

MATERIAL SAFETY DATA SHEET

Emergency Phone: Chemtrec 800-424-9300

Effective Date: May 11, 2010

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: ArmorTech® THREESOME™

PRODUCT DESCRIPTION: A liquid herbicide.

EPA Reg. No. 86064-5

COMPANY IDENTIFICATION:

United Turf Alliance

12840 Ford Drive

Fishers, IN 46038

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Ingredient</u>	<u>Chemical Name</u>	<u>Chemical Formula</u>	<u>CAS Number</u>	<u>Composition</u>
DMA Salt of 2,4-D	Dimethylamine Salt of 2,4-Dichlorophenoxyacetic Acid	C ₁₀ H ₁₃ Cl ₂ O ₃ N	2008-39-1	30.56%
DMA Salt of Mecoprop-P	(+)-R-2-(2-Methyl-4-Chlorophenoxy)propionic Acid	C ₁₂ H ₁₈ ClNO ₃	66423-09-4	8.17%
DMA Salt of Dicamba	3,6-Dichloro-o-anisic Acid	C ₁₀ H ₁₃ Cl ₂ NO ₃	2300-66-5	2.77%

3. HAZARD IDENTIFICATION

For chemical emergency assistance (spill, leak, fire, or accident) call ChemTrec at 1-800-424-9300.

HEALTH HAZARDS: This product is corrosive and causes irreversible eye damage. Harmful if swallowed.

ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish and aquatic invertebrates and may adversely affect non-target plants. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. This chemical has properties and characteristics associated with chemicals detected in groundwater.

PHYSICAL OR CHEMICAL HAZARDS: This product may form toxic gases such as hydrogen chloride and oxides of carbon and nitrogen when thermally decomposed.

4. FIRST AID

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.

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.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE-FIGHTING MEASURES

Flash point (Closed Cup): N/A

Flammability: Not flammable.

Fire and Explosion Hazards: If water is used to fight fire, contain runoff to prevent contamination of water supplies. Dispose of fire control water as instructed in Section 13 of this MSDS.

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

Fire Fighting Equipment: Wear full fire fighting turn-out gear (Bunker gear) and self-contained breathing apparatus.

Fire Fighting Procedures: Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Containers exposed to fire should be kept cool with water spray. Foam and/or dry chemicals are preferred to minimize environmental contamination. If water is used, dike and collect water to prevent run off.

Hazardous Combustion Products: This product may form toxic gases such as hydrogen chloride and oxides of carbon and nitrogen when thermally decomposed.

NFPA Hazard Ratings: Health – 3 / Flammability – 1 / Instability - 0

6. ACCIDENTAL RELEASE MEASURES

Clean up spills immediately observing the precautions in Section 8 of this MSDS. Control spill at the source and prevent material from entering soil, sewers, waterways or low areas. If necessary, dike spill using absorbent or impervious materials such as clay or sand. Recover materials for reuse or disposal by pumping any free liquid into appropriate closed containers, do not flush to drain.

Large spills to soil may require removal of topsoil with the affected area removed and placed into appropriate containers for disposal. Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

7. HANDLING AND STORAGE

Keep out of reach of children. Do not get in eyes or on clothing, avoid contact with skin and avoid inhaling vapor or spray mist. 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.

Always store pesticides in a secured warehouse or storage building. Store at temperatures above 32°F. Open containers in well-ventilated areas. Keep container tightly sealed when not in use. Do not stack cardboard boxes more than two pallets high. Do not store near open containers of fertilizer, seed or other pesticides.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Handle only with adequate ventilation. Facilities storing or utilizing this material should be equipped with an eyewash station and a safety shower.

Protective Clothing: Wear long sleeved shirt, long pants, shoes, socks, and chemical-resistant, chemical resistant gloves and a face shield or goggles. When mixing, loading or cleaning up spills or equipment or otherwise exposed to concentrate, wear a chemical-resistant apron.

General: Wash clothing and other absorbent materials that have been exposed to this product. Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear dark amber liquid

Odor: Slight phenolic odor

pH: 7.0 – 8.0

Density: 9.4 lbs/gal

Specific Gravity: 1.13 @ 20°C

Viscosity: 16.5 cps @ 25°C

Solubility in Water: Soluble

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Excessive heat, do not store near heat or flame.

CHEMICAL STABILITY: Stable under normal use and storage conditions.

INCOMPATIBILITY WITH OTHER MATERIALS: Strong oxidizers: bases and acids.

