


SAFETY DATA SHEET
ArmorTech IP 238
SECTION 1: IDENTIFICATION

Product Name: ArmorTech IP 238
EPA Registration No.: 53883-375-86064
Recommended Use: Fungicide; 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: Dicarboximide
Chemical Name of Active Ingredient(s): Iprodione: 3-(3,5-dichlorophenyl)-N-(1-methylethyl)-2,4-dioxo-1-imidazolidinecarboxamide
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: Opaque liquid with a slight odor.

OSHA HCS CLASSIFICATION (29 CFR 1910.1200)

This product does not meet the regulatory definition of a hazardous chemical under 29 CFR 1910.1200. However, good industrial hygiene practices should be used in the manufacture and handling of the product.

Signal Word: CAUTION FIFRA labeling signal word

Hazard Statement(s): None required

Precautionary Statement(s):

Prevention: No statement required. See section 8 for personal protective equipment.

Response: No statement required. See section 4 for first aid.

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:

7.35%	Acute oral toxicity
7.35%	Acute dermal toxicity
14.05%	Acute Inhalation toxicity
7.35%	Eye irritation
7.35%	Skin irritation
7.35%	Skin Sensitization

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight %
Iprodione	36734-19-7	23.8%
Solvent refined light paraffinic distillate (petroleum)	64741-89-5	28.5 – 33.5%

*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 15 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: None known

NOTE TO PHYSICIAN: This product may pose an aspiration pneumonia hazard. Contains petroleum distillates.

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 and nitrogen oxides as well as hydrogen chloride.

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. Clean area carefully as product contains petroleum distillates and may cause a slipping hazard.

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
Solvent refined light paraffinic distillate (petroleum)	TWA: 5 mg/m ³ (mist)	TWA: 5 mg/m ³ (inhalable fraction)	TWA: 5 mg/m ³ (mist) STEL: 10 mg/ m ³ (mist)

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:	Opaque liquid	Upper/Lower Flammability Limits:	Not determined
Odor:	Slight odor	Vapor Pressure:	Not determined
Odor Threshold:	Not determined	Vapor Density:	Not determined
pH (1% dispersion):	4.0 – 5.0	Relative Density (@24°C):	1.002 (typical)
Melting /Freezing Point:	Not determined	Solubility in Water:	Not determined
Boiling Point/Range:	Not determined	Partition Coefficient:	Not determined
Flash Point:	Not determined	Auto-ignition Temperature:	Not determined
Evaporation Rate:	Not determined	Decomposition Temperature:	Not determined
Flammability:	Not applicable	Viscosity:	358.783 @ 20°C

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 and nitrogen oxides as well as hydrogen chloride.

SECTION 11: TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:	Eye contact, Skin contact, Inhalation, Ingestion
Symptoms of Exposure:	No overt symptoms.
Oral LD₅₀:	4,552 mg/kg (Estimated based upon component data)
Dermal LD₅₀:	3,172 mg/kg (Estimated based upon component data)
Inhalation LC₅₀:	5.24 mg/L (Estimated based upon component data)
Eye Irritation/Damage:	Not anticipated to be an eye irritant based upon component data.
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:	Iprodione has shown effects on the adrenal gland in studies on rats.
Aspiration Hazard:	Not anticipated to be an aspiration hazard.
Carcinogenicity:	See below.

Chemical Name	ACGIH	IARC	NTP	OSHA
Solvent refined light paraffinic distillate (petroleum)			Known to Be Human Carcinogen	

SECTION 12: ECOLOGICAL INFORMATION**Environmental Hazards Statement from FIFRA Regulated Pesticide Label:**

This chemical can contaminate surface water through aerial and ground spray applications. Under some conditions, it may also have a high potential for runoff into surface water after application. This include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlaying extremely shallow groundwater, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas overlaying tile drainage systems that drain to surface water.

This pesticide is toxic to invertebrates. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate.

ECOTOXICITY DATA:

The data presented below is for iprodione technical.

Fish Toxicity:

Rainbow trout: 96 hr LC₅₀ = 4.1 mg/L

Aquatic Invertebrate Toxicity:

Daphnia magna: 48 hr EC₅₀ = 0.25 mg/L

Aquatic Plant Toxicity:

Scenedesmus subspicatus: 72 hr IC₅₀ = 15.3 mg/L

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. (Iprodione), 9, PGIII
IATA (Air): UN3082, Environmentally hazardous substance, liquid, n.o.s. (Iprodione), 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
 Harmful if swallowed, absorbed through skin, or inhaled. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist.

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)
Iprodione	36734-19-7	Cancer

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

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Solvent refined light paraffinic distillate (petroleum)		X	X

SECTION 16: OTHER INFORMATION

NFPA	Health Hazards 2	Flammability 1	Instability 0	Special Hazards – None
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Conditions: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of United Turf Alliance, LLC. All such risks shall be assumed by the user or the buyer.

Disclaimer of Warranties: To the extent consistent with applicable law, United Turf Alliance, LLC makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this SDS or label. No agent of United Turf Alliance, LLC is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, United Turf Alliance, LLC disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

Limitations of Liability: To the extent consistent with applicable law, the exclusive remedy for the use or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at United Turf Alliance, LLC's election, the replacement of the product.

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Revision Note: Corrects typographical errors in Section 1