

# MATERIAL SAFETY DATA SHEET

Emergency Phone: 1-800-892-0099

Effective Date: August 13, 2010

## 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** ArmorTech® Guillotine

**PRODUCT DESCRIPTION:** A granular insecticide.

EPA Reg. No. 59639-152-86064

### COMPANY IDENTIFICATION:

United Turf Alliance, LLC

8014 Cumming Highway

Suite 403-282

Canton, GA 30115

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Ingredient</u>	<u>Chemical Name</u>	<u>Chemical Formula</u>	<u>CAS Number</u>	<u>Composition</u>
Clothianidin	(E)-1-(2-chloro-1,3-thiazol-5-ylmethyl)-3-methyl-2nitroguanidine	-	210880-92-5	50%
Hydrated Amorphous Silica	-	-	7631-86-9	0.5-1.1%

## 3. HAZARD IDENTIFICATION

In case of emergency call 1-800-892-0099 toll free. Have a product container or label with you when calling a poison control center or doctor, or going for treatment.

### CAUTION • May cause moderate eye irritation

Harmful if swallowed, inhaled or absorbed through skin.

Avoid contact with eyes, skin and clothing

Avoid breathing dust or spray mist

Toxic to aquatic invertebrates and bees.

Keep out of reach of children

## 4. FIRST AID

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact PROSAR at 1-800-308-5391 for emergency medical treatment information.

**EYE CONTACT:** 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.

**SKIN CONTACT:** 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.

**INGESTION:** 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.

**INHALATION:** 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.

## 5. FIRE-FIGHTING MEASURES

<b>FLASH POINT:</b>	Not applicable
<b>AUTOIGNITION:</b>	> 150° C (the technical material decomposes at 150° C) Self-ignition temperature: 208° C
<b>EXTINGUISHING MEDIA:</b>	Dry chemical powder, carbon dioxide, foam. Unsuitable extinguishing media - none known.
<b>NFPA RATING:</b>	
Health:	1
Flammability:	0
Reactivity:	0
Special:	None

**FIRE FIGHTING INSTRUCTIONS:** Products of combustion from fires involving this material may be toxic. Avoid breathing smoke and mists. Avoid personnel and equipment contact with fallout and runoff. Minimize the amount of water used for fire fighting. Do not enter any enclosed area without full protective equipment, including self-contained breathing equipment. Contain and isolate runoff and debris for proper disposal. Decontaminate personal protective equipment and fire fighting equipment before reuse.

This material is combustible.

**HAZARDOUS DECOMPOSITION PRODUCTS:** May emit toxic gases and irritating fumes under fire conditions.

## 6. ACCIDENTAL RELEASE MEASURES

### **OBSERVE PRECAUTIONS IN SECTION 8: PERSONAL PROTECTION**

Stop the source of the spill if safe to do so. Contain the spill to prevent further contamination of the soil, surface water, or ground water. For additional spill response information refer to the North American Emergency Response Guidebook.

### **FOR SPILLS ON LAND:**

**CONTAINMENT:** Reduce airborne dust. Avoid runoff into storm sewers or other bodies of water.

**CLEANUP:** Clean up spill immediately. Vacuum or sweep up material and place in a chemical waste container. Wash area with soap and water. Pick up wash liquid with additional absorbent and place in a chemical waste container.

### **FOR SPILLS IN WATER:**

**CONTAINMENT:** This material will disperse or dissolve in water. Stop the source of the release. Contain and isolate to prevent further release into soil, surface water and ground water.

**CLEANUP:** Clean up spill immediately. Absorb spill with inert material. Remove contaminated water for treatment or disposal.

## 7. HANDLING AND STORAGE

### **END USER MUST READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.**

**HANDLING:** Keep pesticide in original container. Do not store or transport near food or feed. Do not contaminate food or feed. Do not put concentrate into food or drink containers. Do not dilute concentrate in food or drink containers. Store in a cool, dry place, out of direct sunlight.

Keep container tightly closed. Keep container in a cool well ventilated area. Stable at normal temperatures and storage conditions in closed original package.

Use only in well ventilated area. Avoid contact with skin and eyes. Do not breath dust.

**STORAGE:** Do not contaminate water, food, or feed by storage or disposal. Store product in original container in a cool, dry area away from children, pets and direct sunlight. Do not use or store near heat or open flame. Do not store near food or feed.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**END USER MUST READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.**

**EYES & FACE:** Do not get this material in your eyes. Eye contact can be avoided by wearing protective eyewear.

**RESPIRATORY PROTECTION:** Use this material only in well ventilated areas. If operating conditions result in airborne concentrations of this material, the use of an approved respirator is recommended. In case of dust formation use a dust mask.

**SKIN & HAND PROTECTION:** Avoid contact with skin or clothing. Skin contact should be minimized by wearing protective clothing including gloves.

