

MATERIAL SAFETY DATA SHEET

TEBUSHA 3.6 FL Fungicide

MSDS DATE: 1/06/10

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: TEBUSHA 3.6 FL Fungicide
SYNONYMS: SHAR-TEB 3.6 FL Fungicide; Tebu-Turf 3.6F; Tebu-Crop 3.6F
EPA REGISTRATION NO.: 83529-11

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CHEMICAL NAME: Tebuconazole
 alpha-(2-(4-Chlorophenyl)ethyl)-alpha-(1-1-dimethylethyl)-1H-1,2,4, triazole-1-ethanol
CHEMICAL FAMILY: Triazole

CHEMICAL FORMULA: C₁₆H₂₂ClN₃O
PRODUCT USE: Fungicide
PREPARED BY: Sharda USA LLC

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

ACTIVE INGREDIENT: Tebuconazole

<u>CAS NO.</u>	<u>% WT</u>	<u>% VOL</u>	<u>SARA 313 REPORTABLE</u>
107534-96-3	38.7	38.7	no
	<u>ppm</u>	<u>mg/m3</u>	
OSHA PEL-TWA:	N/A	N/A	
OSHA PEL STEL :	N/A	N/A	
OSHA PEL CEILING:	N/A	N/A	
ACGIH TLV-TWA:	N/A	N/A	
ACGIH TLV STEL:	N/A	N/A	
ACGIH TLV CEILING:	N/A	N/A	

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: CAUTION. Causes moderate eye irritation. Harmful if swallowed, inhaled or absorbed through the skin. Avoid contact with skin, eyes, and clothing. Avoid breathing vapors or spray mist.

ROUTES OF ENTRY: Ingestion, inhalation, eye contact, and dermal absorption.

POTENTIAL HEALTH EFFECTS

EYES: Moderate irritant

SKIN: Slight irritant

INGESTION: Harmful if swallowed. Do not take internally.

INHALATION: Harmful if inhaled. Avoid inhalation of vapor or mist.

ACUTE HEALTH HAZARDS: Causes moderate eye irritation. Harmful if swallowed, inhaled or absorbed through the skin. Avoid contact with skin, eyes, and clothing. Avoid breathing vapors or spray mist.

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CHRONIC OR DELAYED: This product or its components may have target organ effects.

CARCINOGENICITY – Tebuconazole is classified by EPA as a Group C carcinogen (possible human carcinogen) based on liver tumors in mice and no evidence of carcinogenicity in rats. As the liver tumors were seen only at a dose exceeding a Maximum Tolerated Dose (MTD), no significant carcinogenic risk is posed for human exposure.

SECTION 4: FIRST AID MEASURES

FIRST AID	
If swallowed:	<ul style="list-style-type: none"> Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
If on skin:	<ul style="list-style-type: none"> Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
If inhaled	<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance then give artificial respiration, preferably mouth to mouth, if possible. Call a poison control center or doctor for further treatment advice.
If in eyes:	<ul style="list-style-type: none"> Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatments advice.
HOT LINE NUMBER	
<p>Notes to Physician: There is no specific antidote if this product is ingested. Treat symptomatically.</p> <p>Have a product container or label with you when calling a poison control center or doctor, or going for treatment. For 24-hour medical emergency assistance (human or animal) call 1-800-222-1222. For chemical emergency assistance (spill, leak, fire, or accident) call ChemTrec at 1-800-424-9300.</p>	

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: Not applicable
 (% BY VOLUME) **LOWER:** Not applicable

FLASH POINT: >200.1 deg F/ 93.4 deg C

AUTOIGNITION TEMPERATURE: 405 deg C/761 deg F

FLAMMABILITY: Not applicable

EXTINGUISHING MEDIA: Foam, dry chemical, carbon dioxide, water

SPECIAL FIRE FIGHTING PROCEDURES: Keep out of smoke. Evacuate personnel to safe area. Keep personnel removed and upwind of fire. Wear full protective clothing and self-contained breathing apparatus. If water spray is used to fight fire, dike and collect runoff. Prevent the use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition or combustion may produce irritating and possibly toxic gases including nitrogen oxides, carbon monoxide, hydrogen cyanide, and hydrogen chloride.

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Remove all sources of ignition. Do not allow product to contact vegetation.

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SECTION 6 NOTES:

Small Spill: Absorb small spills with sand, vermiculite or other inert absorbent. Place contaminated material in appropriate container for disposal. Scrub area with hard water detergent. Pick up wash liquid with additional absorbent and place into appropriate container for disposal.

Large Spill: Dike large spills using absorbent or impervious material such as clay or sand. Allow absorbed material to solidify and scrape up for disposal. Pick up wash liquid with additional absorbent and place in a disposable container. After removal, flush contaminated area thoroughly with water. This material should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. Contaminated soil may have to be removed and disposed.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Handle and open container in a manner as to prevent spillage. Store the material in a well ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco product in the storage area. Prevent eating, drinking tobacco use and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and after handling.

OTHER PRECAUTIONS: Do not contaminate water, food, or feed by storage or disposal.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Refer to product label.

EYE PROTECTION: Safety glasses with side-shields.

