



Palette 200 EW (Penconazole 200 g/l)

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010
Issue date: 8/31/2022 Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product form	: Mixture
Trade name	: Palette 200 EW (Penconazole 200 g/l)
Type of product	: Fungicide
CAS-No.	: 66246-88-6
Product group	: End product

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

Use of the substance/mixture	: An emulsion oil in water, systemic fungicide for the control of diseases on crop s as indicated.
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1.3. 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

1.4. Emergency telephone 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: Hazards identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

Flammable liquids	Not classified
Acute toxicity (dermal), Category 5	H313
Reproductive toxicity, Category 2	H361
Specific target organ toxicity – Repeated exposure, Category 2	H373
Hazardous to the aquatic environment – Acute Hazard, Category 3	H402
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411
Full text of H-statements: see section 16	

2.2. Label elements

Labelling according to the United Nations GHS

Hazard pictograms (GHS ZA)



Signal word (GHS-ZA)	: Warning
Hazardous ingredients	: Penconazole 98.7% TC, ethanediol, ethylene glycol
Hazard statements (GHS ZA)	: H313 - May be harmful in contact with skin H361 - Suspected of damaging fertility or the unborn child. H373 - May cause damage to organs (lung/respiratory system) through prolonged or

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Precautionary statements (GHS ZA)

repeated exposure (Inhalation, oral).
H402 - Harmful to aquatic life
H411 - Toxic to aquatic life with long lasting effects.
: P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe vapours, spray.
P273 - Avoid release to the environment.
P280 - Wear protective clothing, eye protection, face protection, protective gloves.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P312 - Call a POISON CENTER or doctor if you feel unwell.
P314 - Get medical advice/attention if you feel unwell.
P391 - Collect spillage.
P405 - Store locked up.
P501 - Dispose of contents and container to an approved waste disposal plant.

2.3. Other hazards

Adverse physicochemical, human health and environmental effects

: Suspected of damaging fertility or the unborn child, May cause damage to organs (lung/respiratory system) through prolonged or repeated exposure (inhalation, oral), Fatal if inhaled, Harmful in contact with skin, Harmful if swallowed, Toxic to aquatic life, Toxic to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to the United Nations GHS
Penconazole 98.7% TC	CAS-No.: 66246-88-6	≥ 20 – < 25	Acute Tox. 5 (Oral), H303 Acute Tox. 5 (Dermal), H313 Acute Tox. 4 (Inhalation:dust,mist), H332 Repr. 2, H361 Aquatic Acute 2, H401 Aquatic Chronic 1, H410
Tristyrylphenol Ethoxylates	CAS-No.: 99734-09-5	≥ 5 – < 10	Eye Irrit. 2A, H319 Aquatic Chronic 2, H411
ethanediol, ethylene glycol	CAS-No.: 107-21-1	≥ 1 – < 5	Acute Tox. 4 (Oral), H302 STOT RE 2, H373 Aquatic Acute Not classified

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general

: Call a physician immediately.

First-aid measures after inhalation

: Immediately remove source of contamination or move victim to fresh air. If breathing has stopped, perform artificial respiration and administer oxygen. Do not give mouth-to-mouth resuscitation if victim ingested or inhaled the substance. Keep person warm and at rest. Treat symptomatically and supportively as and when required. Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

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First-aid measures after skin contact	: Remove contaminated clothing, shoes and leather goods immediately. Gently wipe off excess chemical. Wash skin gently and thoroughly with non-abrasive soap or mild detergent and large amounts of water until no evidence of chemical remains (approximately 15 to 20 minutes). Seek medical advice if irritation develops and persists.
First-aid measures after eye contact	: Immediately flush the eyes with gently flowing lukewarm water or sodium bicarbonate solution for 20 to 30 minutes, occasionally lifting the upper and lower lids. If irritation persists, seek medical advice immediately.
First-aid measures after ingestion	: Do not induce vomiting. Never induce vomiting or give anything to drink to an unconscious person. If the person is alert, rinse mouth thoroughly with water and give one or two glasses of water to drink. Treat symptomatically and supportively. Call a physician or Poison Control Center.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	: May be a slight respiratory irritant.
Symptoms/effects after skin contact	: May irritate skin. The dermal toxicity of this product is low. However, skin contact should be avoided. This product is not a skin sensitizer.
Symptoms/effects after eye contact	: May be mildly irritating to eyes. However, it is unlikely to cause any more than mild transient discomfort. It is also unlikely to cause any lasting effects.
Symptoms/effects after ingestion	: Harmful if ingested. If large amounts are swallowed and aspiration occurs, chemical pneumonitis may develop. Small amounts of product aspirated into the respiratory system during ingestion or vomiting, due to the solvent in product, may cause mild to severe pulmonary injury.

