

MATERIAL SAFETY DATA SHEET

ArmorTech PPZ 143 MC (Fungicide)

United Turf Alliance, LLC

Emergency Phone: Poison Control 800-222-1222; National Pesticide Information Center 800-858-7378

Effective Date: September 21, 2010

EPA Reg. No. 86064-4

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT NAME: ArmorTech PPZ 143 MC

Active Ingredient: Propiconazole

Chemical Formula: C₁₅H₁₇Cl₂N₃O₂

COMPANY IDENTIFICATION:

United Turf Alliance, LLC

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Canton, GA 30115

UNITED STATES

2. COMPOSITION/INFORMATION ON INGREDIENTS

Propiconazole	CAS No. 60207-90-1	14.3%
Other Ingredients		85.7%

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW

Can cause substantial but temporary eye irritation. May be harmful if swallowed, inhaled or absorbed through skin. Avoid contact with eyes, skin or clothing. Avoid breathing vapor or spray mist. Keep out of reach of children.

POTENTIAL HEALTH EFFECTS:

EYE: Substantially irritating to the eyes. Degree of injury will depend on the amount of material that gets into eye and the speed and thoroughness of the first aid treatment.

SKIN: Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

INHALATION: Slightly irritating to respiratory tract.

INGESTION: May be harmful if swallowed.

4. FIRST AID

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 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.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

NOTE TO PHYSICIAN: No specific antidote, treat patient symptomatically. Eye contact may require specialized ophthalmologic attention. If ingested, induce emesis or lavage stomach carefully to avoid aspiration.

5. FIRE-FIGHTING MEASURES

Flash point (method): >105°C (>221°F) (PMA-4)

Flammable Limits (LFL-UFL): Unknown

Fire and Explosion Hazards: This material can burn in fire releasing irritating and toxic gases due to thermal decomposition or combustion.

Suitable Extinguishing Media: Use carbon dioxide, dry chemical, foam or water spray.

Fire Fighting Equipment: Wear full fire fighting turn-out gear (Bunker gear).

Hazardous Combustion Products: Unknown.

NFPA Hazard Ratings: Health 2, Flammability 2, Instability 0.

6. ACCIDENTAL RELEASE MEASURES

Clean up spills immediately, observing precautions in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Small Spill: Absorb small spills with sand, vermiculite or other inert absorbent. Place contaminated material in appropriate container for disposal.

Large Spill: Dike large spills using absorbent or impervious material such as clay or sand. Recover and contain as much free liquid as possible for reuse. Allow absorbed material to solidify and scrape up for disposal. Clean up wash liquid with additional absorbent and place in a disposable container. After clean up, 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.

7. HANDLING AND STORAGE

Keep out of reach of children. Use only in a well-ventilated area. Do not reuse this container. 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 water after handling. Store away from food, feed and drinking water.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS (8 HOUR TWA): (Refer to Section 3)

ENGINEERING CONTROLS: Proper ventilation is required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Facilities storing or

utilizing this material should be equipped with an eyewash facility and a safety shower. Refer to the product label for additional information regarding application of this product.

Personal Protective Equipment:

Eyes and Face: For splash, mist or spray exposure, wear chemical protective goggles or a full face shield.

Protective Clothing: Long-sleeved shirt and long pants, shoes plus socks, and a chemical resistant apron when cleaning equipment, mixing, or loading.

Gloves: Wear chemical-resistant gloves such as barrier laminate, butyl rubber (≥ 14 mils), nitrile rubber (≥ 14 mils), neoprene rubber (≥ 14 mils), polyvinyl chloride (PVC) (≥ 14 mils), or viton (≥ 14 mils).

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/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately, if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Amber liquid

Odor: Slight solvent odor

Molecular Formula (technical): $C_{15}H_{17}Cl_2N_3O_2$

pH: 5.59

Density: 1.086 g/ml

Solubility in Water: Soluble in water.

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Avoid temperatures above 150°F and below 20°F.

CHEMICAL STABILITY: Stable, however may decompose if heated.

INCOMPATIBILITY WITH OTHER MATERIALS: Alkaline and acidic conditions and materials, oxidizing materials.

HAZARDOUS DECOMPOSITION PRODUCTS: Unknown.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

ACUTE ORAL TOXICITY

Oral LD₅₀ (rat): >3,000 mg/kg

ACUTE DERMAL TOXICITY

Dermal LD₅₀ (rat): >5,000 mg/kg

ACUTE INHALATION TOXICITY

Inhalation LC₅₀ (rat): >2.02 mg/L (4 hr.)

EYE IRRITATION

Moderately irritating to the eyes (rabbit)

SKIN IRRITATION

Slightly irritating to the skin (rabbit)

DERMAL SENSITIZATION

Skin sensitizer (guinea pig)

EFFECTS OF ACUTE EXPOSURE: This product has low oral, dermal and inhalation toxicity. This product is substantially irritating to the eyes; the degree of injury will depend on the amount of material that gets into eye and the speed and thoroughness of the first aid treatment.

EFFECTS OF CHRONIC EXPOSURE: In studies with laboratory animals, propiconazole did not cause teratogenicity, neurotoxicity or carcinogenicity in male and female rats and male mice.

In laboratory animals that have ingested large doses of propiconazole during their life span, liver enlargement is often noted and an increase of neoplastic and non-neoplastic liver cell tumors in male mice at 2500 ppm in the diet was observed. At a dose of 850 ppm in the diet, there was a statistically significant increase in benign adenomas but no increase in carcinomas.

In studies of rats, developmental toxicity in the form of cleft palate occurred. In studies of rabbits, no adverse development effects were identified.

An overall absence of genotoxicity has been demonstrated in tests of mutagenicity, DNA damage and chromosome aberrations.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

CARCINOGENICITY:

IARC: Not listed

NTP: Not listed

OSHA: Not listed

OTHER: (ACGIH) Not listed

MUTAGENIC DATA: No evidence of effects during *in vivo* or *in vitro* studies.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL HAZARDS: This pesticide is moderately toxic to fish and invertebrates, and practically non-toxic to birds and bees. 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 contaminate water when disposing of equipment washwater.

ENVIRONMENTAL PROPERTIES: Propiconazole has low mobility and is not persistent in soil, has low bioaccumulation potential, and is stable in water (sinks in water after 24 hours).

Note: The information presented in this section applies to the active ingredient, propiconazole.

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Offer for recycling if available.

RESIDUE REMOVAL: Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment for a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

14. TRANSPORT INFORMATION

DOT HAZARD CLASS OR DIVISION: Not Regulated
U.S. DOT PROPER SHIPPING NAME: N/A
UN NUMBER: N/A
DOT PACKING GROUP: N/A
REPORTABLE QUANTITY: None
MARINE POLLUTANT: Not Listed
U.S. SURFACE FREIGHT CLASS: Agricultural Fungicides, Liquid, NOIBN

15. REGULATORY INFORMATION

FIFRA –

All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act. The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide.

CERCLA REPORTABLE QUANTITY –
None

SARA Title III – Section 302 Extremely Hazardous Substances
Not listed

SARA Title III – Section 311 Hazard Categories
Immediate

SARA Title III – Section 312 Threshold Planning Quantity

The threshold planning quantity (TPQ) for this product treated as a mixture is 10,000 lbs. This product contains no ingredients with a TPQ of less than 10,000 lbs.

SARA Title III – Section 313 Reportable Ingredients
Propiconazole (60207-90-1)

CALIFORNIA PROP 65 STATUS –
Not listed

16. OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by CPR.

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