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 SDS QUESTIONS & REQUESTS, CALL:	1-800-511-MSDS (OUTSIDE USA: 1-423-780-2347)

PRODUCT NAME: **ULTIMA TOTAL CONTROL**

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Supplier
Ultima
1400 Bluegrass Lakes Parkway ,
Alpharetta, GA, 30004
USA

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

Manufacturer
Advantis Technologies
1200 Bluegrass Lakes Parkway
Alpharetta, GA 30004
United States of America

REVISION DATE:	05/26/2015
SUPERCEDES:	12/06/2010
MSDS Number:	000000024368
SYNONYMS:	None
CHEMICAL FAMILY:	None
DESCRIPTION / USE	None established
FORMULA:	None established

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Oxidizing solids	:	Category 2
Acute toxicity (Oral)	:	Category 4
Skin corrosion	:	Category 1B
Serious eye damage	:	Category 1
Acute toxicity (Inhalation)	:	Category 4
Specific target organ toxicity - single exposure	:	Category 3

GHS Label element

Hazard pictograms :

Signal word : Danger

Hazard statements :
H272 May intensify fire; oxidiser.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.

Precautionary statements :

Prevention:
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220 Keep/Store away from clothing/ combustible materials.
P221 Take any precaution to avoid mixing with combustibles.
P260 Do not breathe vapours.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/ physician.
P321 Specific treatment (see supplemental first aid instructions on this label).
P330 Rinse mouth.
P363 Wash contaminated clothing before reuse.
P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.

Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal:
P501 Dispose of contents/container in accordance with local regulation.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS OR CHEMICAL NAME	CAS #	% RANGE
SODIUM DICHLORO-S-TRIAZINE TRIONEDIHYDRATE	51580-86-0	
Sodium Bicarbonate	144-55-8	
Copper Sulfate pentahydrate	7758-99-8	
Sodium Citrate	6132-04-3	

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, pyrophoric or explosive.

Flammable Properties

Flash Point:	Not applicable
Autoignition Temperature:	no data available
Fire / Explosion Hazards:	May intensify fire; oxidiser.
Extinguishing Media:	Water only. Do not use dry extinguishers containing ammonium compounds.
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. Response to this material requires the use of a full encapsulated suit and full-face (NIOSH approved) self-contained breathing apparatus (SCBA).
Hazardous Combustion Products:	During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.
Upper Flammable / Explosive Limit, % in air:	No data.
Lower Flammable / Explosive Limit, % in air:	No data.

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 repirator 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:	Hazardous concentrations in air may be found in local spill area and immediately downwind.Vapors may be suppressed by the use of water fog.
Water Release:	Notify all downstream users of possible contamination.Divert water flow around spill if possible and safe to do so.
Land Release:	Sweep up and place in suitable clean, dry containers for reclamation or later disposal.Avoid dust generation.Do not place spill materials back in their original containers.
Additional Spill Information :	Stop source of spill as soon as possible and notify appropriate personnel. Utilize emergency response personal protection equipment prior to the start of any response. Evacuate all non-essential personnel. Dispose of spill residues per guidelines under Section 13, Disposal Consideration.

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 inhalation of dust and fumes.
Storage:	Store in a cool dry ventilated location, away from sources of ignition or other incompatible conditions and chemicals. Keep container(s) closed.
Incompatible Materials for Storage:	Refer to Section 10, "Incompatible Materials."

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.

