

# MATERIAL SAFETY DATA SHEET

Emergency Phone: CHEMTREC 800-424-9300

Effective Date: December 10, 2011

Replaces MSDS of November 15, 2011

## 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** WILLOWOOD TEBUCON 45DF Fungicide

**CHEMICAL NAME:** Tebuconazole ([RS]-1-[4-chlorophenyl]-4,4-dimethyl-3-[1H-1,2,4-triazol-1-ylmethyl]-pentan-3-ol)

**CHEMICAL FAMILY:** Triazole Fungicide

**PRODUCT CODE:** EPA Reg. No. 87290-12

### COMPANY IDENTIFICATION:

Willowood, LLC

1600 NW Garden Valley Blvd., Suite 120

Roseburg, Oregon 97471

Tel: 877-679-9963

**24/7 Health Emergencies:** Call 800-858-7378 (National Pesticide Information Center)

## 2. COMPOSITION, INFORMATION OF INGREDIENTS:

### Components

Name	CAS - No.	EINECS #	Average % by Weight
Tebuconazole	107534-96-3	NA	45.00
Kaolin	1332-58-7	310-194-1	42.00
Surfactant	Proprietary	Proprietary	11.00
Water	7732-18-5	231-791-2	2.00

## 3. HAZARDS IDENTIFICATION SUMMARY:

*NOTE: Please refer to Section 11 for detailed toxicological information.*

**EMERGENCY OVERVIEW:** WARNING! The product is an irritant and an environmentally hazardous substance. The product may cause moderate eye irritation and harmful if swallowed or inhaled. This herbicide is toxic to aquatic organisms. Avoid breathing dust or spray mist.

**PHYSICAL STATE:** Solid granular.

**APPEARANCE:** Tan.

**ROUTE OF EXPOSURE:** Inhalation, Skin contact, Skin Absorption, Eye Contact.

### IMMEDIATE EFFECTS:

**Eye:** Cause substantial but temporary eye injury. Do not get in eyes.

**Skin:** Harmful if absorbed through the skin. May cause slight irritation. May cause sensitization by skin contact. Avoid contact with skin and clothing.

**Ingestion:** Harmful if swallowed. Do not take internally.

**Inhalation:** Harmful if inhaled. Avoid breathing dust or spray mist.

**CHRONIC OR DELAYED LONG-TERM:** ACGIH, NTP, IARC or OSHA does not list this product as a carcinogen. However, it may contain crystalline silica (quartz), a substance that has been listed as a carcinogen by ACGIH, NTP and IARC. Excessive inhalation of the small portion of silica that is contained in this product under normal conditions of use, is such that excessive inhalation exposure is unlikely.

**Medical Conditions Aggravated by Exposure:** May cause upper respiratory irritation, dermatitis to the skin and sensitive eyes. Pulmonary and respiratory diseases may be aggravated by inhalation of crystalline silica.

#### 4. FIRST AID MEASURES:

**GENERAL:** Have the product container or label with you when calling a poison control center or doctor or going for treatment.

**INHALATION:** Move the exposed person to fresh air free from risk of further exposure. If the exposed person is not breathing call 9-1-1, then apply rescue breathing and seek medical attention as soon as possible.

**EYE CONTACT:** Flush with clean, lukewarm water raising upper and lower eyelids at low pressure for 15 minutes. Remove contact lenses, if present, after the first five minutes and continue to rinse the eyes. Seek medical attention if no relief.

**SKIN CONTACT:** Rinse area with clean water for 15-20 minutes. Call the poison control center or doctor for treatment advice.

**INGESTION:** Call a poison control center or doctor immediately for treatment advice. DO NOT INDUCE VOMITING. Lower the head when person is vomiting to minimize entry into throat and lungs.

**NOTE to Physician:** There is no specific antidote. Use appropriate supportive and symptomatic treatment as indicated by the patient's condition.

#### 5. FIRE FIGHTING MEASURES:

**FLASH POINT:** Not applicable.

**FIRE AND EXPLOSION HAZARDS:** This product, when mixed with air in critical proportions and in the presence of an ignition source, may present an explosion hazard.