INGESTION: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

SKIN PROTECTION: Long-sleeved shirt, long pants, shoes plus socks. Chemical resistant footwear and overalls. Chemical-resistant gloves such as barrier laminate, butyl rubber, nitrile, neoprene rubber, polyvinyl chloride (PVC), or Viton. For overhead exposure, wear chemical resistant headgear.

INHALATION: When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards or industry recommendations. Use effective engineering controls to comply with occupational exposure limits.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

WORK HYGIENIC PRACTICES: Wear protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

EXPOSURE GUIDELINES: Refer to Section 2.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Beige

ODOR: Mild

PHYSICAL STATE: Liquid suspension

pH AS SUPPLIED: 5.72

SPECIFIC GRAVITY (H₂O = 1): 1.093 g/cm³ @ 25 deg C

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SECTION 10: STABILITY AND REACTIVITY

STABLE
X

UNSTABLE

STABILITY: Stable at normal temperature and pressure.

CONDITIONS TO AVOID (STABILITY): Extremes of temperature and direct sunlight. Freezing.

INCOMPATIBILITY (MATERIAL TO AVOID): None known.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Thermal decomposition can lead to the release of nitrogen oxides, carbon monoxide, hydrogen cyanide (hydrocyanic acid), and hydrogen chloride.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Oral LD₅₀ (rat) 3,776 mg/kg (male)
 Dermal LD₅₀ (rat) >2,000 mg/Kg
 Inhalation LC₅₀ (rat) > 2.5 mg/L air (4-hr)
 Eye Contact: Mildly Irritating (Rabbit)
 Skin Contact: Slightly Irritating (Rabbit)
 Skin Sensitization: Not a Sensitizer (Guinea Pig)

Reproductive/Developmental Effects:	Reproduction: Tebuconazole is not considered a primary reproductive toxicant in rats. Reproductive effects (e.g. smaller litters) were observed at the highest concentration, but were secondary to maternal toxicity. Developmental Toxicity: Tebuconazole is not considered a primary developmental toxicant in laboratory animals. Developmental effects were observed only at doses that caused maternal toxicity. Mutagenicity: Tebuconazole was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
Chronic/subchronic toxicity studies	Tebuconazole caused liver, spleen, adrenal and/or eye effects at high doses in chronic studies in rats and dogs.
Carcinogenicity	Tebuconazole is classified by EPA as a Group C carcinogen (possible human carcinogen) based on liver tumors in mice and no evidence of carcinogenicity in rats. As the liver tumors were seen only at a dose exceeding a Maximum Tolerated Dose (MTD), no significant carcinogenic risk is posed for human exposure.
Other toxicity information	Neurotoxicity: Tebuconazole caused only transient neurobehavioral effects (e.g. decreased motor activity) in acute, subchronic and/or developmental neurotoxicity studies in rats.
Toxicity of other components	Not applicable
Target organs	
Active ingredient (Tebuconazole)	Liver, spleen, adrenal and/or eye
Inert ingredient	Not applicable

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: This product is toxic to mammals, fish, estuarine and marine invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to

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discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

Summary of effects:	This material is toxic to mammals, fish, estuarine and marine invertebrates.
Eco Acute Toxicity:	No data available.
Eco Chronic Toxicity:	No data available.
Environmental fate:	No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Product disposal – Pesticide wastes may be acutely hazardous. Improper disposal is a violation of federal law. Pesticide, mixtures, or equipment rinse water that cannot be chemically reprocessed must be disposed of according to applicable federal, state or local regulations. Contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional office for guidance.

Container disposal – Dispose of product containers, waste containers, and residues according to label instructions and local, state, and federal health and environmental regulations.

RCRA HAZARD CLASS: Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION – Non Regulated for Domestic Surface Shipment

WATER TRANSPORTATION-IMDG

PROPER SHIPPING NAME: Environmentally Hazardous Substance Liquid, N.O.S. (Tebuconazole)

HAZARD CLASS: 9

ID NUMBER: UN3082

PACKING GROUP: PGIII, Marine Pollutant

FREIGHT CLASSIFICATION:

Insecticides or Fungicides, N.O.I.; other than poison

SECTION 15: REGULATORY INFORMATION

This product is regulated by U.S. Environmental Protection Agency under the Federal Insecticide, Fungicide and Rodenticide Act.

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): The ingredients of this product are listed on the TSCA inventory or are exempt.

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT):

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

302: None.

311/312 HAZARD CATEGORIES: None.

313 REPORTABLE INGREDIENTS: None.

CA PROPOSITION 65: None

SECTION 16: OTHER INFORMATION

OTHER INFORMATION:

HAZARD RATINGS	NFPA		
HEALTH:	1	0	MINIMAL
FLAMMABILITY:	1	1	SLIGHT
REACTIVITY:	1	2	MODERATE
		3	HIGH
		4	SEVERE

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PREPARATION INFORMATION: MSDS DATE: 1-6-10
 REVISION DATE: 9-7-2011

DISCLAIMER: This product is a registered agricultural chemical and must therefore be used in accordance with the container label directions. The information contained herein is given in good faith and is believed to be correct, but no warrant, express or implied is made. Consult Sharda USA LLC for further information.