

## SAFETY DATA SHEET

OSHA HCS (29 CFR 1920.1200)

### 1. PRODUCT AND COMPANY IDENTIFICATION

#### Product Identifier

**Chemical Name:** 1,3-Benzenedicarbonitrile,  
2,4,5,6-tetrachloro

**Trade Names:** ArmorTech® CLT 720 FL

**CAS No.:** 1897-45-6

#### EPA Identification

**Number:** EPA Reg. No. 86064-2

#### Relevant identified uses of the substance or mixture and uses advised against

**Identified Use(s)** Fungicide

**Uses Advised Against** Do **NOT** aerosolize or atomize to produce inhalable-size particles.

#### Details of the supplier of the safety data sheet

**Company Identification** United Turf Alliance, LLC  
8014 Cumming Highway, Suite 403-282  
Canton, GA 30115

**Telephone** (614) 284-4442

#### Emergency telephone number

**Emergency telephone number** CHEMTREC 24 hr. 1-800-424-9300 / 1 (703) 527-3887 (Collect calls accepted)

### 2. HAZARDS IDENTIFICATION

#### Classification of the substance or mixture

OSHA HCS (29 CFR 1910.1200) Acute Tox. 2; Eye Dam. 1; Carc. 2;  
STOT SE 3

#### Label elements

This chemical is a pesticide product registered by the United States 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 (SDS) and for workplace labels of non-pesticide chemicals. The labeling information below applies to non-pesticide workplace labels. For pesticide label information, refer to Section 15.

#### Hazard Symbol(s)



**Signal Word(s)** DANGER

#### Hazard Statement(s)

Fatal if inhaled (Aerosol Mist).

Causes serious eye damage.

Suspected of causing cancer.

May cause respiratory irritation (Aerosol/Mist).

#### Precautionary Statement(s)

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dust/mist/spray.

Wear protective gloves/protective clothing/eye protection/face protection.

Use of high-pressure spray may cause toxic aerosols. Use only outdoors or in a well-ventilated area.

In case of inadequate ventilation wear respiratory protection.

Wash hands and exposed skin after use.

Contaminated work clothing should not be allowed out of the workplace.

**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

**IF ON SKIN:** Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.

**IF INHALED:** Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

**IF SWALLOWED:** Call a POISON CENTER or doctor/physician if you feel unwell. Treat symptomatically.

#### Other hazards

May cause an allergic skin reaction. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

#### Additional Information

None

## SAFETY DATA SHEET

OSHA HCS (29 CFR 1920.1200)

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Composition/ information on ingredients	%W/W	CAS No.	Hazard Statement(s)
Chlorothalonil	54	1897-45-6	Acute Tox. 2; H330 Eye Dam. 1; H318 Carc. 2; H351 STOT SE 3; H335 Aquatic Acute 1; H400 Aquatic Chronic 1; H410
Propylene glycol	< 5	57-55-6	Not classified as dangerous for supply/ use.

**Additional Information**—Contains trace amounts of Hexachlorobenzene, (CAS# 118-45-6)

### 4. FIRST AID MEASURES



#### Description of first aid measures

<b>Inhalation</b>	Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
<b>Skin Contact</b>	Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
<b>Eye Contact</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
<b>Ingestion</b>	Not normally required. Call a POISON CENTER or doctor/physician if you feel unwell. Treat symptomatically.
<b>Most important symptoms and effects, both acute and delayed</b>	Fatal if inhaled (Aerosol / Mist). Causes serious eye damage. May cause an allergic skin reaction.
<b>Indication of any immediate medical attention and special treatment needed</b>	IF INHALED: Immediately call a POISON CENTER or doctor/physician.

### 5. FIRE-FIGHTING MEASURES

#### Extinguishing Media

**Suitable Extinguishing Media:** Extinguish with carbon dioxide, dry chemical, foam or water spray.

**Unsuitable Extinguishing Media:** Do not use water jet.

#### Special hazards arising from the substance or mixture

Combustion or thermal decomposition will evolve toxic and irritant vapours. Forms oxides of carbon and nitrogen, also chlorine and chlorinated compounds. Decontaminate equipment or materials used in pesticide fires.

#### Advice for fire-fighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

### 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions, protective equipment and emergency procedures

Do not get in eyes. Avoid contact with skin. Do not breathe dust/mist/spray. Wear protective gloves/protective clothing/eye protection/face protection.

#### Environmental precautions

Prevent substance entering sewers.

