SAFETY DATA SHEET
ArmorTech Kade 4L

SECTION 1: IDENTIFICATION

Product Name:	ArmorTech Kade 4L
EPA Registration No.:	60063-67
Recommended Use:	Herbicide; See product label for a complete list of uses and use sites.
Restrictions on Use:	See product label for any restrictions on the use of this product.
Chemical Family:	Dinitroaniline
Chemical Name of Active Ingredient(s):	Prodiamine
Manufactured for:	United Turf Alliance, LLC 8014 Cumming Highway, Suite 403-282 Canton, GA 30115

FOR FIRE, SPILL, AND/OR LEAK EMERGENCIES CONTACT: CHEMTREC 1-800-424-9300
FOR MEDICAL EMERGENCIES AND HEALTH AND SAFETY INQUIRIES CONTACT: Safety Call 1-866-897-8050

SECTION 2: HAZARD(S) IDENTIFICATION

EMERGENCY OVERVIEW: Bright yellow liquid with a very faint amine odor. Causes serious eye irritation.

OSHA HCS CLASSIFICATION (29 CFR 1910.1200)

Eye Damage/Irritation	Category 1
Acute Inhalation Toxicity	Category 4



Signal Word: DANGER

Hazard Statement(s):
Causes serious eye damage.
Harmful if inhaled.

Precautionary Statement(s):

Prevention: Wear eye protection/face protection.
Avoid breathing mist/ vapors/spray.
Use only outdoors or in a well-ventilated area.

Response: **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.

Storage: No statement required. See section 7 for storage information.

Disposal: No statement required. See section 13 for disposal information.

The following percentage of the mixture consists of components with unknown hazards regarding the acute toxicity:

0.2%	Acute oral toxicity
1.63%	Acute dermal toxicity
8.63%	Acute Inhalation toxicity
0.2%	Eye irritation
0.2%	Skin irritation
0.2%	Skin Sensitization

SECTION 3: COMPOSTION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight %
Prodiamine	29091-21-2	40.8%
Sodium N-methyl-N-oleoyltaurate	137-20-2	2.0 – 3.0%

*Ingredients not listed or listed with a weight % range are considered a trade secret and are withheld under 29 CFR 1910.1200(i).

SECTION 4: FIRST AID MEASURES

IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15 to 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 ON SKIN:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 1 5 to 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 mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
IF INGESTED:	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.

Most important symptoms/effects, acute and delayed: Severe eye irritation with potential for irreversible damage.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:	Foam, dry chemical, carbon dioxide or water spray
Unsuitable Extinguishing Media:	Water jet
Hazardous Combustion Products:	Thermal decomposition may produce toxic carbon, nitrogen and sulfur oxides.
Special Protective Equipment & Precautions:	Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Foam and/or dry chemical are preferred to minimize environmental contamination. If water is used, dike and collect water to prevent run-off. Wear self-contained breathing apparatus and full fire-fighting turn-out gear (Bunker gear).
Unusual Fire & Explosion Hazards:	None known

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: See Section 8 for personal protection equipment.

Environmental Precautions: Keep spilled material and any rinsate from contaminating soil or from entering sewage and drainage systems and bodies of water.

Methods for Containment: Isolate the spill area. Keep unnecessary and unprotected personnel from entering. Absorb small spills with sand, vermiculite or other inert absorbent. 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.

Methods for Clean-up: Place contaminated material in appropriate container for disposal. After removal, flush contaminated area thoroughly with water. Pick up wash liquid with additional absorbent and place in a disposable container. Do not put spilled material back in the original container.

Other Information: None known

SECTION 7: HANDLING AND STORAGE

Handling: RECOMMENDATIONS ARE INTENDED FOR MANUFACTURING, PACKAGING AND COMMERCIAL BLENDING WORKERS. PESTICIDE APPLICATORS AND WORKERS must refer to the product label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170. Handle and open container in a manner as to prevent spillage. Do not eat, drink or smoke while handling this product. Immediately wash off accidental splashes of the concentrate or spray mixture from skin, clothing and out of eyes.

Storage: **See pesticide label for full information on product storage.** Do not contaminate water, food or feed by storage of this product. Store away from sources of heat, out of direct sunlight and away from incompatible materials. Pesticides should be stored in secured areas away from children and animals.

Storage Temperature (Min/Max): Not determined but avoid extreme temperatures.

Product Incompatibilities: Avoid contact with strong oxidizers.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Users of a pesticide product must refer to the product label for personal protective equipment requirements.

Exposure Guidelines:

COMPONENT	OSHA PEL	ACGIH TLV	NIOSH REL
No components listed			

Engineering Controls: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs or other specified exposure limits. Local exhaust ventilation is preferred.

Respiratory Protection: In areas of poor ventilation, use a NIOSH approved respirator with cartridges/canisters approved for pesticides.

Eye Protection: Chemical goggles or safety glasses and full-face shield.