**ENGINEERING CONTROLS:** Use in a well ventilated area.

### EXPOSURE LIMITS

Chemical Name	ACGIH Exposure Limits	OSHA Exposure Limits
Hydrated amorphous silica	10 mg/m <sup>3</sup> (total amorphous dust); 3 mg/m <sup>3</sup> (respirable nuisance particulate)	6 mg/m <sup>3</sup> (total dust)
Others	None	None
Clothianidin [(E)-1-(2-chloro-1,3-thiazol-5-ylmethyl)-3-methyl-2-nitroguanidine]	None	None

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL FORM:** Solid Granule **COLOR:** Light tan **ODOR:** Odorless **FLASH POINT:** Not applicable **MELTING POINT:** 176.8° C (technical) **BOILING POINT:** Not applicable **BULK DENSITY:** 37.4 lb/cubic foot @ 20° C **SPECIFIC GRAVITY:** 1.61 (20° C, technical) **VAPOR PRESSURE:** 1.3x10<sup>-10</sup> Pa (25° C, technical) **DISSOCIATION CONSTANT:** pKa 11.09 (20° C, technical) **pH:** 6.4 @ 26 - 27° C **CORROSION CHARACTERISTICS:** No data available **OCTANOL/WATER PARTITION COEFFICIENT:** log Pow=0.7 (25° C, technical) **SOLUBILITY:** Dispersible in water

## 10. STABILITY AND REACTIVITY

**CHEMICAL STABILITY:** Stable at 25°C for 4 months (pH 4 - 9). Stable at 40°C for 3 months.

**OXIDATION/REDUCTION PROPERTIES:** Not an oxidizer.

**EXPLODABILITY:** Minimum Explosive Concentration (dust): 25 g/m<sup>3</sup>

**HAZARDOUS DECOMPOSITION PRODUCTS:** May emit toxic gases and irritating fumes under fire conditions.

**MATERIALS TO AVOID:** None known

**CONDITIONS TO AVOID:** High temperatures

## 11. TOXICOLOGICAL INFORMATION

### ACUTE TOXICITY:

Oral Toxicity LD <sub>50</sub> (rats)	3900 mg/kg (male) 4700 mg/kg (female)	EPA Tox Category	III
Dermal Toxicity LD <sub>50</sub> (rats)	> 5000 mg/kg	EPA Tox Category	IV
Inhalation Toxicity LC <sub>50</sub> (rats)	> 2.3 mg/L	EPA Tox Category	IV
Eye Irritation (rabbits)	Moderately irritating	EPA Tox Category	III

Skin Irritation (rabbits)	Slightly irritating	EPA Tox Category	IV
Skin Sensitization (guinea pigs)	Non-sensitizer	EPA Tox Category	Not available

## CARCINOGEN CLASSIFICATION

Chemical Name	IARC - Group 1 (carcinogenic to humans)	IARC - Group 2A (Probably carcinogenic)	IARC - Group 2B (Possibly carcinogenic)	NTP Carcinogen List
Clothianidin [(E)-1-(2-chloro-1,3-thiazol-5-ylmethyl)-3-methyl-2-nitroguanidine]	No	No	No	Not listed
Hydrated amorphous silica	No	No	No	Not listed
Others	Not known	Not known	Not known	Not known

## TOXICITY OF CLOTHIANIDIN TECHNICAL

**SUBCHRONIC:** The NOEL in a 3-month rat feeding study with Clothianidin Technical was 27.9 mg/kg/day (male) and 34.0 mg/kg/day (female). The NOEL in a 90-day dog feeding study was 19.3 mg/kg/day (male) and 21.2 mg/kg/day (female). In a subchronic dermal study with rats, the NOAEL is > 1,000 mg/kg/day.

**CHRONIC/CARCINOGENICITY:** The Clothianidin NOEL for a 2-year rat study was 9.7 mg/kg/day (female); for a 18-month mouse study was 47.2 mg/kg/day (male) and for a 12-month dog study was 7.8 mg/kg/day (male). The principal target organs were the glandular stomach, kidney, ovary, and liver. No oncogenic effects were observed in the 2-year rat or 18-month mouse feeding studies.

**DEVELOPMENTAL TOXICITY:** Transient developmental effects (delayed ossification) were observed in rabbits at maternally toxic doses (100 mg/kg/d). The technical material is fetotoxic in animal studies at maternally toxic doses. No teratogenic effects on rats or rabbits were observed.

**REPRODUCTION:** No reproductive effects were observed in rats at the highest dose tested (2500 ppm).

**MUTAGENICITY:** *In vivo* tests have demonstrated that the technical material is not mutagenic. Some *in-vitro* tests were positive for mutagenicity. The observed effects *in-vitro* were due to cytotoxic effects. The weight-of-evidence from the *in vivo* whole animal tests suggest that this product does not present a mutagenic hazard.

