

TEBUCONAZOLE 250 EW

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Tebuconazole 250 EW
Other identifier: Tebuconazole 250 g/l
Recommended use: Fungicide
Restrictions on use: Agriculture

Supplier: Universal Crop Protection (Pty) Ltd.
Co. Reg. No.: 1983/008184/07/
PO Box 801
Kempton Park, 1620, South Africa
Telephone: (011) 3962233
Fax: (011) 3964666
Website: www.villacrop.co.za

Emergency telephone numbers:
24 Hr Transport / Spill emergency no:
(Hazcall24) +27 86 044 4411
(Client: Villa Crop Protection)
Griffon Poison Information Centre +27 82 446 8946
(Client: Villa Crop Protection)
Poisoning Emergency telephone numbers:
Griffon Poison Information Centre +27 82 446 8946
Poisons Information Centre +27 861 555 777

2. HAZARDS IDENTIFICATION

| UN GHS, Regulation EC 1272/2008 [EU-GHS/CLP] EU & SANS 10234:2008 | | |
|--|-------------------------------|--------------|
| Hazard classes | Hazard categories | H-statements |
| Health | | |
| Aspiration Toxicity | Asp. Tox. 1 | H304 |
| Oral | Acute Tox. 5 | H303 |
| Dermal | Acute Tox. 5 Skin irrit. 2 | H313 H315 |
| Eye | Eye Dam. 1 | H318 |
| Specific target organ toxicity (single exposure) | STOT SE 3 | H335 |
| Germ cell mutagenicity | Muta. 1B | H340 |
| Carcinogenicity | Carc. 1B | H350 |
| Reproductive toxicity | Repr. 2 | H361d |
| Environment | | |
| Aquatic acute | Aquatic acute 1 | H400 |
| Aquatic chronic | Aquatic chronic 1 | H410 |

The most important adverse effects:

Physiochemical effects: None known.

Human health effects:

May be fatal if swallowed and enters airways.

May be harmful if swallowed.

May be harmful in contact with skin.
Causes skin irritation.
Causes serious eye damage
May cause respiratory irritation
May cause genetic defects.
May cause cancer.
Suspected of damaging fertility or the unborn child.

Label elements:



Signal word: Danger

Hazard statements:

H303: May be harmful if swallowed
H304: May be fatal if swallowed and enters airways.
H313: May be harmful in contact with skin
H315: Causes skin irritation.
H318: Causes serious eye damage.
H335: May cause respiratory irritation.
H340: May cause genetic defects.
H350: May cause cancer.
H361: Suspected of damaging fertility or the unborn child.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P202: Do not handle until all safety precautions have been read and understood.
P203: Obtain, read and follow all safety instructions before use.
P261: Avoid breathing dust, fume, gas, mist, vapours, or spray.
P264: Wash hands and face thoroughly after handling.
P264+P265: Wash hands thoroughly after handling. Do not touch eyes.
P271: Use only outdoors in a well-ventilated area.
P273: Avoid release to the environment.
P280: Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.
P301+P316: IF SWALLOWED: Get emergency medical help immediately.
P302+P317: IF ON SKIN: Get medical help.
P302+P352: IF ON SKIN: Wash with plenty of water and non-abrasive soap.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

TEBUCONAZOLE 250 EW

SAFETY DATA SHEET

P305+P354+P338: IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313: If exposed or concerned: Get medical attention.

P310: Immediately call a POISON CENTRE.

P317: Get medical help.

P318: IF exposed or concerned, get medical advice.

P319: Get medical help if you feel unwell.

P331: Do NOT induce vomiting.

P332+P317: If skin irritation occurs: get medical help.

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

P391: Collect spillage.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

P501: Dispose of contents/container to suitable landfill in accordance with local regulations.

Other hazards:

None known.

Toxicity:

Classification according to GHS: Category 5

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture

Composition:

| Chemical name | CAS | Conc. (m/v %) | Classification EC 1272/2008 |
|------------------------|-------------|---------------|--|
| Tebuconazole technical | 107534-96-3 | 26.4% | Acute Tox. 4 (H302) Repr. 2 (H361) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) |
| Light aromatic solvent | 64742-95-6 | <20 % | Asp.Tox. 1 (H304) Muta. 1B (H340) Carc. 1B (H350) |
| Isophorone | 78-59-1 | <50 % | Acute Tox. 4 (H302) Acute Tox. 4 (H312) Eye irrit. 2 (H319) STOT SE 3 (H335) Carc. 2 |

| | | | |
|--------------------------|------------|-------|--|
| | | | (H351) |
| Aromatic sulphonate salt | 26264-06-2 | <10 % | Acute Tox. 4 (H302) Skin irrit. 2 (H315) Eye Dam. 1 (H318) Aquatic chronic 4 (H413) |

4. FIRST AID MEASURES

Remove the victim from the area of exposure. Wash off remaining material with plenty of water. In the event of any complaints or symptoms, avoid further exposure. Immediately consult a doctor.

