

MATERIAL SAFETY DATA SHEET

FOR ANY EMERGENCY, 24 HOURS / 7 DAYS, CALL: 1-800-654-6911 (OUTSIDE USA: 1-423-780-2970)
FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC®: 1-800-424-9300 (OUTSIDE USA: 1-703-527-3887)
FOR ALL MSDS QUESTIONS & REQUESTS, CALL: 1-800-511-MSDS (OUTSIDE USA: 1-423-780-2347)

PRODUCT NAME: **GLB TRIPLE TAB**

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Supplier

GLB
1400 Bluegrass Lakes Parkway ,
Alpharetta, GA, 30004
USA

Telephone: +17705215999
Telefax: +17705215959
Web: www.poolspacare.com

REVISION DATE: 02/07/2014
SUPERCEDES: 09/27/2013

MSDS Number: 000000024528
SYNONYMS: None
CHEMICAL FAMILY: None
DESCRIPTION / USE: None established
FORMULA: None established

Manufacturer

Advantis Technologies
1400 Bluegrass Lakes Parkway
Alpharetta, GA 30004
United States of America

SECTION 2. HAZARDS IDENTIFICATION

OSHA Hazard
Classification:

Corrosive to eyes and skin, Lung toxin, Oxidizer

Routes of Entry: Inhalation, skin, eyes, ingestion
Chemical Interactions: No known or reported interactions.
Medical Conditions Aggravated: Asthma, respiratory and cardiovascular disease

Human Threshold Response Data

Odor Threshold Not established for product.

Irritation Threshold Not established for product.

MATERIAL SAFETY DATA SHEET

Hazardous Materials Identification System / National Fire Protection Association Classifications

<u>Hazard Ratings :</u>	<u>Health</u>	<u>Flammability</u>	<u>Physical / Instability</u>	<u>PPI / Special hazard.</u>
HMIS	3	0	2	
NFPA	2	0	2	NFPA Oxidizer Class: Meets the criteria of an NFPA Class 1 Oxidizer

Immediate (Acute) Health Effects

Inhalation Toxicity:	This product in the form of solid tablets is not an inhalation hazard. However, if dust is created and inhaled, inhalation of this material in dust or vapor form is irritating to the nose, mouth, throat and lungs. It may also cause burns to the respiratory tract with the production of lung edema which can result in shortness of breath, wheezing, choking, chest pain, and impairment of lung function. Inhalation of high concentrations can result in permanent lung damage.
Skin Toxicity:	DRY MATERIAL CAUSES MODERATE SKIN IRRITATION. WET MATERIAL CAUSES SKIN BURNS. Dermal exposure to dry material causes moderate skin irritation characterized by redness and swelling. Dermal exposure to wet material can cause severe irritation and/or burns characterized by redness, swelling and scab formation. Prolonged skin exposure may cause permanent damage.
Eye Toxicity:	CAUSES BURNS TO EYES. Severe irritation and/or burns can occur following eye exposure. Direct contact may cause impairment of vision and corneal damage.
Ingestion Toxicity:	MODERATELY TOXIC IF SWALLOWED. CAUSES BURNS TO DIGESTIVE TRACT. Irritation and/or burns can occur to the entire gastrointestinal tract, including the stomach and intestines, characterized by nausea, vomiting, diarrhea, abdominal pain, bleeding, and/or tissue ulceration. Ingestion may cause severe damage to the gastrointestinal tract with the potential to cause perforation.
Acute Target Organ Toxicity:	This product is corrosive to all tissues contacted and upon inhalation, may cause irritation to mucous membranes and respiratory tract., The dry material is irritating to the skin. However when wet, it will produce burns to the skin.

Prolonged (Chronic) Health Effects

Carcinogenicity:	This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.
Reproductive and Developmental Toxicity:	Not known or reported to cause reproductive or developmental toxicity.
Inhalation:	There are no known or reported effects from chronic exposure except for effects similar to those experienced from acute exposure.
Skin Contact:	Effects similar to those from acute exposure. In addition, chronic exposure to wet material may cause effects secondary to tissue destruction.