**SUITABLE EXTINGUISHING MEDIA:** Use dry chemicals, carbon dioxide and foam.

**FIRE FIGHTING INSTRUCTIONS:** Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Dike the area to prevent runoff and contamination of water sources. Equipment or materials involved in pesticide fires may become contaminated.

#### 6. ACCIDENTAL RELEASE MEASURES:

**PERSONAL PRECAUTIONS:** Wear PPE per section 8. Keep unauthorized people away. Isolate the hazard area. Avoid contact with spilled product or contaminated surfaces.

**METHODS FOR CLEANING UP:** Avoid creating a dust cloud. Sweep up spilled material. Keep in suitable, closed containers for disposal. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

**HANDLING AND STORAGE PRECAUTIONS:** Use normal safety procedures and good personal hygiene. Wash thoroughly after use, and before eating, drinking, chewing gum or using tobacco.

**ADDITIONAL ADVICE:** Do not allow material to enter streams, sewers, or other waterways.

## 7. HANDLING AND STORAGE:

**STORAGE TEMPERATURE:** Keep containers tightly closed. Avoid high temperatures. Store in a cool, dry, well-ventilated area above freezing 32 °F. (0°C.) and below 100 °F. (38 °C.)

**SPECIAL SENSITIVITY:** Avoid contact with the skin and eyes; wear PPE per section 8.

**HANDLING AND STORAGE PRECAUTIONS:** Avoid breathing the dust. Use normal safety procedures and good personal hygiene. Wash thoroughly after use, and before eating, drinking, chewing gum, or using tobacco.

## 8. EXPOSURE CONTROLS, PERSONAL PROTECTION:

**EYE PROTECTION:** Use safety glasses or goggles, there is potential for dust exposure to cause injury to the eyes.

**SKIN PROTECTION:** Wear chemically resistant glove (e.g. nitrile, butyl, or neoprene.) Wear a long sleeved shirt, long pants, shoes, and socks.

**RESPIRATORY PROTECTION:** Wear a respirator if the airborne conditions result in a dust forming.

**OCCUPATIONAL EXPOSURE LIMITS:** Silica crystalline - total dust 0.1 mg/m<sup>3</sup>.

**ENGINEERING CONTROLS:** Provide adequate ventilation when product is used. Eyewash and shower should be provided in mixing and loading areas.

## 9. PHYSICAL AND CHEMICAL PROPERTIES:

**PHYSICAL FORM:** Solid granular.

**COLOR:** Tan.

**ODOR:** Slight odor.

**pH:** 6.0 [1 % in water @ 73 °F (23 °C)]

**SOLUBILITY IN WATER:** Soluble

**SPECIFIC GRAVITY (water=1):** 1.34 @ 68 °F (20 °C)

## 10. STABILITY AND REACTIVITY:

**STABILITY:** This product is stable material under normal conditions of storage and handling. Avoid temperatures above 100 °F. (38 °C.)

**HAZARDOUS POLYMERIZATION:** Will not occur.

**INCOMPATIBLES:** None known.

**DECOMPOSITION PRODUCTS:** Product can burn and the products of thermal decomposition can include oxides of carbon and nitrogen as well as hydrogen chloride and cyanides.

## 11. TOXICOLOGICAL INFORMATION:

**This data refers to Tebuconazole, Technical**

Oral LD<sub>50</sub> (male rat) = 4865 mg/kg

Oral LD<sub>50</sub> (female rat) = 2596 mg/kg

Dermal LD<sub>50</sub> (rabbit) = >2000 mg/kg

LC<sub>50</sub> (rat) = > 0.97mg/L (4-hr test no deaths)

Tebuconazole was not considered carcinogenic in a chronic feeding study nor considered a primary reproductive ingredient.

Crystalline silica is considered carcinogenic.

The significant routes of exposure are eyes, ingestion, and inhalation.

## 12. ECOLOGICAL INFORMATION:

Product is toxic to estuarine and marine invertebrates. Do not allow product to get in waterways.

Fish toxicity (technical): 96 hour LC<sub>50</sub>: Rainbow trout 4.4 mg/L & Bluegill 5.7 mg/L.

