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Material Safety Data Sheet (MSDS)

MSDS# AT-FUN014003

Date: 06/17/2008

Section 1 - Product Chemical and Company Identification

Product name	AmTide TEBU 3.6F Foliar Fungicide		
Product Use	Fungicide		
Company	AmTide LLC.		
EPA Reg. No.	83851-9		
Emergency phone	Chemtrec	1-800-424-9300	
	AmTide LLC.	1-949-753-4723	

Section 2 - Composition /Information on Ingredients

Active Ingredient	CAS number	w/w %
Tebuconazole	80443-41-0	40.53%
Other ingredients		59.47%

Section 3 - Hazards Identification

Emergency overview

CAUTION:

Physical Hazards: Liquid

Health Hazards: Harmful if inhaled; Harmful if absorbed through skin; Harmful if swallowed.

Read the entire MSDS for a more thorough evaluation of the hazards.

Potential Health Effects:

Acute effects of exposure:

Based on animal toxicity testing, we would expect this product to be slightly irritating to the skin and minimally irritating to the eyes. Based on the EPA Toxicity Category criteria, this material is mildly toxic by the oral and dermal routes.

Chronic effects of exposure:

Based on animal toxicity dates of the active ingredient, tebuconazole, there may be toxic effects on the following organs: spleen, liver, adrenals, and lens of the eye.

Medical conditions aggravated by exposure:

No specific conditions are known, which may be aggravated by exposure to this product.

Section 4 - First Aid Measures

If poisoning occurs, immediately contact a doctor or Poisons Information Centre, and follow the advice given. Show this Material Safety Data Sheet to the doctor.

If swallowed: 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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.

If on skin or clothing: 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.



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If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If inhaled: 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.

Note to physician: There is no specific antidote if this product is ingested. Treat symptomatically. Antidote –None known.

Section 5 - Fire Fighting Measures

Flash point: Greater than 100°C

Extinguishing media: Water; Carbon Dioxide; Dry Chemical; Foam.

Fire/explosion hazards:

Flammable limits:

Fire fighting instructions: Keep out of smoke. Cool exposed containers with water spray. Fight fire from upwind position. Use self-contained breathing equipment. Contain runoff by diking to prevent entry into sewers or waterways. Equipment or materials involved in pesticide fires may become contaminated.

Section 6 - Accidental Release Measures

Personal precautions:

Steps to be taken in case material is released or spilled:

Isolate area and keep unauthorized people away. Do not walk through spilled material. Avoid breathing vapors and skin contact. Remove sources of ignition if combustible or flammable vapors may be present and ventilate area. Wear proper protective equipment. Dike contaminated area with absorbent granules, soil, sand, etc. If large spill, material should be recovered. Small spills can be absorbed with absorbent granules, spill control pads, or any absorbent material. Carefully sweep up absorbed spilled material. Place in covered container for reuse or disposal. Scrub contaminated area with soap and water. Use dry absorbent materials such as clay granules to absorb and collect wash solution for proper disposal. Contaminated soil may have to be removed and disposed. Do not allow material to enter streams, sewers, or other waterways or contact vegetation.

Methods for cleaning up:

Use the following procedures:

1. Soak in liquid with a suitable absorbent such as clay, sawdust, or kitty litter.
2. Sweep up absorbed material and place in a chemical waste container for disposal.
3. Generously cover contaminated area with a slurry of common household powdered laundry detergent and water. Using a stiff brush, work the slurry into cracks and crevices. Allow to stand for 2-3 minutes, then flush with water. Repeat if necessary. Large spills should be handled according to a spill plan. In case of spill emergency, day or night, call CHEMTREC,



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Section 7- Handling and Storage

Special sensitivity: Extreme heat.

Handling/storage precautions: Store in a cool, dry place 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

Ventilation: Control exposure levels through the use of general and local exhaust ventilation.

Respiratory protection: If necessary, under the conditions of use, wear a NIOSH-approved organic vapor respirator with particulate prefilter.

Personal protective equipment (ppe):

Eye protection: Use splash-proof goggles if needed to prevent liquid from getting into the eyes.

Clothing protection: Launder clothing after use. Wash thoroughly after handling.

Skin protection: Wear long sleeves and trousers to prevent skin contact, and chemical resistant gloves such as nitrile or butyl rubber.

Other Protective Measures: Clean water should be available for washing in case of eye or skin contamination. Educate and train employees in safe use of the product. Follow all label instructions

Section 9 - Physical and Chemical Properties

Appearance: Off-White thick liquid; Suspension

Odor: Resin-like odor

Density @ 20°C: 1.10±0.05g/mL

Flammability: > 100

pH: 5.5 ~ 7.5

These physical data are typical values based on material test but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis and any specific lot or as specification items.

Section 10 - Stability and Reactivity

Chemical stability: This is a stable material

Incompatibility: None known

Hazardous: Proposed under fire or other extreme conditions: CO₂, oxides of nitrogen

Decomposition products: Combustion products: Toxic materials.

Hazardous polymerizations: Will not occur.

Section 11 - Toxicological Information (Based on the active Ingredient)

Acute oral LD₅₀: >5,000 mg/kg (rat)



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Acute dermal Id50: >5,050 mg/kg (rabbit)

Acute inhalation Ic50: >2.23 mg/L air 4 hours

Eye irritation: Rabbit: Minimal (non-remarkable) irritation to the conjunctiva was observed with all irritation resolving within 72 hours, Toxicity Category IV.