Ingestion:	There are no known or reported effects from chronic ingestion except for effects similar to those experienced from single exposure. The acute corrosivity of this product, makes chronic ingestion of significant amounts unlikely.
Sensitization:	This material tested negative for skin sensitization in animals.
Chronic Target Organ Toxicity:	There are no known or reported target organ effects from chronic exposure., Toxicological investigation indicates it does not produce significant effects from chronic exposure.
Supplemental Health Hazard Information :	No additional health information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>CAS OR CHEMICAL NAME</u>	<u>CAS #</u>	<u>% RANGE</u>
TRICHLORO-S-TRIAZINETRIONE	87-90-1	
Aluminum Sulfate	17927-65-0	
Copper Sulfate pentahydrate	7758-99-8	

SECTION 4. FIRST AID MEASURES

General Advice:	Call a poison control center or doctor for treatment advice. For 24-hour emergency medical assistance, call Arch Chemical Emergency Action Network at 1-800-654-6911. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
Inhalation:	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.
Skin Contact:	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.
Eye Contact:	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.
Ingestion:	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 a poison control center or doctor. Do not give anything by mouth to an unconscious person.
Notes to Physician:	Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5. FIREFIGHTING MEASURES

Flammability Summary (OSHA): Product is not known to be flammable, combustible or pyrophoric.,
 NFPA Oxidizer Class: Meets the criteria of an NFPA Class 1
 Oxidizer

Flammable Properties

Fire / Explosion Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Closed containers may explode (due to the build up of steam pressure) when exposed to extreme heat.

Extinguishing Media: Water only.

Fire Fighting Instructions: Use water to cool containers exposed to fire. On small fires, use water spray or fog. On large fires, use heavy deluge or fog streams. Flooding amounts of water may be required before extinguishment can be accomplished. Do not use dry extinguishers containing ammonium compounds.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Protection for Emergency Situations: Response to a large quantity spill (100 pounds or greater) or when dusting or decomposition gas exposure could occur requires the use of a positive pressure full face supplied air respirator or self contained breathing apparatus (SCBA), chemical resistant gloves, coveralls and boots. In case of fire, this personal protective equipment should be used in addition to normal fire fighter equipment. Compatible materials for response to this material are: neoprene. Protection concerns must also address the following: If this material becomes damp/wet or contaminated in a container, the formation of nitrogen trichloride gas may occur and an explosive condition may exist.

Spill Mitigation Procedures

Air Release: Vapors may be suppressed by the use of water fog.

Water Release: This material is heavier than water. This material is soluble in water. Stop water flow or divert water flow around spill if possible and safe to do so. Begin monitoring for available chlorine and pH immediately.

Land Release: Do not contaminate spill material with any organic materials, ammonia, ammonium salts or urea. Clean up all spill material with clean, dry dedicated equipment and place in a clean dry container.

Additional Spill Information : FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC: 1-800-424-9300 REPORTABLE QUANTITY: Not Applicable (Per 40 CFR 302.4) Hazardous concentrations in air may be found in local spill area and immediately downwind. If spill material is still dry, do not put water directly on this product as a gas evolution may occur. If material is wet, contact 1-800-654-6911 for proper stabilization procedures. Dispose of spill residues per guidelines under Section 13, Disposal Consideration. This material may be neutralized for disposal; you are requested to contact Arch Chemicals at 1-800-654-6911 before beginning any such procedure.

