



MATERIAL SAFETY DATA SHEET

LAWN FUNGICIDE

Date Issued: June 2017

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Revision No.: 2

Print Date: 1/4/19

1. PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: LAWN FUNGICIDE

SUPPLIER: EFEKTO

PO BOX 652147

BENMORE

2010

TEL No. 0861 333586 office hours

EMERGENCY TELEPHONE NUMBERS:

SPILLAGES: 082 446 8946

POISONINGS:

Poisons Information Helpline 0861 555 777 (all hours)

Griffon Poison Centre 082 446 8946

Use: A fungicide for the control of lawn fungi as is indicated on the label.

2. HAZARDS IDENTIFICATION

- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- Can cause mild skin and eye irritation.
- May cause sensitization by skin contact.

Likely routes of exposure:

Eye contact, skin contact, ingestion, and inhalation.

Eye contact: The product may cause mild to moderate eye irritation.

Skin contact: The product may cause mild to moderate irritation and is a skin sensitizer.

Ingestion: Harmful.

Inhalation: Harmful.

Symbols : Xn; N

R phrases: R 22; R 36/38; R43; R50/53

UN No.: 3082

3. COMPOSITION/INFORMATION ON INGREDIENTS

Active ingredients:



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Active ingredients.	CAS No.:	EC No.:
Propiconazole 500g/l	60207-90-1	262-104-4
Inerts	Trade secret	

Chemical Name: (±)-1-[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-ylmethyl]-1*H*-1,2,4-triazole (IUPAC)

Chemical Family: Azole

Chemical Formula: C₁₅H₁₇Cl₂N₃O₂

NIOSH/RTECS No.: XZ462000

4. FIRST-AID MEASURES

Inhalation:

Remove source of contamination or move victim to fresh air. Keep victim warm and at rest. Treat symptomatically and supportively. Obtain medical advice if necessary.

Skin contact:

Remove contaminated clothing, shoes and leather goods. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. Seek medical advice if necessary. Persons who become sensitised may require specialised medical management with anti-inflammatory agents.

Eye contact:

Immediately flush the eyes with gently flowing lukewarm water or saline solution for 20 minutes, occasionally lifting the upper and lower lids. Obtain medical attention if necessary. Specialized ophthalmologic treatment might be required.

Ingestion:

Do not induce emesis. Have victim drink a suspension of activated charcoal with water to bind toxicant remaining in the gastrointestinal tract. Follow charcoal with sodium or magnesium sulphate to induce catharsis. Seek medical advice.

Advice to physician:

There is no specific antidote. Treat symptomatically and supportively as and when required. Gastric lavage may be indicated.

The active ingredient of this product has a high affinity for activated charcoal. Five mg/kg activated charcoal suspension (50g/400ml water) can be given to absorb the remaining toxicant.

5. FIRE-FIGHTING MEASURES

Extinguishing agents:



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Extinguish **small fires** with carbon dioxide, dry powder, or alcohol-resistant foam. Water spray can be used for cooling of unaffected stock, but avoid water coming in contact with the product.

Firefighting:

Fight fire from maximum distance. For **massive fire**, use unmanned hose holder or monitor nozzles. Remove container from fire area if possible. Avoid runoff to sewer. Contain fire control agents for later disposal. Use a recommended extinguishing agent for the type of surrounding fire. Water can be used to cool unaffected containers. Avoid inhaling hazardous vapours. Keep upwind.

Personal protective equipment:

Fire-fighters and others that may be exposed should wear full chemical protective clothing and self-contained breathing apparatus.

Special hazards:

Fire may produce irritating or poisonous vapours (HCN and toxic oxides of carbon, nitrogen and chlorine) of combustion.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Avoid contact with skin and eyes. Do not breathe in fumes. Ventilate area of spill or leak, especially confined areas. Shut off/remove any ignition sources. For personal protection see Section 8.

Environmental precautions:

Do not allow to enter drains or water courses. When the product contaminates public waters, inform appropriate authorities immediately in accordance with local regulations.

Occupational spill:

Avoid runoff to sewer as it may cause fire/explosion. Remove all sources of ignition. For small liquid spills, soak up with sand or other suitable noncombustible absorbent material, and place into containers for subsequent disposal. For large spills, contain liquid far ahead of spill. Contain spillage and contaminated water for subsequent disposal. Do not flush spilled material into drains. Keep spectators away.

7. HANDLING AND STORAGE

Handling:

Remove sources of naked flame or sparks. Avoid contact with eyes, prolonged contact with skin, and inhalation of fumes and spray particles. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Remove clothing immediately if the product gets inside. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing. Do not apply directly to areas where surface water is present. Water used to clean equipment must be disposed of correctly to avoid contamination.

Storage:

Keep out of reach of unauthorised persons, children and animals. Store in its original labeled container in shaded, well-ventilated area, away from heat, sparks and other sources of ignition. Not to be stored next to foodstuffs and water supplies. Local regulations should be complied with.



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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits:

Not available.

Engineering control measures:

It is essential to provide adequate ventilation. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

PERSONAL PROTECTIVE EQUIPMENT:

Respirator:

An approved full face respirator suitable for protection from dusts and mists of pesticides is required. Limitations of respirator use specified by the approving agency and the manufacturer must be observed.

Clothing:

Employee must wear appropriate protective (impervious) clothing, boots, hat and equipment to prevent repeated or prolonged skin contact with this substance. Do not wear leather clothing.

Gloves:

Employee must wear appropriate chemical resistant protective gloves to prevent contact with this substance.

Eye protection:

The use of safety goggles is recommended.

Emergency eye wash: Where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Liquid.