Avian toxicity (technical): Oral LD<sub>50</sub>: Bobwhite quail 1900 mg/kg

Product is not toxic to bees.

## 13. DISPOSAL CONSIDERATIONS:

**WASTE DISPOSAL METHOD:** This material is a granular solid. Wear a dust respirator and other required PPE to dispose of the material in accordance with label instructions for pesticide and container disposal. Dispose of in accordance with all local, state, and federal regulations.

## 14. TRANSPORT INFORMATION:

**US DOT (ground) SHIPPING NAME:** Not regulated by ground shipment, per 49 CFR Part 172.101(12)(iv).

**IATA (air) SHIPPING NAME:** Not regulated by air in non-bulk.

**IMO (water) SHIPPING NAME:** UN3077, Environmentally Hazardous Substance, solid, N.O.S., (Tebuconazole), DG Class 9, Packing Group III Marine Pollutant

## 15. REGULATORY INFORMATION:

**OSHA STATUS:** None.

**TSCA STATUS:** Silica, crystalline

**CERCLA REPORTABLE QUANTITY:** None.

**CALIFORNIA PROPOSITION 65:** Silica, crystalline, cancer.

**RCRA STATUS:** None.

### **SARA 311/312 HAZARD NOTIFICATION/REPORTING**

IMMEDIATE Y FIRE N SUDDEN RELEASE OF PRESSURE N

DELAYED Y REACTIVE N

**SARA TITLE III:** None.

**SECTION 302 EXTREMELY HAZARDOUS:** None.

**SECTION 313 TOXIC CHEMICALS:** None.

**RIGHT TO KNOW:** Crystalline silica is listed in New Jersey and Pennsylvania.

## 16. OTHER INFORMATION:

### National Fire Protection Association (NFPA)

#### Hazardous Materials Identification System (HMIS)

NFPA		HMIS	
	0 Least		
1 Health	1 Slight	1	Health
0 Flammability	2 Moderate	0	Flammability
0 Instability	3 High	0	Reactivity
	4 Severe	H	PPE

**RISK PHRASES:** R21, Harmful in contact with skin; R36, Irritating to eyes; R45, May cause cancer, and R51, Toxic to aquatic organisms.

**SAFETY PHRASES:** S2, Keep out of reach of children; S9, Keep container in a well-ventilated place; S25, Avoid contact with eye; S36, Wear suitable protective clothing; S37, Wear suitable gloves; S38, In case of insufficient ventilation, wear suitable respiratory equipment; S39, Wear eye/face protection; S61, Avoid release to the environment; and S62, If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

**REASON FOR ISSUE:** New EPA Product Registration Number.

**APPROVAL DATE:** 12/30/2011

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#### ABBREVIATIONS

ACGIH	American Conference of Governmental Industrial Hygienists
AICS	Australian Inventory of Chemical Substances
CAS#	Chemical Abstract Service Number
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
°C	Celsius temperature scale
CI	China
DSL	Canada Domestic Substances List
ECL	Korean Existing Chemicals List
EEC	European Economic Commission
ENCS	Japanese existing Chemical List
EINECS #	European Inventory of Existing Chemical Substance Number
EU	European Union

FIFRA (Israel)	Federal Insecticide, Fungicide, and Rodenticide Act 2001 proposed list of chemical substances to be regulated under Israel Hazardous Substances Law and Regulations List of 1993
IARC	International Agency for Research on Cancer
MAC	Netherlands
MAK	Germany
MITI	Ministry of International Trade and Industry
NA	Not Applicable
ND	Not Determined
NE	Not Established
NIOSH	National Institute of Occupational Safety and Health
NPIC	National Pesticide Information Center
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Act
PICCS	Philippines
PPE	Personal Protective Equipment
Prop	Proprietary
SARA	Superfund Amendments and Reauthorization Act
SWISS	Giftliste 1 and Inventory of Notified New Substances
TSCA (Taiwan)	Toxic Substances Control Act List of Toxic Chemical Substances regulated under Taiwan Toxic Chemical Substances Control Act of November 26, 1986
UK	United Kingdom
USA	United States of America

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