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:	Neoprene, Nitrile, Natural rubber (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

no data available

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	solid
Form	granules
Color:	No data.
Odor:	Mild chlorine-like
Molecular Weight:	None established
pH :	7.0 - 7.5 () 10 g/l (as aqueous solution)
Boiling Point:	Not applicable
Melting point/freezing point	no data available

Density	No data.
Bulk Density:	() no data available
Vapor Pressure:	Not applicable
Vapor Density:	Not applicable
Viscosity:	
Solubility in Water:	20 g/l 68 °F (20 °C) soluble
Partition coefficient n-octanol/water:	
Evaporation Rate:	no data available
Oxidizing:	No data
Volatiles, % by vol.:	Not applicableNo data
VOC Content	no data available This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489). This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450.
HAP Content	No data

SECTION 10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:	Stable under normal conditions., Product will not undergo hazardous polymerization.
Conditions to Avoid:	Sparks, open flame, other ignition sources, and elevated temperatures., Contact with incompatible substances
Chemical Incompatibility:	This product is chemically reactive with many substances, including, e.g., other pool treatment products, acids, organics, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, corrosive , flammable or combustible materials.
Hazardous Decomposition Products:	Chlorine, Nitrogen trichloride, carbon monoxide
Decomposition Temperature:	No data

SECTION 11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology
Oral LD50 value:

SODIUM DICHLORO-S-TRIAZINE TRIONEDIHYDRATE	LD50	=	735 mg/kg	Rat
Sodium Bicarbonate	LD50	>	5,000 mg/kg	Rat
Copper Sulfate pentahydrate	LD50	=	300 mg/kg	Rat

Component Animal Toxicology
Dermal LD50 value:

SODIUM DICHLORO-S-TRIAZINE TRIONEDIHYDRATE	LD50	> 2,000 mg/kg	Rabbit
Sodium Bicarbonate	LD50	> 2,000 mg/kg	Rabbit
Copper Sulfate pentahydrate	LD50	>= 1,000 mg/kg	Rabbit

Component Animal Toxicology

Inhalation LC50 value:

SODIUM DICHLORO-S-TRIAZINE TRIONEDIHYDRATE	Inhalation LC50 1 h (aerosol dust), (Nose Only) Rat	Approximately	2.16 mg/l	
	Inhalation LC50 4 h (aerosol dust), (Nose Only) Rat	Approximately	0.54 mg/l	
Sodium Bicarbonate	Inhalation LC50 4 h (Whole-body) >		4.74 mg/l	Rat
Copper Sulfate pentahydrate	no data available			

Product Animal Toxicity

Oral LD50 value:	LD50 Believed to be approximately 1,200 mg/kg Rat
Dermal LD50 value:	LD50 Believed to be > 2,000 mg/kg Rabbit
Inhalation LC50 value:	LC50 1 h (aerosol dust) Believed to be approximately 5.2 mg/l Rat LC50 4 h (aerosol dust) Believed to be approximately 1.3 mg/l Rat
Skin Irritation:	DRY MATERIAL CAUSES MODERATE SKIN IRRITATION., WET MATERIAL CAUSES SKIN BURNS.
Eye Irritation:	Corrosive to eyes.
Skin Sensitization:	This material is not known or reported to be a skin or respiratory sensitizer. The active ingredient in this product tested negative for skin sensitization in laboratory animals.
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:	Not known or reported to cause subchronic or chronic toxicity.
Reproductive and Developmental Toxicity:	No reproductive or developmental risk to humans is expected from exposure to this product. The active ingredient in this product has been tested in laboratory animals and no evidence of teratogenicity or fetotoxicity was seen.
Sodium Bicarbonate	This product did not cause developmental effects in a study with laboratory animals.
Mutagenicity:	Not known or reported to be mutagenic. The active ingredient in this product has been tested in a battery of mutagenicity assays and was found to be non-mutagenic under the conditions of the tests.

Sodium Bicarbonate	This chemical has been tested and was shown to be non-mutagenic.
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.

Sodium Bicarbonate	This material did not cause cancer in long-term animal studies.

SECTION 12. ECOLOGICAL INFORMATION

Overview: Highly toxic to fish and other aquatic organisms.