Inhalation: Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation occurs.

Skin: Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. **TEBUZOLE 250 EW** causes mild skin irritation. Obtain medical attention if irritation occurs.

Eyes: Flush eyes with clean water for at least 15 – 20 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. **Seek immediate medical attention.**

Ingestion: Seek medical attention or call a poison control centre for treatment advice. Do not induce vomiting unless instructed to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person. If the person is alert, rinse mouth thoroughly with water.

Anticipated acute effects: Causes serious eye damage. May be harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation.

Anticipated delayed effects: May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. The product contains light aromatic solvent that may cause chemical pneumonitis if aspirated into lungs. Watch for delayed onset of pulmonary aspiration.

Most important symptoms / effects: None known.

Advice to physician: Treat symptomatically and supportively. No specific antidote known.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Use carbon dioxide or dry chemical for small fires and water fog or foam for large fires.

TEBUCONAZOLE 250 EW

SAFETY DATA SHEET

Unsuitable Extinguishing Media: High volume water jet. Use a water jet only to cool heated containers.

Specific hazards: Fire may release harmful carbon monoxide, carbon dioxide and oxides of nitrogen.

Special fire-fighting procedures: Remove spectators from surrounding area. Isolate the fire area and evacuate all personnel downwind of the fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Remain upwind of fire. Avoid inhaling hazardous vapours and fumes from burning materials. Remove container from fire area if possible and without risk. Do not use high volume water jet, due to contamination risk. Do not scatter the burning material. Water can be used to cool unaffected containers but must be contained for later disposal. Contain fire control agents for later disposal. Avoid pollution of waterways by run-off from the site.

Personal protective equipment: Wear NIOSH / MSHA approved self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Avoid contact with eyes and skin. Do not breathe in spray mist/fumes or vapours. Ventilate area of spill or leak, especially in contained areas.

Protective equipment: Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.

Emergency procedures: Alert firefighting personnel, evacuate unprotected personnel and animals.

Environmental Precautions: Prevent spilled product from entering sewers, waterways, or ground water. This product is classified as very toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment. Any spillages or uncontrolled discharges into watercourses should be reported immediately to the police and the Department of Water / Environmental Affairs.

Methods and Materials for Containment: Contain spilt product by diking area with sand or earth.

Methods and Materials for Clean-up: Cover contained spill with an inert absorbent material such as sand, vermiculite, earth or other appropriate material. Vacuum, scoop, or sweep up material and place the material into a clean, dry, sealable container. Label containers with the contents and dispose of according to local regulations. Do not place spilt material back in original container. Do not re-use spilt material. Collect washings and add to the

drums already collected. Do not flush spilt material or washings into drains or waterways. To decontaminate the spill area, tools and equipment, wash with water and suitable detergent. See section 13 for disposal considerations.

7. HANDLING AND STORAGE

Handling:

Precautions for safe handling: May be harmful if swallowed. Avoid contact with eyes and skin. Ensure adequate ventilation during handling and use. Do not handle broken packages without protective equipment. Immediately clean up spills that occur during handling. Keep containers closed when not in use. In the case of contact with the product refer to First Aid Measures – Section 4.

General occupational hygiene: Practice good hygiene when using this material. Wash hands before eating, drinking, chewing gum, smoking, using the toilet or applying cosmetics. Worker should shower at the end of each workday. Launder all clothing before it is re-used.

Storage:

Conditions for safe storage: Keep under lock and key and out of reach of unauthorised persons, children and animals. Store in its original, labelled container, tightly closed in an isolated, dry, cool and well-ventilated area. Do not store near heat, open flame, sources of ignition or hot surfaces. Not to be stored next to foodstuffs, feed and water supplies. Avoid cross contamination with other pesticides and fertilisers.

Incompatible substances and mixtures: Refer to product label.

Packaging material: Fluorinated plastic containers.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible concentration:

| Components | Exposure limits | Type of exposure limit | Source |
|------------|-----------------|------------------------|----------------|
| Isophorone | 4 ppm | 8-hour TWA | "www.osha.gov" |

Engineering Controls:

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. Local Exhaust: Provide general or local exhaust ventilation systems to maintain airborne concentrations

TEBUCONAZOLE 250 EW

SAFETY DATA SHEET

below OELs or other specified exposure limits. Local exhaust ventilation is preferred. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire and other applicable regulations.

