

# TebuDew

## SAFETY DATA SHEET

### 1. PRODUCT & COMPANY IDENTIFICATION

**Product Name:** TebuDew  
**Pesticide Classification:** Fungicide  
**UN No.:** 1992

**Supplier**

Enviro Bio-Chem (Pty) Ltd  
Co. Reg. No.: 2013/194774/07  
44 Kerk Street, Lichtenburg  
North West, South Africa 2740

**Registration Holder**

Erintrade CC t/a RT Chemicals CC  
Co. Reg. No.: CK2001/036403/23  
44 Kerk Street, Lichtenburg  
North West, South Africa 2740

**Telephone:** +27 87 231 7261  
**Fax:** 086 541 7948  
**Website:** [www.envirobiochem.co.za](http://www.envirobiochem.co.za)

**24 Hr Emergency Number:** Bateleur: +27 83 123 3911

**In case of Poisoning:**

Poison Information Centre: +27 82 446 8946  
Tygerberg Hospital: (+27 21) 931 6129  
Poison Emergency Enquiries: (+27 21) 689 5227

**Common Name:** Tebuconazole 250g/l EC  
**Chemical Name:** (RS)-1-p-chlorophenyl-4,4-dimethyl-3-(1H-1,2,4-triazol-1-ylmethyl)pentan-3-ol (IUPAC)  
**Empirical Formula:** C<sub>16</sub>H<sub>22</sub>ClN<sub>3</sub>O  
**CAS No.:** 107534-96-3  
**RSA Reg. No.:** L7871 Act/Wet No. 36 of/van 1947

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### 2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Ingredient Name</u>	<u>Concentration</u>
Tebuconazole	250 g/l
Xylene (solvent)	350 g/l

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### 3. HAZARD IDENTIFICATION

**Hazard Class:** WHO Class III -Slightly hazardous.

**Main Hazard:** Moderately irritating to skin and severely irritating to eyes.

**Flammability:** Extremely flammable.

**Chemical Hazard:** Hydrogen sulfide, oxides of carbon, sulfur and nitrogen may form during combustion.

**Biological Hazard:** Product is considered a marine pollutant.

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### 4. FIRST AID MEASURES AND PRECAUTIONS

If poisoning is suspected, do not wait for symptoms to develop. Contact a physician, the nearest hospital, or the nearest Poison Control Centre.

**Symptoms of Human Poisoning:** No signs and symptoms of poisoning are known.

#### First Aid Measures:

**Skin Contact:** Remove contaminated clothing and wash before re-use. Wash affected skin areas with fresh running water and soap. Treat symptomatically. Seek medical attention if symptoms persist.

**Eye Contact:** Hold eyes open and flush immediately with clear, clean running water for at least 15 minutes. If eye symptoms (redness, irritation or pain) persist refer patient to ophthalmologist for examination of eyes.

**Ingestion:** Wash out mouth with water if the patient is alert and conscious. Do not induce vomiting. If vomiting occurs spontaneously, keep airway clear. Keep patient at rest and seek medical attention. Seek medical attention.

**Inhalation:** Move victim from contaminated area to fresh air. Avoid inhalation of vapor or spray mist. Seek medical attention.

**Advice to Physician:** Treatment is supportive and symptomatic.

**Antidote:** There is no specific antidote for poisoning with this product.

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### 5. FIRE FIGHTING MEASURES

**Flammability:** Highly flammable.

**Extinguishing Agents:** Water spray, dry chemical CO<sub>2</sub> or dry powder as suitable for fire conditions.

**Firefighting:** Wear full protective clothing and self-contained breathing apparatus. Remove spectators from surrounding area. Isolate the fire area and evacuate downwind. 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 can be used to cool unaffected containers but must be contained for later disposal. Dyke fire control water for later disposal. Do not scatter the material. Avoid pollution of waterways. Do not use high volume water jet, due to contamination risk. Contain water used for firefighting for later disposal. Avoid the accumulation of polluted run-off from the site.

**Special Hazards:** Hydrogen sulfide, oxides of carbon, sulfur and nitrogen may form during combustion.

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### 6. ACCIDENTAL RELEASE MEASURES (SPILLAGE)

**Personal Precautions:** Wear protective clothing. Avoid breathing vapours or spray drift. If necessary, wear a self-contained breathing apparatus.

**Environmental Precautions:** Prevent spilled material from entering drains or watercourses. Contain spill and absorb with earth, sand, clay or other absorbent material.

**Spills:** Soak up with absorptive material such as damp earth or sand or other suitable non-combustible absorbent material. Place the material into a clean, dry container and cover for subsequent disposal. In situations where product comes in contact with water, contain contaminated water for later disposal. Prevent material from spreading by damming in with absorptive material. Do not flush spilled material into drains. Keep spectators away and upwind. 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. Label drums with its content and dispose it in accordance with local regulations. Open burning or dumping of this material is prohibited.

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## 7. HANDLING AND STORAGE REQUIREMENTS

**Handling:** Avoid contact with skin, eyes and clothing. Do not leave spray solution in spray tanks for long periods. 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 non-abrasive soap and put on clean clothing. Do not apply directly to areas where surface water is present or to intertidal areas below the mean high-water mark. Water used to clean equipment must be disposed of correctly to avoid contamination.

**Storage Precautions:** Store at temperatures below 30 °C and above 5 °C. Store in original sealed containers in a cool, well-ventilated and dry storehouse. Keep away from direct sunlight, food, seed, animals, children and uniformed persons.

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## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

**Exposure Limits:** 0.03 mg/kg body weight.

**Engineering Controls:** Use outdoors in a well-ventilated area. Comply with occupational safety, environmental, fire and other applicable regulations. Wear suitable personal protective equipment.