Ecological Toxicity Values for: SODIUM DICHLORO-S-TRIAZINE TRIONEDIHYDRATE

Rainbow trout (Salmo gairdneri),	-	(nominal, flow-through) 96 h LC50 = 0.22 mg/l
Bluegill	-	(nominal, flow-through) 96 h LC50 = 0.28 mg/l
Water flea (Daphnia magna),	-	(nominal, static). 48 h LC50= 0.196 mg/l
Mallard duck	-	Oral LD50 = 3,300 mg/kg
Bobwhite quail	-	Oral LD50 = 730 mg/kg
Mallard duck	-	8 d Dietary LC50 > 10,000 mg/kg
Bobwhite quail	-	8 d Dietary LC50 > 10,000 mg/kg

Ecological Toxicity Values for: Sodium Bicarbonate

Bluegill sunfish	-	(measured, flow-through) 96 h LC50 = 7,100 mg/l
Bluegill sunfish	-	(nominal, static). 96 h LC50 = 8,600 mg/l
Rainbow trout (Oncorhynchus mykiss)	-	(measured, flow-through) 96 h LC50 = 7,700 mg/l
Mosquito fish	-	(nominal, static). 96 h LC50 = 7,550 mg/l
Daphnia magna,	-	(measured, flow-through) 48 h LC50= 4,100 mg/l
Daphnia magna,	-	(nominal, static). 48 h EC50= 1,640 mg/l
Ceriodaphnia dubia	-	(nominal, static). 48 h LC50= 1,075 mg/l
Daphnia magna,	-	(static, renewal) 21 day EC50 (chronic toxicity)> 576 mg/l

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 will be a nonhazardous waste according to U.S. RCRA regulations. Dispose of in accordance with all Local, State, Federal, and Provincial Environmental Regulations.
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.
	:	(Sodium dichloro-s-triazine trionedihydrate, Copper Sulfate pentahydrate)
Class	:	9
Packing group	:	III
Labels	:	9
Emergency Response Guidebook Number	:	171

TDG

UN number	:	3077
Description of the goods	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
		(Sodium dichloro-s-triazine trionedihydrate, 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. (Sodium dichloro-s-triazine trionedihydrate, 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. (Sodium dichloro-s-triazine trionedihydrate, 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

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.

Signal word	:	DANGER!
Hazard statements	:	Harmful if swallowed. Harmful if absorbed through skin. May be fatal if inhaled. Corrosive. Causes skin burns. Corrosive. Causes irreversible eye damage. This pesticide is toxic to fish.

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ

			(lbs)
Copper Sulfate pentahydrate	7758-99-8		112
Copper Sulfate pentahydrate	7758-99-8	10	112

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313

The following components are subject to reporting levels established by SARA Title III, Section 313:

Copper Sulfate pentahydrate	7758-99-8	8.96 %

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Copper Sulfate pentahydrate	7758-99-8	8.96 %

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Copper Sulfate pentahydrate	7758-99-8	8.96 %

This product contains the following toxic pollutants listed under the U.S. Clean Water Act Section 307

Copper Sulfate pentahydrate	7758-99-8	8.96 %

US State Regulations

Massachusetts Right To Know

sodium dichloroisocyanurate, dihydrate	51580-86-0
Copper Sulfate pentahydrate	7758-99-8

Pennsylvania Right To Know

Sodium hydrogencarbonate	144-55-8
sodium dichloroisocyanurate, dihydrate	51580-86-0
Copper Sulfate pentahydrate	7758-99-8
CITRATE, SODIUM, DIHYDRATE	6132-04-3

New Jersey Right To Know

Sodium hydrogencarbonate	144-55-8
sodium dichloroisocyanurate, dihydrate	51580-86-0
Copper Sulfate pentahydrate	7758-99-8
CITRATE, SODIUM, DIHYDRATE	6132-04-3

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.

The components of this product are reported in the following inventories:

TSCA : This is an EPA registered pesticide.

: sodium dichloroisocyanurate, dihydrate
: Copper Sulfate pentahydrate
: CITRATE, SODIUM, DIHYDRATE

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION

SECTIONS REVISED: 1
Major References : Available upon request.

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. .