

FARM-AG INTERNATIONAL (Pty) Ltd

P.O. Box 1523, Durban 4000 Co Reg. No. 2005/011761/07

Head Office : 61 Marshall Dr., Old Mill Industrial Park, Mount Edgecombe South Africa

Tel + 27 31 0033486 • Fax + 27 31 502 5825

1. COMPOSITION / INFORMATION ON INGREDIENTS

Product name: EPOCH 125 SC
 Product use: Fungicide
 Creation date: November 2017
 Revision date: -

24 Hr Emergency Number: 082 771 2712
 In case of Spillage:
 HAZMAT: 0800 147 112
 In case of Poisoning:
 Poison Information Centre 0861555777
 Tygerberg Hospital: (021) 931 6129
 Red Cross Poison Emergency Enquiries :(021) 689 5227

2. COMPOSITION / INFORMATION ON INGREDIENTS

Common Name: Epoxiconazole
 Chemical Name: (2RS,3SR)-1-[3-(2-chlorophenyl)-2,3-epoxy-2-(4-fluorophenyl)propyl]-1H-1,2,4-triazole
 CAS No.: [133855-98-8]
 Chemical Family: Triazole
 Chemical Formula: C₁₇H₁₃Cl₁₇H₁₃ClFN₃O
 Molecular weight: 329.8
 Formulation: Epoxiconazole 125 g/l
 Suspension Concentrate

Use: Systemic fungicide with protective and curative action. Inhibition of C-14-demethylase in sterol biosynthesis.

Hazardous ingredients of toxicological concern:

COMPONENT	Concern	% present
Epoxiconazole	Mild irritant	12.5 %
		Up to 100%

The specific chemical identity is being withheld because it is trade secret information of Farm-Ag International.

SYMBOLS: Xi, Xn, N

Indication of danger: Irritant, Harmful, Environmentally Hazardous Substance

RISK-PHRASE(S): R23/25, R36/37/R38, R51/53

3. HAZARD IDENTIFICATION**Likely routes of exposure**

May be harmful if mist or vapour is inhaled.

Poisonous if swallowed and may be moderately irritating to eyes.

Product may be mildly irritating due to inert. It is not a skin sensitizer.

Toxic to aquatic organisms.

May cause long-term adverse effects in the aquatic environment.

Other Health Hazard Information:

Product not considered mutagenic, teratogenic or carcinogenic, but inerts, present at low concentrations in product, may be.

At normal dose rates none of the above hazards are likely to occur.

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4. FIRST AID MEASURES AND PRECAUTIONS

Use personal protection recommended in section 8.

Symptoms of human poisoning:

The product may cause mild to moderate irritation, tearing, nausea, vomiting, diarrhea, headache, breathing difficulty and death.

Eye contact

If in eyes, hold eye open and rinse slowly and gently for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

Skin contact

Remove contaminated clothing, shoes and leather goods. Wash affected skin gently with plenty of water.

Use non-abrasive soap. If there are persistent symptoms, obtain medical advice.

Inhalation

Remove person to a well-ventilated area. Keep person calm and reassured. If not breathing, give artificial respiration.

Ingestion

Call poison control center or doctor immediately for treatment advice. Have person drink several glasses of milk or water if able to swallow. Do not induce vomiting unless told to do so by the poison center or doctor. Do not give anything by mouth to an unconscious person. Obtain medical attention immediately

Advice to doctors

There is no specific antidote available. Treat symptomatically and supportively.

5. FIRE-FIGHTING MEASURES

Fire/Explosion hazard:

Non-flammable.

Flash point : Not applicable.

Extinguishing media

Recommended: Fine water spray, dry chemical powder, foam, carbon dioxide (CO₂). Water spray can be used to extinguish surrounding fire and cool unaffected or exposed containers.

Fire fighting:

Remove spectators from surrounding area. Isolate the fire area and evacuate upwind. Use a recommended extinguishing agent for the type of surrounding fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal. Avoid inhaling hazardous vapours and fumes from burning materials. Keep upwind. Remove container from fire area if possible and without risk. Water spray can be used to cool unaffected containers. Dyke fire control water for later disposal. Do not scatter the material.