4.3. Indication of any immediate medical attention and special treatment needed

There is no specific antidote available. Treat symptomatically. The product contains solvent that may cause chemical pneumonitis if aspirated into lungs. Watch for delayed onset of pulmonary. If ingested perform gastric lavage and administer activated charcoal.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Water spray as a fog can be used for cooling of unaffected stock, but avoid water coming in contact with the product. Contain water used for fire-fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Toxic fumes may be released.
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5.3. Advice for firefighters

Firefighting instructions	: Remove spectators from surrounding area. Remove container from fire area if possible without risk. Eliminate all ignition sources in immediate area. Fight fire from maximum distance. For massive fire, use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal. Use a recommended extinguishing agent for the type of surrounding fire. Avoid inhaling hazardous vapours. Keep upwind.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Personal protection (Emergency response)	: Protective clothing, Protective goggles, Wear respiratory protection, Gloves



SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No additional information available

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6.1.1. For non-emergency personnel

Emergency procedures : Do not breathe dust/fume/gas/mist/vapours/spray. Only qualified personnel equipped with suitable protective equipment may intervene.

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 material for containment and cleaning up

For containment : Collect spillage.
Methods for cleaning up : Take up liquid spill into absorbent material. 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 : 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/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Do not get in eyes, on skin, or on clothing.
Hygiene measures : 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 container tightly closed. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ethanediol, ethylene glycol (107-21-1)

South Africa - Occupational Exposure Limits (Recommended Limits)

Local name	Ethylene glycol
OEL TWA	50 mg/m ³ (V: vapour fraction) 100 mg/m ³ (V: vapour fraction)
OEL STEL	20 mg/m ³ (H: aerosol only)
Remark	SKIN (danger of cutaneous absorption)
Regulatory reference	Government Notice No. R. 280, 2021

South Africa - Occupational Exposure Limits (Airborne Pollutants)

Local name	Ethylene glycol (Ethane-1,2-diol; 1,2-Dihydroxyethane)
OEL TWA	20 mg/m ³
OEL STEL	40 mg/m ³
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.

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8.3. Individual protection measures, such as personal protective equipment (PPE)

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. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Colour	: White.
Odour	: Characteristic odour.
Odour threshold	: No data available
pH	: 5 – 8
pH solution	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 100 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not 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	: No data available
Relative density of saturated gas/air mixture	: No data available
Density	: 1.04 g/ml
Relative gas density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available
Lower explosion limit	: No data available
Upper explosion limit	: No data available

9.2. Other information

No additional information available

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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)	: May be harmful in contact with skin.
Acute toxicity (inhalation)	: Not classified

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ATE ZA (Dermal)	2500 mg/kg bodyweight
Unknown acute toxicity (GHS ZA)Unknown acute toxicity (GHS ZA)	14.56% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 80% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 100% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Vapours))

Penconazole 98.7% TC (66246-88-6)

LD ₅₀ oral rat	2125 mg/kg
LD ₅₀ oral	2444 mg/kg Mice
LD ₅₀ dermal rat	> 3000 mg/kg
LC ₅₀ Inhalation - Rat	> 4.05 mg/l

Water (7732-18-5)

LD ₅₀ oral rat	90000 mg/kg
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Skin corrosion/irritation	: Slightly irritating pH: 5 – 8
Serious eye damage/irritation	: Slight eye irritant pH: 5 – 8
Respiratory or skin sensitisation	: Not a skin sensitizer
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.
STOT-single exposure	: Not classified
STOT-repeated exposure	: May cause damage to organs (lung/respiratory system) through prolonged or repeated exposure (Inhalation, oral).
Aspiration hazard	: Not classified

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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Toxic to aquatic life. Toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Harmful to aquatic life.
Hazardous to the aquatic environment, long-term (chronic)	: Toxic to aquatic life with long lasting effects.