Personal Protective Equipment:

Respiratory Protection: For most well-ventilated conditions, no respiratory protection should be needed. If used in a poorly ventilated area (airborne concentrations exceed exposure limits), use a NIOSH approved, air-purifying respirator with cartridges / canisters approved for organic vapours.

Hand Protection: The use of chemically protective impervious gloves is recommended to prevent against skin contact.

Eye Protection: this product causes serious eye damage. Wear a face shield/ visor. The use of chemical safety goggles is recommended to prevent against eye contact. Contact lenses are not protective eye devices.

Skin and Body Protection: Employees must wear appropriate protective impervious clothing, rubber boots, hat and equipment to prevent repeated or prolonged skin contact with this product.

Emergency eyewash: Where there is any possibility that an employee's eyes may be exposed to this product, 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: Clear to pale yellow liquid

Odour: Characteristic aromatic odour.

Odour threshold: Not available.

pH (1% aqueous dilution): 6.0 to 9.0.

Melting point: Not available.

Freezing Point: Not available.

Boiling Point: Not available.

Flash Point: Not available.

Flammability: Not flammable.

Upper / lower explosion limits: Not explosive.

Vapour Pressure (mm Hg): Not available.

Relative Vapour Density: Not available.

Density / Relative density: 0.996 ± 0.05 g/ml @ 20 °C.

Solubility: Forms an emulsion in water.

n-octanol / water partition coefficient: Not available.

Auto-ignition temperature: Not available.

Decomposition temperature: Not available.

Viscosity: Not available.

10. STABILITY AND REACTIVITY

Chemical stability: The product is stable for two years at ambient temperature and pressure, under normal storage and handling conditions. Avoid storage under extreme temperatures and conditions. Store below 50 °C, preferably below 30 °C, and not for prolonged periods in direct sunlight.

Reactivity: None known.

Possibility of hazardous reactions: None known.

Conditions to avoid: Extreme heat or exposure to flames. Avoid contact with strong oxidising agents.

Incompatible materials: Strong oxidizers, strong bases, strong reducing agents.

Hazardous decomposition products: Fire may release harmful carbon monoxide, carbon dioxide and oxides of nitrogen.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Calculated according to GHS:

Oral LD₅₀: (24h) > 2500 mg/kg (rat)

Dermal LD₅₀: > 2900 mg/kg (rat)

Inhalation LC₅₀: Unclassified

Skin Irritation: Causes skin irritation.

Eye Damage: Causes serious eye damage.

Skin Sensitization: Not classified.

Respiratory Sensitization: Not classified.

Reproductive cell mutagenicity: May cause genetic defects.

Carcinogenicity: May cause cancer.

Reproductive toxicity: Suspected of damaging fertility or the unborn child.

Specific target organ toxicity – single exposure: May cause respiratory irritation.

Specific target organ toxicity – repeated exposure: Not available.

Aspiration hazard: May be fatal if swallowed and enters airways.

Chronic Effects: Not classified.

POTENTIAL ADVERSE EFFECTS:

Oral: May be harmful if swallowed. Causes skin irritation.

Skin contact: May be harmful in contact with skin.

Eye contact: Due to the inerts, this product can cause serious eye damage.

TEBUCONAZOLE 250 EW

SAFETY DATA SHEET

12. ECOLOGICAL INFORMATION

This product is very toxic to aquatic life with long lasting effects.

ECOTOXICITY DATA:

Tebuconazole

Fish:

| | | |
|-------------------------|------------------|----------|
| LC ₅₀ (96 h) | Rainbow trout | 4.4 mg/ℓ |
| | Bluegill sunfish | 5.7 mg/ℓ |

| | | |
|--|--|-----------|
| <u>Daphnia:</u> LC ₅₀ (48 h) | | 2.79 mg/ℓ |
|--|--|-----------|

| | | |
|--|--|-----------|
| <u>Algae:</u> E _r C ₅₀ (72 h) | <i>Pseudokirchneriella subcapitata</i> | 3.80 mg/ℓ |
|--|--|-----------|

| | | | |
|-----------------------------|--------|----------------|------------|
| <u>Birds:</u> | | | |
| Acute oral LD ₅₀ | Male | Japanese quail | 4440 mg/kg |
| | Female | Japanese quail | 2910 mg/kg |
| | | bobwhite quail | 1990 mg/kg |

| | | | |
|--------------|------------------|----------------|------------------|
| Dietary (5d) | LC ₅₀ | Mallard ducks | >4820 mg/kg diet |
| | | Bobwhite quail | >5000 mg/kg diet |

| | |
|--|------------|
| <u>Bees:</u> LD ₅₀ contact | >200µg/bee |
| LD ₅₀ oral (48h) | >83 µg/bee |

| | | |
|---|-----------------------|-----------------|
| <u>Worms:</u> LC ₅₀ (14d) | <i>Eisenia fetida</i> | 1380 mg/kg soil |
|---|-----------------------|-----------------|