SECTION 7. HANDLING AND STORAGE

Handling:	Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water. Avoid breathing dust, mist, vapor or gas.
Storage:	Store in a cool dry ventilated location, away from sources of ignition or other incompatible conditions and chemicals. Keep container(s) closed. Avoid creating dusts.
Shelf Life Limitations:	Indefinite. Available chlorine loss can be as little as 0.1% per year at ambient temperatures.
Incompatible Materials for Storage:	Organic materials, Reducing agents, nitrogen containing materials, oxidizers, Acids, Bases, (Incompatible materials for packaging: paper, cardboard)
Do Not Store At temperatures Above:	140 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation:	Local exhaust ventilation or other engineering controls are normally required when handling or using this product to keep airborne exposures below the TLV, PEL or other recommended exposure limit.
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Protective Equipment for Routine Use of Product

Respiratory Protection :	Wear a NIOSH approved respirator if levels above the exposure limits are possible., A NIOSH approved full-face air purifying respirator equipped with combination chlorine/P100 cartridges. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.
Skin Protection :	Wear impervious gloves to avoid skin contact. A full impervious suit is recommended if exposure is possible to a large portion of the body.
Eye Protection:	Use chemical goggles.
Protective Clothing Type:	Nitrile, Natural rubber, Neoprene (This includes: gloves, boots, apron, protective suit)
General Protective Measures:	An eye wash and safety shower should be provided in the immediate work area.

Components with workplace control parameters

Components (CAS-No.)	Value	Control parameters	Basis (Update)
Copper Sulfate pentahydrate (7758-99-8)	Conc	100 mg/m3	NIOSH/GUIDE (2003)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	solid
Form	No data.
Color:	No data.
Odor:	No data.
Molecular Weight:	232.41 g/mol
Relative density	no data available
pH :	2.4 - 2.7 () 10 g/l (as aqueous solution)
Boiling Point:	not applicable
Melting point/range	no data available
Density	no data available
Bulk Density:	2,100 kg/m3 ()
Vapor Pressure:	no data available
Vapor Density:	not applicable
Viscosity:	not applicable
Solubility in Water:	12 g/l 77 °F (25 °C)
Partition coefficient n-octanol/water:	() no data available
Evaporation Rate:	not applicable
Oxidizing:	None established
Volatiles, % by vol.:	not applicable
VOC Content	not applicable
HAP Content	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Conditions to Avoid:	Sparks, open flame, other ignition sources, and elevated temperatures., Contact with small amounts of water may result in an exothermic reaction with the liberation of toxic fumes., Damp or slightly wet product (will evolve nitrogen trichloride), May be unstable at temperatures above 225 Deg. C (437 Deg. F)
Chemical Incompatibility:	organic materials, Oils, Grease, Sawdust, Reducing agents,

Hazardous Decomposition Products: nitrogen-containing compounds, oxidizers, acids, Bases, Dry fire extinguishers containing ammonium compounds
 Decomposition Temperature: Nitrogen trichloride, Chlorine, nitrous oxides, cyanates, Carbon monoxide, Carbon dioxide
 > 225 °C

SECTION 11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology

Oral LD50 value:

TRICHLORO-S-TRIAZINETRIONE	LD50 = 490 mg/kg	Rat
Aluminum Sulfate	LD50 anhydrous substance = 6,207 mg/kg	Mouse
	LD50 anhydrous substance = 1,930 mg/kg	Rat
Copper Sulfate pentahydrate	LD50 = 300 mg/kg	rat

Component Animal Toxicology

Dermal LD50 value:

TRICHLORO-S-TRIAZINETRIONE	LD50 > 2,000 mg/kg	Rabbit
Aluminum Sulfate	LD50 anhydrous substance	Believed to be > 2,000 mg/kg Rabbit
Copper Sulfate pentahydrate	LD50 >= 1,000 mg/kg	rabbit

Component Animal Toxicology

Inhalation LC50 value:

TRICHLORO-S-TRIAZINETRIONE	LC50 4 h (aerosol dust), (Nose Only)	Approximately 0.54 mg/l	Rat
	LC50 1 h (aerosol dust), (Nose Only)	Approximately 2.16 mg/l	Rat
Aluminum Sulfate	No data		
Copper Sulfate pentahydrate	no data available		

Product Animal Toxicity

Oral LD50 value: LD50 Believed to be > 500 but < 5,000 mg/kg. Rat

Dermal LD50 value: LD50 > 5,000 mg/kg Rabbit

Inhalation LC50 value: This product has been tested for acute inhalation toxicity. However, due to the physical nature of the product, an aerosol dust of desired particle size could not be generated. Therefore, no animals could be exposed and no LC50 could be obtained.

