

## MATERIAL SAFETY DATA SHEET

### Section 1. Company Contact and Chemical Product Information

**Product Name:** TOLEDO® 45WP Agricultural Fungicide

Tebuconazole 450g/kg WP

**EPA Reg. No.:** 83100-13-83979

**Product Code:** RTFF-020

**Corporate Contact:** 1-866-927-6826 (toll free); 1-305-599-2221

**Emergency number for spills and cleanup: CHEMTREC: 1-800-424-9300**

**Chemical Name of Active Ingredient:**

(RS)-1-*p*-chlorophenyl-4,4-dimethyl-3-(1H-1,2,4-triazol-1-ylmethyl)pentan-3-ol (IUPAC)

( $\alpha$ -[2-(4-chlorophenyl)ethyl]- $\alpha$ -(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol (CAS)

**Chemical Formula of Active Ingredients:**

C<sub>16</sub>H<sub>22</sub>ClN<sub>3</sub>O

**CAS Registry Number of Active Ingredient:**

107534-96-3 (CAS); 403-640-2 (EEC); 494 (CIPAC)

### Section 2. Composition/Information on Ingredients

| Component         | CAS Number  | Content (g/kg) |
|-------------------|-------------|----------------|
| Tebuconazole      | 107534-96-3 | 450            |
| Inert ingredients |             | 550            |

### Section 3. Hazards Identification

WARNING. Do not get in eyes, on skin, or on clothing. Avoid breathing dust or spray mist. Harmful if swallowed. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### Section 4. First Aid Measures

**If Inhaled:** Remove victim to fresh air and keep at rest. Ask for medical advice.

**If on Skin or Clothing:** Remove contaminated clothing. Wash affected areas with soap and water. Seek medical advice.

**If in Eyes:** Rinse eyes immediately with clean water for at least 15 minutes and obtain medical aid immediately.

**If Swallowed:** Wash out mouth with water. Do NOT induce vomiting. Keep patient at rest and seek medical advice immediately.

## **Section 5. Fire Fighting Measures**

**Firefighting media:** Water fog or foam, CO<sub>2</sub>, dry chemical to extinguish fire.

**Firefighting Precaution:** Keep out of smoke. Fight fire from upwind position. Cool containers / tanks with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Equipment or materials involved in pesticide fires may become contaminated. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

## **Section 6. Accidental Release Measures**

In case materials are released, keep unauthorized persons away. Prevent spill from spreading or entering waterways or drains. Avoid creating a dust cloud. Sweep up a spilled material into a suitable and sealable containers for disposal. Use suitable protective equipment. Follow all fire prevention procedures.

## **Section 7. Handling and Storage**

**Handling precautions:** Read label carefully before use. Handle and open container in a manner as to prevent spillage. Use only in area provided with appropriate exhaust ventilation. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

**Storage precautions:** Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

## **Section 8. Exposure Controls/Personal Protection**

**Engineering Controls:** Provide local exhaust or process enclosure ventilation system.

**Eye/Face:** To protect against accidental eye contact, goggles/face-shield should be worn.

**Skin Protection:** Rubber gloves and slightly protection clothes should be worn. Wash thoroughly with soap and water after handling.

**Respiratory Protection:** Ensure good ventilation. Wear an adequate respirator or facepiece.

## **Section 9. Physical and Chemical Properties**

|                             |  |
|-----------------------------|--|
| <b>Appearance</b>           | Off-white powder   |
| <b>Odor</b>                 | Mild characteristic odor                                     |
| <b>pH</b>                   | 7.31 at 25.0   |
| <b>Explosive properties</b> | Unlikely to produce explosion                                |
| <b>Flammability</b>         | Not consider as highly flammable at 21,32% humidity, 96.1kPa |

## **Section 10. Stability and Reactivity**

**Stability:** Stable under normal handling and storage conditions.

**Incompatibilities:** Avoid mixing with moisture, heat, flames and sparks.

**Hazardous decomposition:** In the event of fire, the formation of carbon monoxide, carbon dioxide and nitrogen oxides must be anticipated.

**Hazardous polymerization:** Will not occur.

## **Section 11. Toxicological Information**

**Acute Oral Toxicity:** LD<sub>50</sub> for rats > 2000 mg/kg

**Acute Dermal Toxicity:** LD<sub>50</sub> for rats > 5000 mg/kg

**Acute Inhalation Toxicity:** LC<sub>50</sub> (4hr) for rats > 4.2mg/L

**Skin Irritation:** Non-irritating to skin of rabbits.

**Eye Irritation:** Slightly irritating to eyes of rabbits.

## **Section 12. Ecological Information**

Referenced technical active ingredient ecological information list as below:

|       |   |
|-------|---|
| Birds | Acute oral LD <sub>50</sub> for male Japanese quail 4438, female Japanese quail 2912, bobwhite quail 1988 mg/kg b.w. Dietary LC50 (5 d) for mallard ducks > 4816, bobwhite quail > 5000 mg/kg feed. |
| Fish  | LC <sub>50</sub> (96 h) for rainbow trout 4.4, bluegill sunfish 5.7 mg/l (flow through).  |
| Bee   | LD <sub>50</sub> (48 h) (oral) 175.8 µg/bee; (contact) 0.6 µg/bee.  |

Environmental Fate:

Animals After three days, elimination was almost complete (>99%). Tebuconazole was excreted with the urine and the feces.

Plants Metabolism studies on wheat, grapes and peanuts show that tebuconazole is the major terminal residue. The metabolites detected were mainly triazole-containing compounds of no toxicological relevance. In plant tissue, a mean half-life of 12 days could be derived (cereals).

Soil/Environment

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 DT<sub>50</sub> 1-4 w. Low vapor pressure and strong adsorption result in low volatilization into the air.

## **Section 13. Disposal Considerations**

Disposal of product would be treated, stored, transported, and disposed of according to the local waste regulation. Do not flush to surface water or sanitary sewer system.

## **Section 14. Transport Information**

### **US DOT Classification**

**Proper Shipping Name:** Not Regulated This product is not Regulated by 49 CFR (DOT)

### **IMO Classification**

**Proper Shipping Name:** Environmentally hazardous substance, liquid, N.O.S.  
Tebuconazole 430g/l Suspension Concentrate

**Class:** 9

**UN No.:** 3082

**Packaging Group:** III

**Marine Pollutant**

### **IATA Classification**

**Proper Shipping Name:** Environmentally hazardous substance, liquid N.O.S.  
Tebuconazole 430g/l Suspension Concentrate

**Class:** 9

**UN No.:** 3082

**Packaging Group:** III

## **Section 15. Regulatory Information**

### **USEPA Registered Company Address:**

Rotam North America, Inc., 1400 NW 107th Avenue, Suite 310, Miami, FL 33172

### **European/International Regulation:**

#### **Hazard Symbol(s):**

N Dangerous to environment.

#### **R-phrases(s):**

R 22 Harmful if swallowed.

#### **S-phrases(s):**

S 2 Keep out of reach of children

S 13 Keep away from food, drink and animal feeding stuffs

S 24/25 Avoid contact with skin and eyes.

S 36/37 Wear suitable protective clothing and gloves.

S 61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

**Further information:** Handle in accordance with good industrial hygiene and safety practice.

**Other regulations:** The product is classified and labeled in accordance with National and European directives.

## **Section 16. Other Information**

**Disclaimer:** The information provided by Rotam North America, Inc. contained herein is given in good faith and correct to the best of our knowledge. However, the information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification.

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