For a summary of the potential for adverse health effects from exposure to this product, refer to Section 2. For information regarding regulations pertaining to this product, refer to Section 15.

## 12. ECOLOGICAL INFORMATION

### AVIAN TOXICITY:

**The following results were obtained from studies with Clothianidin Technical:** LD<sub>50</sub> Japanese quail: = 430 mg/kg LD<sub>50</sub> Northern bobwhite: > 2000 mg/kg LC<sub>50</sub> Northern bobwhite: > 5200 ppm LC<sub>50</sub> Mallard duck: > 5200 ppm

### AQUATIC ORGANISM TOXICITY:

**This product is toxic to aquatic invertebrates. The following are results from testing of Clothianidin Technical:** Bluegill 96 hr. LC<sub>50</sub> : > 120 mg/L Rainbow trout 96 hr. LC<sub>50</sub> : > 100 mg/L Sheepshead minnow 96 hr. LC<sub>50</sub> : > 100 mg/L Water flea 48 hr. EC<sub>50</sub> : 40 mg/L Mysid 96 hr. LC<sub>50</sub> : = 0.053 mg/L Algae 72 hr. ErC<sub>50</sub> : > 120 mg/L Partition coefficient: log Pow=0.7 @ 25 C; Degradation in soil: DT<sub>50</sub> : >140 days

### OTHER NON-TARGET

**ORGANISM TOXICITY:** Honeybee 48-hour oral LD<sub>50</sub> : = 0.044ug (microgram)/bee Honeybee 48-hour contact LD<sub>50</sub> : = 0.004 ug (microgram)/bee Earthworm 7-day LC<sub>50</sub> : = 19 mg/kg dry soil

### 13. DISPOSAL CONSIDERATIONS

**END USERS MUST DISPOSE OF ANY UNUSED PRODUCT AS PER THE LABEL RECOMMENDATIONS.**

**DISPOSAL METHODS:** Check government regulations and local authorities for approved disposal of this material. Dispose in accordance with applicable laws and regulations.

### 14. TRANSPORT INFORMATION

**UN/NA NUMBER:** Not applicable **DOT (ground) SHIPPING NAME:** Pesticide, Solid, Non-regulated  
**TECHNICAL NAME (hazardous material):** Not applicable **HAZARD CLASS:** Not applicable **PACKING GROUP:** Not applicable **DOT REPORTABLE QUANTITY (RQ):** Not applicable **REMARKS:** None  
**EXEMPTION REQUIREMENT:** None

**EMERGENCY RESPONSE GUIDEBOOK NO.:** Not applicable

**MARINE POLLUTANT:** Not applicable

### 15. REGULATORY INFORMATION

**PESTICIDE REGULATIONS:** All pesticides are governed under FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act). Therefore, the regulations presented below are pertinent only when handled outside of the normal use and applications of pesticides. This includes waste streams resulting from manufacturing/formulation facilities, spills or misuse of products, and storage of large quantities of products containing hazardous or extremely hazardous substances.

**U.S. FEDERAL REGULATIONS:** Ingredients in this product are reviewed against an inclusive list of federal regulations. Therefore, the user should consult appropriate authorities. The federal regulations reviewed include: Clean Water Act, SARA, CERCLA, RCRA, DOT, TSCA and OSHA. If no components or information is listed in the space below this paragraph, then none of the regulations reviewed are applicable.

#### **SARA (311, 312):**

Immediate Health:	Yes
Chronic Health:	No
Fire:	No
Sudden Pressure:	No
Reactivity:	No

#### **STATE REGULATIONS:**

Each state may promulgate standards more stringent than the federal government. This section cannot encompass an inclusive list of all state regulations. Therefore, the user should consult state or local authorities. The state regulations reviewed include: California Proposition 65, California Directors List of Hazardous Substances, Massachusetts Right to Know, Michigan Critical Materials List, New Jersey Right to Know, Pennsylvania Right to Know, Rhode Island Right to Know and the Minnesota Hazardous Substance list. For Washington State Right to Know, see Section 8 for Exposure Limit information. For Louisiana Right to Know refer to SARA information listed under U.S. Regulations above. If no components or information is listed in the space below this paragraph, then none of the regulations reviewed are applicable.

#### **Hydrated amorphous silica**

California - Directors List of Present (exempt except when inhalable particulates are present or can be Hazardous Substances generated. Applies to silica sand and flour, but not to naturally occurring dirt and sand which have not gone through beneficiation) MA Right To Know Listed  
NJ Right To Know Listed PA Right To Know Listed MN Hazardous Substance Listed

For information regarding potential adverse health effects from exposure to this product, refer to Sections 2 and 11.

## 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.

### **DISCLAIMER**

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. United Turf Alliance assumes no responsibility for results obtained or for incidental or consequential damages arising from the use of these data.