Color: Yellow to brown

Odour: Aromatic.

Explosive properties: Not explosive.

Data as for Propiconazole 250EC.

Flammability: Flammable.

Flash point: 62.0 °C.

Oxidising properties: Not oxidative.

pH: 7.05 (1 % aqueous dispersion).

Relative density: 0.985 g/mL (24.5 °C).

Partition-coefficient in n-octanol / water:

Kow log P = 3.72 (pH 6.6, 25 °C)

10. STABILITY AND REACTIVITY



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Stability:

Stable for 2 years under normal storage conditions.

Incompatibility:

Incompatible with strong oxidising materials. The product is compatible with many other fungicides when used at normal rates. However, a compatibility test is required before using with other products. Do not physically mix concentrate directly with other herbicides or pesticide concentrates; always dilute first.

Thermal decomposition:

Formation of HCN, toxic oxides of carbon, nitrogen and chlorine on heating.

11. TOXICOLOGICAL INFORMATION

Data as for Propiconazole 250EC.

Acute oral LD₅₀ : 1 503 mg/kg in rats.

Acute dermal LD₅₀ : > 2 000 mg/kg in rats.

Acute inhalation LC₅₀ : > 7.10 mg/L of air.

Acute skin irritation: Irritation to rabbit skin.

Acute eye irritation: Irritation to rabbit eyes.

Dermal sensitisation:

Tests indicate that the product should be considered a moderate sensitiser (Grade III).

Carcinogenicity: There were no tumors in the rat at any feeding level.

Teratogenicity: No effects were found in any study.

Mutagenicity: No evidence found in any study.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGY :

Data as for Propiconazole 250EC.

Birds:

Practically non-toxic.

Acute oral LD₅₀: 1 839 mg/kg (Japanese quail)

Fish:

Toxic to fish.

LC₅₀ (96 h): 1.47 mg/L (rainbow trout)

Daphnia:

Toxic to *Daphnia magna*.

EC₅₀ (24h): 5.83 mg/l.

EC₅₀ (48h): 3.64 mg/l.

Alga:

Selenastrum capricornutum:

EC₅₀ (72-h): 20,66 p.p.m. Average specific growth rate

Bees:



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Low toxicity to bees.

Contact LD₅₀ (24 h): > 158 µg a.i./bee.

LD₅₀ >10µg/bee for Propiconazole 250 EC.

Earthworms:

Low toxicity to *Eisenia foetida*.

LC₅₀ (7d): 640 mg/kg.

LC₅₀ (14d): 608 mg/kg.

Soil micro-organisms:

No significant effect on soil micro-organisms, nitrogen fixation or root nodulation.

Mobility, leaching and Degradability:

The soil movement and leaching potential of propiconazole is limited. Mobility is restricted in soils high in montmorillonite clay and/or organic matter.

The main degradation pathways are hydroxylation of the *n*-propyl side-chain and the deketalisation of the dioxolan ring, with formation of 1,2,4-triazole, which further degrades to form CO₂. The half-life in aerobic soils at 25 °C is 40-70 days. In aerobic aquatic systems the half-life is 25-85 days.

13. DISPOSAL CONSIDERATIONS

Pesticide disposal

Contaminated absorbents, used containers, surplus product, etc., should be burnt at > 1000°C in an incinerator with effluent gas scrubbing, or buried in an approved landfill. Comply with local legislation applying to waste disposal.

Package product wastes:

Emptied containers retain vapour and product residues. Observe all labeled safeguards until container 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, then punctured and transported to a scrap metal facility for disposal.

14. TRANSPORT INFORMATION

UN NUMBER: 3082

ADR/RID:

Shipping name: Environmentally hazardous substance, liquid, n.o.s (Propiconazole)

Class: 9

Classification code: M6

Packaging group: III

Label: 9

Hazard ID: 90

IMDG/IMO:



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Shipping name: Environmentally hazardous substance, liquid, n.o.s (Propiconazo)

Class: 9
Packaging group: III
Label : 9 Marine pollutant

IATA:

Shipping name: Environmentally hazardous substance, liquid, n.o.s (Propiconazole).

Class: 9

Label: 9

Packaging group: III

Tremcard No: 90GM6-III

15. REGULATORY INFORMATION

Symbol : Xn; N

Indication of danger: Harmful, Irritant; Dangerous for environment.

Risk phrases:

R 22 Harmful if swallowed.

R 36/38 Irritating to eyes and skin.

R43 May cause sensitization by skin contact.

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

Safety phrases:

S2 Keep out of reach of children.

S24/25 Avoid contact with skin and eyes.

S36/37 Wear suitable protective clothing and gloves.

S46 If swallowed, seek medical advice immediately and show this container or label.

S60 This material and its container must be disposed of as hazardous waste.

S61 Avoid release to the environment. Refer special instructions/Safety data sheets.

National legislation: In accordance with the South African National Road Traffic Act, 1996 (Act 93 of 1996), the Fire Brigade Act, 1987 (Act 99 of 1987) and the Occupational Health and Safety Act, 1993 (Act. No. 85 of 1993)

16. OTHER INFORMATION

Compiled by: Danie Fourie

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith



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and believed to be correct. This information applies to the PRODUCT AS SUCH. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear.

It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulations(s) containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.

REFERENCES

- DAS Propiconazole MSDS.
- *The Pesticide Manual*; Thirteenth Edition; Editor Clive Tomlin; Crop Protection Publications, 2003.
- ECB-ESIS: European Chemical Substance Information System.
- Dangerous Goods Regulations, IATA, 46th Edition, 1 January 2005
- ADR ,2005

END OF MSDS.