Penconazole 98.7% TC (66246-88-6)

LC ₅₀ - Fish [1]	1.3 mg/l Rainbow Trout
LC ₅₀ - Fish [2]	3.8 mg/l Carp
EC ₅₀ - Crustacea [1]	6.7 mg/l
ErC ₅₀ algae	1.7 mg/l
Partition coefficient n-octanol/water (Log Kow)	3.1
Additional ecotoxicological information	Birds: Mallard ducks and Bobwhite quail > 2000 mg/kg, Dietary (5 d): Mallard ducks and Bobwhite quail > 5620 mg/kg diet; Bees: Not toxic to bees: LD ₅₀ (Oral & topical) > 200 µg/bee; Earthworms: >1000 mg/kg dry soil

ethanediol, ethylene glycol (107-21-1)

LC ₅₀ - Fish [1]	41000 mg/l Trout (96h)
LC ₅₀ - Fish [2]	34250 mg/l Bluegill sunfish
LC ₅₀ - Other aquatic organisms [1]	46300 mg/l Water flea
Partition coefficient n-octanol/water (Log Pow)	-1.4

Water (7732-18-5)

Partition coefficient n-octanol/water (Log Pow)	-1.38
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12.2. Persistence and degradability

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Persistence and degradability	No additional information available
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Penconazole 98.7% TC (66246-88-6)

Persistence and degradability	(Aerobic, 20 -25 °C, lab.) 61 – 188 d; (field) 67 – 107 d. The main degradation pathways are oxidation of the aliphatic side chain and cleavage of the bridge between the two ring systems, resulting in the formation of 1,2,4-triazole.
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ethanediol, ethylene glycol (107-21-1)

Persistence and degradability	Long term degradation products may arise.
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12.3. Bioaccumulative potential

Palette 200 EW (Penconazole 200 g/l) (66246-88-6)

Bioaccumulative potential	No additional information available
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Penconazole 98.7% TC (66246-88-6)

Partition coefficient n-octanol/water (Log Kow)	3.1
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ethanediol, ethylene glycol (107-21-1)

Partition coefficient n-octanol/water (Log Pow)	-1.4
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Water (7732-18-5)

Partition coefficient n-octanol/water (Log Pow) -1.38

12.4. Mobility in soil

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Mobility in soil No additional information available

Penconazole 98.7% TC (66246-88-6)

Partition coefficient n-octanol/water (Log Kow) 3.1

ethanediol, ethylene glycol (107-21-1)

Partition coefficient n-octanol/water (Log Pow) -1.4

Water (7732-18-5)

Partition coefficient n-octanol/water (Log Pow) -1.38

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

SANS	IMDG	IATA
14.1. UN number		
2902	2902	2902
14.2. Proper Shipping Name		
PESTICIDE, LIQUID, TOXIC, N.O.S. (contains penconazole 200 g/l)	PESTICIDE, LIQUID, TOXIC, N.O.S. (contains penconazole 200 g/l)	Pesticide, liquid, toxic, n.o.s. (contains penconazole 200 g/l)
14.3. Transport hazard class(es)		
6.1	6.1	6.1
 	 	 
14.4. Packing group		
I	I	I
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		

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14.6. Special precautions for user

SANS

Special provisions (SANS)	: 61, 274
Limited quantities (SANS)	: 0
Limited quantities (SANS)	: 0
Packagings, large packagings and IBCs Packing instructions (SANS)	: P001
Portable tank and bulk containers instructions (SANS)	: T14
Portable tank and bulk container special provisions (SANS)	: TP2, TP13, TP27

IMDG

Special provisions (IMDG)	: 61, 274
Limited quantities (IMDG)	: 0
Excepted quantities (IMDG)	: E5
Packing instructions (IMDG)	: P001
Tank instructions (IMDG)	: T14
Tank special provisions (IMDG)	: TP2, TP13, TP27
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-A - SPILLAGE SCHEDULE Alfa - TOXIC SUBSTANCES
Stowage category (IMDG)	: B
Properties and observations (IMDG)	: Liquid pesticides which present a very wide range of toxic hazard. Miscibility with water depends upon the composition. Toxic if swallowed, by skin contact or by inhalation.

IATA

PCA Excepted quantities (IATA)	: E5
PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: 652
PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 658
CAO max net quantity (IATA)	: 30L
Special provisions (IATA)	: A3, A4
ERG code (IATA)	: 6L

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

No additional information available

SECTION 16: Other information

Issue date : 31/08/2022

Full text of H-statements

H302	Harmful if swallowed.
H303	May be harmful if swallowed
H313	May be harmful in contact with skin
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H361	Suspected of damaging fertility or the unborn child.

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Full text of H-statements

H373	May cause damage to organs through prolonged or repeated exposure.
H401	Toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

Safety Data Sheet (SDS), South Africa

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.