Plants:

Metabolism studies in representative crops show that tebuconazole is the major terminal residue in grapes and peanut and cereal straw. In cereal grains, triazole alanine is the main metabolite (similar to the metabolism of other parent triazoles). In plant tissue, mean DT₅₀ in the range 7–12 d could be derived (cereals), depending on the data base taken.

ENVIRONMENTAL EFFECTS

Persistence and degradability: The degradation of tebuconazole in soil was slow in laboratory studies. Under field conditions, the compound degraded much more rapidly, and did not accumulate in long-term studies (3–5 y). Since no residues could be detected in deeper soil layers of these and other studies, and adsorption/desorption studies indicated a low mobility in the soil, groundwater contamination through leaching can be excluded. In natural waters, hydrolysis and indirect photolysis occur; in a pond study, the compound

dissipated from the water body with DT₅₀ 4–6 w. Low vapour pressure and strong adsorption result in low volatilisation into the air.

Bio-accumulative potential: Not determined.

Mobility in soil: Low mobility in the soil.

Other adverse effects: Not determined.

13. DISPOSAL CONSIDERATIONS

Waste: Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or re-processed. Never pour untreated waste or surplus product into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers. Comply with local legislation applying to waste disposal. The product may be taken to a registered waste disposal site or incineration plant.

Container: Emptied containers retain product residues. Do not re-use the empty container for any other purpose. Triple rinse empty containers by inverting the empty container over the spray or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a drip. Thereafter, rinse the container three times with a volume of water equal to a third of that of the container. Add the rinsings to the contents of the spray tank before destroying the container in the prescribed manner. Puncture the triple rinsed container and dispose of via an approved collector or recycler (www.croplife.co.za). Do not bury, burn, or donate the container to any other parties that may use it as a container for food or beverages. Observe all labelled safeguards until container is destroyed.

14. TRANSPORT INFORMATION

This product is classified as a marine pollutant.

| | |
|---------------------------------------|---|
| UN Number: | 3082 |
| Road Transport ADR / ORD: | |
| Class: | 9 |
| Packaging group: | III |
| UN Proper Shipping Name: | Environmentally hazardous substance, liquid, N.O.S. (Tebuconazole 250 g/ℓ) |
| Maritime Transport IMDG / IMO: | |
| Class: | 9 |
| Packaging group: | III |
| UN Proper Shipping Name: | Environmentally |

TEBUCONAZOLE 250 EW

SAFETY DATA SHEET

hazardous substance, liquid, N.O.S. (Tebuconazole 250 g/l)

Marine pollutant (Y/N): Yes

Air Transport IATA / ICAO:

Class: 9

Packaging group: III

UN Proper Shipping Name: Environmentally

hazardous substance, liquid, N.O.S. (Tebuconazole 250 g/l)

Special / Environmental Precautions: Wedge drums tightly to avoid movement.

Transport in bulk: Refer to MARPOL 73/78, Annex II and the IBC code.

15. REGULATORY INFORMATION

Safety, health and environmental regulations / legislation for the mixture:

OHSA 1993 Regulations for Hazardous Chemical Substances.

Relevant information regarding restrictions: None.

EU regulation: Regulation EC1272/2008 (EU-GHS/CLP)

Other national regulations: None.

Chemical Safety Assessment carried out? No

16. OTHER INFORMATION

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

Other hazard statements, abbreviations and explanations:

H302: Harmful if swallowed.

H312: Harmful in contact with skin.

H319: Causes serious eye irritation.

H351: Suspected of causing cancer.

H413: May cause long lasting harmful effects to aquatic life.

IATA: International Air Transport Association.

IBC: International Bulk Chemical.

ICAO: International Civil Aviation Organization.

IMDG: International Maritime Dangerous Goods

IMO: International Maritime Organization.

LD₅₀ value: The median lethal dose or the amount of a toxic agent that is sufficient to kill 50 percent of a population within a certain period of time.

TWA: Time-weighted average – The average exposure over a specified period, usually a nominal eight hours.

ST/STEL: Short-term exposure limits.

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 and 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.

END OF DOCUMENT

Compiled: August 2004

Reviewed: July 2022

Revision no.: (1)

Next revision: June 2027

For detailed information on revisions, contact the Registration holder.