#### Methods and material for containment and cleaning up

Cover spills with inert absorbent material. Transfer to a container for disposal or recovery. Collect spillage. Wash the spillage area with water. If possible prevent water running into sewers.

#### Reference to other sections

None

#### Additional Information

None

### 7. HANDLING AND STORAGE

#### Precautions for safe handling

Do not handle until all safety precautions have been read and understood. Do not get in eyes. Avoid contact with skin. Do not breathe mist/spray. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. In case of inadequate ventilation wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace.

#### Conditions for safe storage, including any incompatibilities

**Storage Temperature:** Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

**Incompatible Materials:** Strong oxidizing agents or reducing agents. Strong acids / bases.

**Specific end use(s)** Fungicide

## SAFETY DATA SHEET

OSHA HCS (29 CFR 1920.1200)

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

#### Occupational Exposure Limits

Substance	CAS No.	(8hr TWA)		(STEL)		Note:
		PEL (OSHA)	TLV (ACGIH)	PEL (OSHA)	TLV (ACGIH)	
None	—	—	—	—	—	—

#### Exposure Controls

**Appropriate engineering controls** Do **NOT** aerosolize or atomize to produce inhalable-size particles. Use low-pressure course spray only.

#### Personal protection equipment

Eye/face protection Wear protective eyewear (goggles, face shield, or safety glasses).



Skin protection (Hand protection/Other) Gloves (PVC, Neoprene, or Natural rubber).



Respiratory protection Not normally required.



Thermal hazards Not normally required.

**Environmental Exposure Controls** Do not allow to enter drains, sewers or watercourses.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Information on basic physical and chemical properties

Appearance	Liquid
Color	Light gray
Odor	Slight
Odor Threshold (ppm)	Not available
pH (Value)	6 - 8
Melting Point/Freezing Point (C)	-5 (23 °F)
Boiling point/boiling range (°C)	100 (212 °F)
Flash Point (°C)	> 93 (>200 °F)
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable
Explosive Limit Ranges	Not applicable

Vapour Pressure (Torr)	5.72 x 10 <sup>-7</sup> @ 25 °C
Vapour Density (Air=1)	Not available
Density (g/ml)	1.24 @ 25 °C (10.3 lbs/gal)
Specific Gravity	1.24 @ 25 °C
Solubility (Water)	0.6 - 0.9 ppm
Solubility (Other)	Not available
Partition Coefficient (n-Octanol/water)	Not available
Auto Ignition Point (°C)	Not available
Decomposition Temperature (°C)	Not available
Kinematic Viscosity (cSt)	Not available
Explosive properties	Not explosive
Oxidizing properties	Not available

**Other information** VOC Content: 56%

### 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	Stable under normal conditions.
<b>Chemical stability</b>	Stable.
<b>Possibility of hazardous reactions</b>	None anticipated.
<b>Conditions to avoid</b>	Avoid contact with heat and ignition sources.
<b>Incompatible materials</b>	Strong oxidizing agents or reducing agents. Strong acids / bases.
<b>Hazardous decomposition product(s)</b>	Combustion or thermal decomposition will evolve toxic and irritant vapours: acrid smoke. Forms oxides of carbon and nitrogen, also chlorine and chlorinated compounds.

### 11. TOXICOLOGICAL INFORMATION

**Exposure routes:** Skin Contact, Eye Contact

#### Information on toxicological effects

#### Chlorothalonil (CAS#1897-45-6):

Acute toxicity (calculated / estimated)	Oral: LD50 ~3260 mg/kg-bw (rat)
	Dermal: LD50 ~2020 mg/kg-bw (rat)
	Inhalation: LC50 0.1 mg/L (4 hr) (rat) (Inhalable Dust) - May cause respiratory irritation
Irritation/Corrosivity	Causes serious eye damage.



## SAFETY DATA SHEET

OSHA HCS (29 CFR 1920.1200)

**Sensitization** Based on reliable animal studies, the substance is not a skin sensitizer except possibly in the presence of a carrier solvent such as acetone. The substance may be a weak skin sensitizer based on a relatively small number of physician's clinical reports from exposed workers and, therefore, the potential for skin sensitization cannot be completely ruled out

**Repeated dose toxicity** Not to be expected.

**Carcinogenicity** Suspected of causing cancer.

NTP	IARC	ACGIH	OSHA
Animal carcinogen	2B	No.	No.