Personal protective equipment.

Self-contained breathing apparatus. Fire may produce irritating or toxic vapours or mists.

Equipment should be thoroughly decontaminated after use.

6. ACCIDENTAL RELEASE MEASURES (SPILLAGE)

Personal precautions

Use personal protection recommended in section 8.

Avoid contact with skin, eyes and clothing. Do not breathe in spray or fumes. Wear personal protective clothing. Immediately remove contaminated clothing, undergarments and shoes. For personal protection see Section 8.

Environmental precautions

Keep out of drains, surface or groundwater or spilling onto soil. Considered a marine Pollutant.

Occupational spill:

Avoid breathing mist/vapour and skin contact. Remove sources of ignition if combustible or flammable vapours may be present. Ventilate area.

Methods for cleaning up

Isolate area and keep authorized persons away. Do not walk through spilled material. Collect with the non-combustible suitable absorbent material. Contaminated soil may have to be removed and disposed. Label drums with its content and dispose of it in accordance with local regulations. To decontaminate spill area, tools and equipment, wash with a suitable solution (i.e. organic solvent, detergent bleach or caustic). Add the solution to the drums already collected. Open burning or dumping of this material is prohibited.

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7. HANDLING AND STORAGE REQUIREMENTS

Good industrial practice in housekeeping and personal hygiene should be followed.

Handling

Avoid contact with eyes and skin. Product may be mildly irritating to eyes and skin.

When using do not eat, drink or smoke.

Wash hands thoroughly after handling or contact.

Thoroughly clean equipment after use.

Do not contaminate drains, sewers and water ways when disposing of equipment rinse water.

Emptied packages retain product residue and dust.

FOLLOW LABELLED WARNINGS EVEN AFTER CONTAINER IS EMPTIED.

Storage

Keep away from food, drink and animal feed.

Keep only in the original container.

The product can crystallize below the limit temperature.

Protect from temperatures below: -5°C and above 40°C.

Minimum shelf life: 2 years.

Local regulations should be complied with.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

It is essential to provide adequate ventilation. The measures appropriate for a particular work site 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.

Engineering controls

An approved respirator suitable for protection from mists of pesticides is adequate.

Eye protection

Wear safety goggles.

Skin protection

Wear chemical resistant gloves and appropriate protective clothing and equipment to prevent repeated skin contact with this product. Wash contaminated clothing and clean protective equipment before re-use.

Respiratory protection

An approved respirator suitable for protection from mist of pesticides is adequate.

When recommended, consult manufacturer of personal protective equipment for the appropriate type of equipment for a given application.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White to off white flowable liquid
Odour:	Faint aromatic
Density:	1.070 g/ml (20°C)
Solubility in water:	Completely soluble in water
Flash point:	Water based
pH:	5.0 – 8.0

10. STABILITY AND REACTIVITY

Stability

Stable for a period of 2 years under normal conditions of handling and storage.

Conditions and Materials to avoid/Reactivity

Keep the product in a cool, dry well-ventilated place. Protect from sunlight, open flame and sources of heat. Avoid contact with strong bases, strong acids, strong oxidizing agents.

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11. TOXICOLOGICAL INFORMATION

This section is intended for use by toxicologists and other health professionals.

Data obtained on product and components are summarized below.

Acute oral toxicity LD₅₀ (Rat): >2000 mg/kg

Acute dermal toxicity: (Rat) LD₅₀: >2,000 mg/kg

Skin irritation: Mild irritant

Eye Irritation: Moderate irritant

Acute inhalation toxicity: Rat, LC₅₀, 4 hours, aerosol: >3.79 mg/L

Skin Sensitization: Not a skin sensitizer

Carcinogenicity

Indication of possible carcinogenic effect in animal test.

Reproductive toxicity

The results of animal studies suggest a fertility impairing effect.