Skin Irritation: DRY MATERIAL CAUSES MODERATE SKIN IRRITATION., WET MATERIAL CAUSES SKIN BURNS.

Eye Irritation:	Corrosive to eyes.
Skin Sensitization:	Negative skin sensitizer, guinea pig - Buehler Method
Acute Toxicity:	This product is corrosive to all tissues contacted and upon inhalation, may cause irritation to mucous membranes and respiratory tract. The dry material is irritating to the skin. However when wet, it will produce burns to the skin.
Subchronic / Chronic Toxicity:	There are no known or reported effects from repeated exposure., Toxicological investigation indicates it does not produce significant effects from chronic exposure.
Reproductive and Developmental Toxicity:	Not known or reported to cause reproductive or developmental toxicity.
TRICHLORO-S-TRIAZINETRIONE	Not known or reported to cause reproductive or developmental toxicity. A similar product has been tested and it did not produce teratogenic or fetotoxic effects in laboratory animals.
Mutagenicity:	Not known or reported to be mutagenic.
TRICHLORO-S-TRIAZINETRIONE	This product was determined to be non-mutagenic in the Ames assay.
Copper Sulfate pentahydrate	Copper sulfate has been tested for mutagenicity, and there is equivocal evidence for its mutagenic potential. It was found to be negative in the Ames assay and in a yeast assay. It was found to be positive in the in vitro Syrian hamster embryo (SA7/SHE) cell transformation assay.
Carcinogenicity:	This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.
TRICHLORO-S-TRIAZINETRIONE	This chemical is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP, or EPA.

SECTION 12. ECOLOGICAL INFORMATION

Overview: Highly toxic to fish and other aquatic organisms.

Ecological Toxicity Values - Product:

Rainbow trout (<i>Salmo gairdneri</i>),	-	96 h LC50 0.32 mg/l
Bluegill sunfish	-	96 h LC50 0.30 mg/l
Daphnia magna,	-	48 h LC50 0.21 mg/l
Mallard duck	-	8 d Dietary LC50 > 10,000 ppm
Mallard duck	-	Acute Oral LD50 1,600 mg/kg
Bobwhite quail	-	8 d Dietary LC50 7,422 ppm

Ecological Toxicity Values for: TRICHLORO-S-TRIAZINETRIONE

Rainbow trout (<i>Salmo gairdneri</i>),	-	96 h LC50 0.32 mg/l
Bluegill sunfish	-	96 h LC50 0.30 mg/l
Daphnia magna,	-	48 h LC50 0.21 mg/l

	Mallard duck	-	8 d Dietary LC50 > 10,000 ppm
Mallard duck		-	Acute Oral LD50 1,600 mg/kg
Bobwhite quail		-	8 d Dietary LC50 7,422 ppm

Ecological Toxicity Values for: Aluminum Sulfate

	Largemouth bass	-	96 h LC50 = 250 mg/l (anhydrous aluminum sulfate)
Mosquito fish		-	96 h LC50 = 235 mg/l (anhydrous aluminum sulfate)