**Mutagenicity** Not to be expected.

**Reproductive toxicity** Not to be expected.

### 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

#### Chlorothalonil (CAS#1897-45-6):

**Short term (estimated / calculated)** LC50 (96 hour): 0.012 mg/L(fish)

**Long Term** Very toxic to aquatic life with long lasting effects.

**Persistence and degradability** Not persistent.

**Bioaccumulative potential** The substance has low potential for bioaccumulation.

**Mobility in soil** The substance has low mobility in soil.

**Results of PBT and vPvB assessment** None known.

**Other adverse effects** Strong oxidizing agents or reducing agents. Strong acids / bases.

### 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods** Disposal should be in accordance with local, state or national legislation. Consult an accredited waste disposal contractor or the local authority for advice.

**Additional Information** None known.

### 14. TRANSPORT INFORMATION

	Land transport (U.S. DOT)*	Sea Transport (IMDG)	Air Transport (ICAO/IATA)
UN Number	UN 3082	UN 3082	UN 3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. (Chlorothalonil)		
Transport hazard class(es)	9	9	9
Packing group	III	III	III
Hazard label(s)	Marine Pollutant	Marine Pollutant	Marine Pollutant
Environmental hazards	Yes	Yes	Yes
Special precautions for user	None Assigned	None Assigned	None Assigned

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable

\* Not regulated for ground shipments in the U.S. in non-bulk packaging (<119 gallons).

### 15. REGULATORY INFORMATION

**Safety, health and environmental regulations/legislation specific for the substance or mixture:**

**TSCA (Toxic Substance Control Act)** - Inventory Status: All components listed or polymer exempt.

**EPA FIFRA Information for SDS Section 15 (Regulatory Information):**

This chemical is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non pesticide chemicals.

**The hazard information required on the pesticide label is reproduced below:**

**WARNING:** May be fatal if inhaled. Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Do not breathe spray mist.

Mixers, loaders, applicators and all other handlers must wear: Long-sleeved shirt and long pants; shoes plus socks,; protective eye wear; chemical-resistant gloves made of waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyethylene, polyvinyl chloride, or viton (if you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart); a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P, or HE prefilter. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into



## SAFETY DATA SHEET

OSHA HCS (29 CFR 1920.1200)

clean clothing. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

**Personal Protective Equipment (PPE):** 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. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. DO NOT reuse them.

**Engineering Controls:** When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**Environmental Hazards:** This product is toxic to aquatic invertebrates and wildlife. 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 from treated areas may be hazardous to aquatic organisms in neighboring areas. DO NOT contaminate water when disposing of equipment washwater or rinsate. Chlorothalonil can contaminate surface water through spray drift. DO NOT apply when weather conditions favor drift from treated areas. Under some conditions, it may also have a high potential for runoff into surface water for several days to weeks after application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlaying extremely shallow ground water, 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 over-laying tile drainage systems that drain to surface water. Chlorothalonil degradates are known to leach through soil into ground water under certain conditions as a result of label use. Use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

The pesticide label also includes other important information, including directions for use.

### Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4):

Chemical Name	CAS No.	Typical % wt	RQ (Pounds)
None	—	—	—

### SARA 311/312 - Hazard Categories:

- Fire
  Sudden Release
  Reactivity  
 Immediate (acute)
  Chronic (delayed)

### SARA 313 - Toxic Chemicals (40 CFR 372):

Chemical Name	CAS No.	Typical % wt
Chlorothalonil	1897-45-6	~98

### SARA 302 - Extremely Hazardous Substances(40 CFR 355):

Chemical Name	CAS No.	Typical % wt	RQ (Pounds)	TPQ (Pounds)
None	—	—	—	—

### Proposition 65 (California):

Chemical Name	CAS No.	Typical % wt	Hazards
Chlorothalonil	1897-45-6	~98	Cancer
Hexachlorobenzene	118-74-1	Trace	Cancer

## 16. OTHER INFORMATION

The following sections contain revisions or new statements: : 1-16

**Date of Preparation:** December 29, 2016.

**Hazard Statement(s) and Risk Phrases Listed in: SECTION 2:/ SECTION 3:**

#### Hazard Statement(s)

- H318: Causes serious eye damage.
- H330: Fatal if inhaled.
- H335: May cause respiratory irritation.
- H351: Suspected of causing cancer.
- H400: Very toxic to aquatic life.
- H410: Very toxic to aquatic life with long lasting effects.

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