### Personal Protective Equipment:

**Clothing:** Long-sleeved shirt, long pants, shoes plus socks, protective waterproof (impermeable) gloves. Employee must wear appropriate protective clothing and equipment to prevent prolonged skin contact with this product. Clothing soaked with TebuDew solution should be promptly removed and laundered before re-use.

**Gloves:** Protective waterproof (impermeable) rubber or plastic gloves are recommended.

**Eye Protection:** Wear eye protection. During mixing or pouring operations or other activities in which eye contact with undiluted TebuDew is likely to occur, splash goggles should be worn. 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.

**Respiratory:** When handling the product and when preparing the spray mixture, wear a face shield. It is usually safe to use the product without respirator. If the product is used in dusty or confined conditions, a respirator suitable for protection from dusts and mists of pesticides is adequate.

**Other Protection:** Do not eat, drink or smoke while handling this product. Prevent contamination of food, feeds, drinking water and eating utensils. After using this product wash hands and face before eating. Take extreme care to avoid drift. Wash accurately (preferably a shower) after work shift. Wash hands during breaks and at the end of the work with soap and water.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Light brown transparent liquid.

**Odor:** Characteristic odor.

**pH:** 6 – 9.5 (undiluted).

**Melting Point:** 0 °C

**Flash Point:** >45 °C

**Flammability:** Highly flammable.

**Explosive Properties:** Not an explosion hazard.

**Density:** 0.98 g/ml at 20 °C.

**Solubility in Water:** Forms an emulsion in water.

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## 10. STABILITY AND REACTIVITY

**Stability:** The product is stable when stored under normal storage conditions at normal temperatures.

**Conditions to Avoid:** Avoid extreme temperatures and ignition sources.

**Incompatible Materials:** Incompatible with acids or alkalis.

**Decomposition Products:** Hydrogen sulfide, oxides of carbon, sulfur and nitrogen.

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## 11. TOXICOLOGICAL INFORMATION

Acute toxicity based on the formulation toxicity.

**Acute Oral LD<sub>50</sub> (rat):** >2 000 mg/kg (calculated).

**Acute Dermal LD<sub>50</sub> (rat):** >2 000 mg/kg (calculated).

**Acute Inhalation LC<sub>50</sub> (rat, 4 hr):** Harmful. Inhalation of excessive amounts may cause respiratory irritation.

**Skin and Eye Irritation (rabbit):** Moderately irritating to skin and severely irritating to eyes.

**Skin Sensitization:** Not a skin sensitizer.

**Chronic Dietary Study:** Based on animal studies, chronic overexposure to tebuconazole may affect the spleen, liver, adrenals and lens of the eye.

**Carcinogenicity:** No carcinogenic effects were observed in rats or mice. An increase in liver tumours was observed in mice tested at a very high tebuconazole dose level.

**Mutagenicity:** Tebuconazole tested negative in several in-vitro and in-vivo short-term mutagenicity assays.

**Reproductive Hazard:** No data available.

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## 12. ECOLOGICAL INFORMATION

Ecotoxicity based on active ingredient toxicity.

**Aquatic Toxicity Fish LC<sub>50</sub> (96 hr):** 4.4 mg/l (rainbow trout); 5.7 mg/l (bluegill sunfish). Toxic to fish.

**Aquatic Toxicity Daphnia LC<sub>50</sub> (48 hr):** 4.2 mg/l.

**Aquatic Toxicity Algae EC<sub>50</sub>:** No data available.

**Avian Toxicity LD<sub>50</sub>:** 1 988 mg/kg (bobwhite quail). Practically non-toxic to birds.

**Bee Toxicity LD<sub>50</sub>:** >200 µg/bee (contact); 83 µg/bee (oral). Non-toxic to bees.

**Biodegradability:** The degradation of tebuconazole in soil was slow in laboratory studies. Under field conditions, the compound degraded much more rapidly.

**Bio-accumulation:** Tebuconazole did not accumulate under field conditions in long-term studies (3 to 5 years).

**Mobility:** Readily mobile in aqueous phase.

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## 13. DISPOSAL CONSIDERATION

**Pesticide Disposal:** Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be re-used or reprocessed. Never pour untreated waste or surplus products 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.

**Package Product Wastes:** Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is cleaned, reconditioned or destroyed. Rinse empty container three times with a volume of water equal to at least one tenth of that of the container. Add the rinsings to the spray tank before perforating and flattening the container. Dispose of in approved landfill or preferably in a pesticide incinerator.

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## 14. TRANSPORT INFORMATION

**UN No.:** 1992

**Class:** 3

**Packaging Group:** III

**Proper Shipping Name:** Flammable Liquid; Toxic; N.O.S. (contains Tebuconazole)

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## 15. REGULATORY INFORMATION

**Risk Phrases:** R11- Highly flammable  
R20/21/22- Harmful by inhalation, in contact with skin and if swallowed.  
R36/38- Irritating to eyes and skin.  
R40- Limited evidence of a carcinogenic effect.  
R41- Risk of serious damage to eyes.  
R51- Toxic to aquatic organisms.

**Safety Phrases:** S1/2- Keep locked up and out of reach children.  
S13- Keep away from food, drink and animal feedings tuffs.  
S16- Keep away from sources of ignition – No smoking.  
S23- Do not breathe vapour/spray.  
S24/25- Avoid contact with skin and eyes.  
S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.  
S61- Avoid release to the environment. Refer to special instructions/safety data sheet.

**National Legislation:** This product is registered under Act 36 of 1947 of the Republic of South Africa. It is a violation of South African law to use this product in any manner inconsistent with its approved labelling. Read and follow all label directions.

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## 16. OTHER INFORMATION

**Note:** Read and understand all the information on the product label before using the product.

**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.

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