Ecological Toxicity Values for: Copper Sulfate pentahydrate

	Bluegill	-	(measured, renewal) 96 h LC50 = 0.892 mg/l
Bluegill		-	(static). 96 h LC50 = 1.3 - 2.8 mg/l
Rainbow trout (Oncorhynchus mykiss)		-	(static). 96 h LC50 = 0.13 mg/l
Blue crab (Callinectes sapidus)		-	(static). 96 h LC50= 28 mg/l
Northern pink shrimp (Penaeus duorarum)		-	(static). 96 h LC50= 16 mg/l
Marsh grass shrimp		-	(static). 96 h LC50= 17 mg/l
Green algae (Selenastrum capricornutum),		-	(static). 5 day EC50 (population growth) = 0.0031 mg/l
Anabaena flos-aquae (freshwater blue-green algae)		-	(static). 5 day EC50 (population growth) = 0.029 mg/l
Skeletonema costatum (diatom)		-	(static). 5 day EC50 (population growth) = 0.25 mg/l

SECTION 13. DISPOSAL CONSIDERATIONS

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THE MATERIAL. THE USER OF THE MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES.

Waste Disposal Summary : If this product becomes a waste, it DOES NOT meet the criteria of a hazardous waste as defined under 40 CFR 261, in that it does not exhibit the characteristics of hazardous waste of Subpart C, nor is it listed as a hazardous waste under Subpart D.

Disposal Methods : As a nonhazardous waste, it should be disposed of in accordance with local, state and federal regulations.

SECTION 14. TRANSPORT INFORMATION

DOT

UN number : 3077
 Description of the goods : Environmentally hazardous substances, solid, n.o.s.
 : (Trichloro-s-triazinetriene, Copper Sulfate pentahydrate)
 Class : 9
 Packing group : III
 Labels : 9
 Emergency Response : 171
 Guidebook Number

TDG

UN number : 3077
 Description of the goods : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
 N.O.S.
 : (Trichloro-s-triazinetriene, Copper Sulfate pentahydrate)
 Class : 9
 Packing group : III
 Labels : 9

IATA

UN number : 3077
 Description of the goods : Environmentally hazardous substance, solid, n.o.s.
 : (Trichloro-s-triazinetriene, Copper Sulfate pentahydrate)
 Class : 9
 Packing group : III
 Labels : 9MI
 Packing instruction (cargo aircraft) : 956
 Packing instruction (passenger aircraft) : 956
 Packing instruction (passenger aircraft) : Y956

IMDG-CODE

UN number : 3077
 Description of the goods : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
 N.O.S.
 : (Trichloro-s-triazinetriene, Copper Sulfate pentahydrate)
 Class : 9
 Packing group : III
 Labels : 9
 EmS Number 1 : F-A
 EmS Number 2 : S-F
 Marine pollutant : yes

SECTION 15. REGULATORY INFORMATION

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UNITED STATES:

Toxic Substances Control Act (TSCA): This is an EPA registered pesticide.
EPA Pesticide Registration Number: None established

FIFRA Listing of Pesticide Chemicals (40 CFR 180): This product is regulated under the Federal Insecticide, Fungicide and Rodenticide Act. It must be used for purposes consistent with its labeling.

Superfund Amendments and Reauthorization Act (SARA) Title III:

Hazard Categories Sections 311 / 312 (40 CFR 370.2):

Health Immediate (Acute) Health Hazard
Physical Fire Hazard

Clean Air Act

Clean Air Act Toxic ARP Section 112r None established

Clean Air Act Socmi None established

Clean Air Act VOC Section 111 None established

Clean Air Act Haz. Air Pollutants Section 112 None established

California Prop 65	:	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
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SECTION 16. OTHER INFORMATION

MSDS REVISION STATUS :

SECTIONS REVISED: 1

Major References : Available upon request.

MATERIAL SAFETY DATA SHEET

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. ARCH CHEMICALS BELIEVES THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF THE DATE OF PUBLICATION BUT, MAKES NO WARRANTY THAT IT IS. ADDITIONALLY, IF THIS MSDS IS MORE THAN THREE YEARS OLD, YOU SHOULD CONTACT ARCH CHEMICALS MSDS CONTROL AT THE PHONE NUMBER ON THE FRONT PAGE TO MAKE CERTAIN THAT THIS DOCUMENT IS CURRENT. .