Skin irritation: Rabbit: Slight dermal irritant. Toxicity Category IV.

Sensitization: Guinea pig: Not a dermal sensitizer.

Subchronic Toxicity: In dermal toxicity studies using rabbits, the no-observed-effect-level (NOEL) was 1000 mg/kg. In a 3 week inhalation study with rats, the NOEL was 10.6 mg/cubic meter.

Chronic Toxicity: In chronic dog studies, tebuconazole was administered for 52 weeks at dietary concentrations of 40, 100, 150, 200 or 1000 ppm. Due to a lack of significant effects, the high dose was increased to 2000 ppm at 40 weeks for the remainder of the study. At the high dose, effects relating to liver, spleen, ocular and adrenal were observed. The overall NOEL from these studies was 100 ppm based on adrenal effects. In a 2 year study, tebuconazole was administered to rats at dietary concentrations of 100, 300 or 1000 ppm. There was a reduction in body weight gains and an increased incidence of liver and spleen effects at the high dose. The NOEL was 300 ppm.

Carcinogenicity: There was no indication of a carcinogenic effect in rats or mice when tested at dose levels up to and including the maximum tolerated dose (MTD) for each species. An increased incidence of hepatocellular neoplasms occurred in mice at a dose level approximately three fold greater than the MTD

Mutagenicity: In vitro and in vivo mutagenicity studies conducted on tebuconazole have been negative.

Developmental Toxicity: In mice treated at dose levels ranging from 1-1000 mg/kg, the NOELs for maternal and developmental toxicity were 3 and 10 mg/kg, respectively. In rats treated at dose levels of 30, 60 or 120 mg/kg, the NOELs for maternal and developmental toxicity were 30 and 60 mg/kg, respectively. For rabbits, the NOELs for maternal and developmental toxicity were less than 10 and 30 mg/kg, respectively. In dermal teratology studies on rats and mice, tebuconazole was administered during gestation at dose levels of 100, 300 or 1000 mg/kg. In rats, there was no indication of maternal or developmental toxicity; therefore, the maternal and developmental NOEL was 1000 mg/kg. In mice, the NOELs for maternal and developmental toxicity were 100 and 300 mg/kg, respectively.

Reproduction: In a reproduction study in rats, smaller litter sizes and decreased pup weight gain was observed in conjunction with maternal toxicity at the high concentration. The maternal and reproductive NOEL was 300 ppm.

Neurotoxicity: In an acute neurotoxicity screening study, tebuconazole was administered to rats as a single oral dose at doses of 100, 500 or 1000 mg/kg for males and 100, 250 or 500 mg/kg for females. Treatment related clinical signs of toxicity and transient neurobehavioral effects were evident in both sexes. There were no treatment related microscopic lesions within the skeletal muscle or neural tissues. Based on these results the NOEL for neuropathology



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was 1000 mg/kg for males and 500 mg/kg for females, the highest dose tested. The overall NOEL was less than 100mg/kg for both sexes. In a subsequent study, an overall NOEL of 50 mg/kg was established for both sexes. In a 13 week neurotoxicity screening study in rats, body weight and food consumption was reduced at the high dose, functional observational battery (FOB) and automated measures of motor and locomotor activity were not affected by treatment, there were no treatment related microscopic lesions in neural tissues or skeletal muscle in any of the treated animals, and there was no evidence of neurotoxicity at any dietary concentration. The NOEL for overall toxicity was 400 ppm. In a one generation developmental neurotoxicity study, tebuconazole was administered to rats during gestation and postnatal development. Maternal toxicity observed included decreased body weight and feed consumption, mortality, prolonged gestation, and alopecia. Effects observed in the offspring included mortality, developmental delay, and decrease in number of liveborn, viability index, body weight gain, absolute brain weight and cerebellar thickness. Tebuconazole did not cause any specific neurobehavioral effects in the offspring. The NOEL for both maternal and F1 offspring toxicity was 300 ppm.

Section 12 - Ecological Information (Based on the active ingredient)

Fish LC₅₀ (96 h) for rainbow trout 158.40 mg/L.
Daphnia EC₅₀ (48 h) >42.26 mg/L.

Environmental hazards: This product is toxic to estuarine and marine invertebrates. As with any pesticide, this product should be used according to label directions and should be kept out of streams, lakes, and other aquatic habitats.

Section 13 - Disposal Considerations

Disposal methods: Follow container label instructions for disposal of wastes generated in compliance with the FIFRA product label. In other situations burn in an incinerator approved for pesticide destruction. Do not reuse container.

Container disposal: Do not reuse the container. Clean and empty containers should be disposed in accordance with state and local laws.

Section 14 - Transport Information

Dot classification:

Not regulated by DOT.

Imdg classification:

UN 3082, Environmentally Hazardous Substances Liquid, N.O.S. (Tebuconazole), 9, PG III, Marine Pollutant

Freight classification:

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

Section 15 - Regulatory Information



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OSHA STATUS: This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200

TSCA STATUS: This product is exempt from TSCA Regulation under FIFRA Section 3(2)(B)(ii) when used as a pesticide.

CERCLA Reportable Quantity: No components listed

SARA TITLE III:

Section 302 Extremely Hazardous Substances: None

Section 311/312 Hazard Categories: Immediate Health Hazard; Delayed Health Hazard

Section 313 Toxic Chemicals: None

Section 16 - Other Information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. AmTide, LLC assumes no responsibility for results obtained or for incidental or consequential damages arising from the use of these data.