.
STOT-single exposure	: Not classified
STOT-repeated exposure	: May cause damage to organs through prolonged or repeated exposure.

Mancozeb TC (8018-01-7)

STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified

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Viscosity, kinematic	Not applicable
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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Very toxic to aquatic life.
Hazardous to the aquatic environment, short-term (acute)	: Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

Mancozeb TC (8018-01-7)

LC50 - Fish [1]	1 mg/l (96 h, rainbow trout)
LC50 - Fish [2]	0.022 mg/l (96 h, fathead minnows)
EC50 - Crustacea [1]	3.8 mg/l (48 h, Daphnia magna, Measured concentration)
EC50 - Other aquatic organisms [1]	0.11 mg/l Rotifers
EC50 - Other aquatic organisms [2]	> 113 mg/l Snails
EC50 72h - Algae [1]	0.044 mg/l
ErC50 algae	32.2 µg/l (EPA OPP 122-2, 120 h, Selenastrum capricornutum, Static system, Fresh water, Experimental value, GLP)
NOEC chronic fish	0.66 mg/l
Additional data	Birds: > 5 500 (10 days) (mallard ducks); NOEL - Reproduction: 125 mg/diet; Dietary LC50 (8 days) bobwhite quail > 5 200, Reproduction 300 mg/diet bowwhite quail. Bees: LD50 (oral) > >209 µg/bee; (contact) >400 µg/bee. Earthworms: 14 days > 1 000 mg/kg soil.

Alkyl aryl sulphonate (26264-05-1)

EC50 - Crustacea [1]	6.7 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): other:

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Xanthan gum (11138-66-2)

LC50 - Fish [1]	420 mg/l Source: ECOTOX
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12.2. Persistence and degradability

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Persistence and degradability	No additional information available
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Mancozeb TC (8018-01-7)

Persistence and degradability	Biodegradable in the soil. No inhibition of biodegradation process in the soil. Not readily biodegradable in water.
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Kaolin (1332-58-7)

Persistence and degradability	Biodegradability: not applicable.
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Chemical oxygen demand (COD)	Not applicable
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ThOD	Not applicable
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BOD (% of ThOD)	Not applicable
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12.3. Bioaccumulative potential

FarmAg Mancozeb 800 WP (mancozeb 800 g/kg) (8018-01-7)

Bioaccumulative potential	No additional information available
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Mancozeb TC (8018-01-7)

Partition coefficient n-octanol/water (Log Pow)	0.26
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Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
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Kaolin (1332-58-7)

Bioaccumulative potential	No bioaccumulation data available.
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12.4. Mobility in soil

FarmAg Mancozeb 800 WP (mancozeb 800 g/kg) (8018-01-7)

Mobility in soil	No additional information available
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Mancozeb TC (8018-01-7)

Surface tension	Not applicable (water solubility < 1 mg/l)
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Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.89 (log Koc, Calculated value)
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Ecology - soil	Low potential for adsorption in soil.
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12.5. Other adverse effects

Ozone : Not classified

Other adverse effects : No additional information available

SECTION 13: Disposal Considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

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SANS	IMDG	IATA
14.1. UN number		
3077	3077	3077
14.2. UN Proper Shipping Name		
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains mancozeb 800 g/kg)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains mancozeb 800 g/kg)	Environmentally hazardous substance, solid, n.o.s. (contains mancozeb 800 g/kg)
14.3. Transport hazard class(es)		
9	9	9
		
14.4. Packing group, if applicable		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes
No supplementary information available		

14.6. Special precautions for user

SANS

Special provisions (SANS) : 179, 274, 331, 335
 Limited quantities (SANS) : 5 kg
 Limited quantities (SANS) : 5 kg
 Packagings, large packagings and IBCs Packing instructions (SANS) : P002, IBC08, LP02
 Packagings, large packagings and IBCs Special packing instructions (SANS) : PP12, B3
 Portable tank and bulk containers instructions (SANS) : T1, BK2
 Portable tank and bulk container special provisions (SANS) : TP33

IMDG

Special provisions (IMDG) : 274, 335, 966, 967, 969
 Limited quantities (IMDG) : 5 kg
 Excepted quantities (IMDG) : E1
 Packing instructions (IMDG) : LP02, P002
 Special packing provisions (IMDG) : PP12
 IBC packing instructions (IMDG) : IBC08
 IBC special provisions (IMDG) : B3
 Tank instructions (IMDG) : BK1, BK2, BK3, T1
 Tank special provisions (IMDG) : TP33
 EmS-No. (Fire) : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
 EmS-No. (Spillage) : S-F - SPILLAGE SCHEDULE Foxtrot - WATER-SOLUBLE MARINE POLLUTANTS
 Stowage category (IMDG) : A

IATA

PCA Excepted quantities (IATA) : E1
 PCA Limited quantities (IATA) : Y956
 PCA limited quantity max net quantity (IATA) : 30kgG
 PCA packing instructions (IATA) : 956
 PCA max net quantity (IATA) : 400kg
 CAO packing instructions (IATA) : 956

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CAO max net quantity (IATA) : 400kg
Special provisions (IATA) : A97, A158, A179, A197, A215
ERG code (IATA) : 9L

14.7. Transport in bulk according to IMO instructions

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations specific for the product in question

No additional information available

SECTION 16: Other information

Issue date : 01/09/2022
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Supersedes : 19/02/2024

Full text of H-statements:

H303	May be harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H351	Suspected of causing cancer
H361	Suspected of damaging fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H412	Harmful to aquatic life with long lasting effects

Safety Data Sheet (SDS), South Africa (HCA)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.