Protective Gloves:	Chemical-resistant gloves such as barrier laminate, butyl rubber, nitrile, neoprene rubber, polyvinyl chloride (PVC) or Viton.
Other Protective Clothing:	Long-sleeved shirt, long pants and chemical resistant footwear plus socks.
General Safety Measures:	Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately after handling this product. Wash outside of gloves before removing. 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.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Bright yellow liquid	**Upper/Lower Flammability Limits:**	Not determined
Odor:	Very faint amine	**Vapor Pressure:**	Not determined
Odor Threshold:	Not determined	**Vapor Density:**	Not determined
pH (1% dispersion):	7.46	**Relative Density (@24°C):**	1.165 (typical)
Melting /Freezing Point:	Not determined	**Solubility in Water:**	Not determined
Boiling Point/Range:	Not determined	**Partition Coefficient:**	Not determined
Flash Point:	Not applicable	**Auto-ignition Temperature:**	Not determined
Evaporation Rate:	Not determined	**Decomposition Temperature:**	Not determined
Flammability:	Not applicable	**Viscosity:**	Not determined

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	No hazardous chemical reactions known.
Chemical Stability:	Stable under normal storage and handling conditions.
Possibility of Hazardous Reactions:	No potential for hazardous reactions known.
Conditions to Avoid:	Extreme temperatures
Incompatible Materials:	Strong oxidizers
Hazardous Decomposition Products:	Thermal decomposition may produce toxic carbon, nitrogen and sulfur oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:	Eye contact, Skin contact, Inhalation, Ingestion
Symptoms of Exposure:	Serious eye irritation with potential for irreversible damage.
Oral LD_{50}:	4,999 mg/kg (Estimated based upon component data)
Dermal LD_{50}:	3,626 mg/kg (Estimated based upon component data)
Inhalation LC_{50}:	2.79 mg/L (Estimated based upon component data)
Eye Irritation/Damage:	Based upon component data, severe eye irritation is anticipated.
Skin Corrosion/Irritation:	Not anticipated to be a skin irritant based upon component data.
Skin Sensitization:	Non-sensitizer, based upon component data.

Chronic/Subchronic Toxicity:	No data available
Mutagenicity:	No data available
Reproductive Toxicity:	No data available
Neurotoxicity:	No data available
Target Organs:	No data available

Aspiration Hazard: Not anticipated to be an aspiration hazard.
Carcinogenicity: No components are known or potential carcinogens.

Chemical Name	ACGIH	IARC	NTP	OSHA
No components listed				

SECTION 12: ECOLOGICAL INFORMATION

Environmental Hazards Statement from FIFRA Regulated Pesticide Label:
This product has low solubility in water. At the limit of solubility, this product is not toxic to fish. However, at concentrations substantially above the level of water solubility, it may be toxic to fish. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not contaminate water when disposing of equipment washwater.

ECOTOXICITY DATA:

Fish Toxicity: No data available
Aquatic Invertebrate Toxicity: No data available
Aquatic Plant Toxicity: No data available
Avian Toxicity: No data available
Honeybee Toxicity: No data available

ENVIRONMENTAL EFFECTS:

Persistence and Degradability: No data available
Bioaccumulation: No data available
Mobility: No data available
Other Adverse Effects: No data available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal: **Refer to the pesticide label for full information on disposal.** Pesticide wastes are toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of Federal law. If these wastes cannot be used 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 in proper disposal methods.

Container Disposal: **Refer to the pesticide label for full information on disposal.** When possible, triple rinse the container and offer for recycling if available.

RCRA Characteristics: It is the responsibility of the individual disposing of this product to determine the RCRA classification and hazard status of the waste.

SECTION 14: TRANSPORTATION INFORMATION

DOT (Ground): Not regulated

IMDG (Sea): UN3082, Environmentally hazardous substance, liquid, n.o.s. (Prodiamine), 9, PGIII

IATA (Air): UN3082, Environmentally hazardous substance, liquid, n.o.s. (Prodiamine), 9, PGIII

SECTION 15: REGULATORY INFORMATION

Labeling Requirements Under FIFRA: This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION
May be harmful if swallowed, absorbed through skin, or inhaled. Avoid breathing vapor. Avoid contact with skin, eyes, or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

TSCA Inventory: This product is exempt from TSCA inventory listing requirements as it is solely for FIFRA regulated use.

SARA Title III Information:

Section 302 – Extremely hazardous substances: None

Section 311/312 – Hazard Categories: Acute (Immediate)

Section 313 – This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS Number	Weight %	SARA 313 – Threshold Values (lbs)
None listed			

CERCLA – This product contains the following chemicals which have a reportable quantity (RQ) under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Chemical Name	CAS Number	RQ	Quantity of Finished Product
None listed			

CALIFORNIA PROPOSITION 65:

Chemical Name	CAS Number	Prop 65 Category(ies)
None listed		

U.S. STATE RIGHT-TO-KNOW REGULATIONS:

Chemical Name	New Jersey	Massachusetts	Pennsylvania
None listed			

SECTION 16: OTHER INFORMATION

NFPA	**Health Hazards** 1	**Flammability** 1	**Instability** 0	**Special Hazards** – None

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