HAZARDOUS DECOMPOSITION PRODUCTS: This product may form toxic gases such as hydrogen chloride and oxides of carbon and nitrogen when thermally decomposed.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

ACUTE ORAL TOXICITY

Oral LD₅₀ (rat-female): 930 mg/kg

Oral LD₅₀ (rat-male): > 500 mg/kg

ACUTE DERMAL TOXICITY

Dermal LD₅₀ (rat): > 2,000 mg/kg

ACUTE INHALATION TOXICITY

Inhalation LC₅₀ (rat): > 3.57 mg/L (4 hr)

EYE IRRITATION: Severely irritating and corrosive

SKIN IRRITATION: Slightly irritating

DERMAL SENSITIZATION: Not a contact sensitizer

CARCINOGENICITY:

ACGIH: Not listed

IARC: Class 2B (chlorophenoxy herbicides)

OSHA: Not listed

NTP: Not listed

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

REPRODUCTIVE TOXICITY: Not known to cause reproductive or birth defects at normal exposure levels.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish and aquatic invertebrates and may adversely affect non-target plants. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. This chemical has properties and characteristics associated with chemicals detected in groundwater.

The following information is for the active ingredient, 2,4-D Amine:

Bluegill (96 hr LC₅₀): 524 mg/L

Bobwhite Quail (Oral LD₅₀): 500 mg/kg

Rainbow Trout (96 hr LC₅₀): 250 mg/L

Mallard Duck (8-day Dietary LC₅₀): > 5,620 ppm

Daphnia (48 hr EC₅₀): 184 mg/L

The following information is for the active ingredient, Mecoprop-P:

Bluegill (96 hr LC₅₀): > 100 mg/L
Daphnia (48 hr EC₅₀): > 270 mg/L

Green Algae (72 hr LC₅₀): > 270 mg/L

The following information is for the active ingredient, Dicamba:

Bluegill (96 hr LC₅₀): 135 mg/L
Rainbow Trout (96 hr LC₅₀): 135 mg/L
Daphnia (48 hr EC₅₀): 110 mg/L

Bobwhite Quail (8-day Dietary LC₅₀): > 10,000 ppm
Mallard Duck (8-day Dietary LC₅₀): > 10,000 ppm

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Pesticide wastes are toxic. If container is damaged or if pesticide has leaked, contain all spillage. Absorb and clean up all spilled material with granules or sand. Place in a closed, labeled container for proper disposal. Improper disposal of excess pesticide, spray mixtures, or rinsate is a violation of Federal law and may contaminate groundwater. 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:

This is a nonrefillable container, do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying.

Nonrefillable container ≤ 5 gallons: Triple rinse as follows: Empty the remaining contents into application equipment or 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable > 5 gallons: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

14. TRANSPORT INFORMATION

Containers ≤ 41 Gallons:

DOT PROPER SHIPPING NAME: Not Regulated by DOT

Containers > 41 Gallons:

DOT PROPER SHIPPING NAME: UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (2,4-Dichlorophenoxyacetic Acid), 9, PG III

REPORTABLE QUANTITY: 100 lbs. (42 gallons of product)

DOT EMERGENCY RESPONSE GUIDE: 171

MARINE POLLUTANT: No

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.

SARA Title III – Section 302 Extremely Hazardous Substances

Not Listed

SARA Title III – Section 311/312 Hazard Categories

Immediate, Delayed

SARA Title III – Section 312 Threshold Planning Quantity

N/A

SARA Title III – Section 313 Reportable Ingredients

2,4-Dichlorophenoxyacetic Acetic Acid (CAS No. 94-75-7)

Dicamba (CAS No. 1918-00-9)

CERCLA Reportable Quantity (RQ) –

2,4-Dichlorophenoxyacetic Acetic Acid (CAS No. 94-75-7): 100 lbs. (26.3 gallons of product)

Dicamba (CAS No. 1918-00-9): 1000 lbs. (4,545 gallons of product)

CALIFORNIA PROP 65 STATUS –

This product does not contain any chemicals known to the state of California to cause cancer or reproductive toxicity.

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.

TERMS AND CONDITIONS OF USE

If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. Otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies.

WARRANTY DISCLAIMER

United Turf Alliance warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. To the extent consistent with applicable law, United Turf Alliance MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

INHERENT RISKS OF USE

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperature, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of United Turf Alliance or the seller. To the extent consistent with applicable law, all such risks shall be assumed by buyer.

LIMITATION OF REMEDIES

To the extent consistent with applicable law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at United Turf Alliance's election, one of the following:

1. Refund of purchase price paid by buyer or user for product bought, or
2. Replacement of amount of product used

To the extent consistent with applicable law, United Turf Alliance, the manufacturer, or the seller shall not be liable for consequential, special, or indirect damages resulting from the use, handling, application, storage, or disposal of this product or for damages in the nature of penalties, and the buyer and the user waive any right that they may have to such damages.

The terms of the Warranty Disclaimer and Inherent Risks of Use above and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of United Turf Alliance or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.