Development toxicity:

Developmental toxicity/teratogenicity were seen in animal studies.

Repeated dose toxicity and Specific target organ toxicity

Repeated exposure to large quantities may affect certain organs

12. ECOLOGICAL INFORMATION**Mobility, Degradability & Accumulation:**

Epoxiconazole is relatively stable in the environment with hydrolysis or photolysis not likely. In aerobic soil and aquatic conditions it is slowly degraded.

In soil Epoxiconazole is strongly to moderately absorbed. In column and field studies there was no evidence of leaching and , therefore, it has a relatively low potential to contaminate adjacent surface water. Degradation of technical Epoxiconazole in soil is by microbial activity, DT₅₀ c. 2-3 months.

Epoxiconazole is extensively degraded in plants and is not phytotoxic to non-target terrestrial plants.

ECOTOXICOLOGY:**Aquatic toxicity, fish: Very toxic to aquatic organisms.**

May cause long-term adverse effects in the aquatic environment.

Rainbow trout (Oncorhynchus mykiss):

Acute toxicity, 96 hours LC₅₀: >2.2 - <4.6 mg/L

Aquatic toxicity, invertebrates: Water flea (Daphnia magna):

Acute toxicity, 48 hours, static, EC₅₀: 8.69 mg/L

Aquatic toxicity, algae/aquatic plants

EC₅₀ (72 h) green algae for 2.3 mg/l

Arthropod toxicity

Bees (Apis mellifera): Practically non-toxic

LD₅₀ >100 µg/bee

Soil organism toxicity, invertebrates: Practically non-toxic.

Worms (Eisenia foetida): EC₅₀ (14 d) > 1000 mg/kg dry soil

Persistence and degradability:

Not readily biodegradable

Bioaccumulative potential:

Bioconcentration factor: 59 – 70, *Oncorhynchus mykiss*. Does not accumulate in organisms

Mobility in soil

Contamination of groundwater is not expected

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Keep out of drains, sewers, ditches and water ways.

Recycle if appropriate facilities/equipment available.

Must be sent to a suitable incineration plant, observing local regulations.

Follow all local/regional/national/international regulations.

Container

See the individual container label for disposal information.

Emptied packages retain products residue and dust.

Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

Empty packaging completely.

Store for collection by approved waste disposal service.

Ensure packaging cannot be reused.

Do NOT re-use containers.

Bury in approved landfill.

Follow all local/regional/national/international regulations.

Use handling recommendations in Section 7 and personal protection recommendations in Section 8.

14. TRANSPORT INFORMATION**UN No.:** 3082**Road Transport ADR/IRD:**

Class : 9

Packaging group: III

Shipping name: Environmentally Hazardous Substance, N.O.S (Epoxiconazole 125 g/l)

Maritime Transport IMDG/IMO: MARINE POLLUTANT

Class : 9

Packaging group: III

Shipping name: Environmentally Hazardous Substance, N.O.S (Epoxiconazole 125 g/l)

15. REGULATORY INFORMATION**Symbol:** Xi, Xn, N**Indication of danger:** Harmful, Irritant, Environmentally Hazardous Substance**Risk phrases:****R23/25** Toxic by inhalation and if swallowed**R36/37/R38** Irritating to eyes, to respiratory system and skin.**R51** Toxic to aquatic organisms**R53** May cause long-term adverse effects in the aquatic environment.**Safety phrases:****S 1/2** Keep locked up and out of the reach of children.**S 24/25** Avoid contact with skin and eyes.**S 36/37** Wear suitable protective clothing and gloves.**S 46** If swallowed, seek medical advice immediately and show container or label.**16. OTHER INFORMATION****Packing and Labelling:**

Packed in 1, 5, 10, 20, and 25 litre fluorinated plastic containers and labelled according to the South African regulations and guidelines.

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Disclaimer:

The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage use of the product. It is not applicable to unusual or non-standard uses of the product nor where instructions or recommendations are not followed.

All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.