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: **ULTIMA TOTAL CONTROL**
EPA Registration Number: 7364-46

1. PRODUCT AND COMPANY IDENTIFICATION

Supplier
Ultima
1400 Bluegrass Lakes Parkway ,
Alpharetta, GA, 30004
United States

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

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

REVISION DATE:	12/06/2010
SUPERCEDES:	09/09/2009
MSDS Number:	000000012452
SYNONYMS:	None
CHEMICAL FAMILY:	None
DESCRIPTION / USE	None established
FORMULA:	None established

2. HAZARDS IDENTIFICATION

OSHA Hazard Classification:	**Corrosive to eyes, skin and mucous membranes, Lung toxin, Toxic by inhalation (dust)., 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.

Hazardous Materials Identification System / National Fire Protection Association Classifications

Hazard Ratings :	Health	Flammability	Physical / Instability	PPI / Special hazard.
HMIS	3	0	1	
NFPA	2	0	1	OX

Immediate (Acute) Health Effects

Inhalation Toxicity: HARMFUL IF INHALED. 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. Toxic by inhalation (dust).

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 exposure. Direct contact may cause impairment of vision and corneal damage. Rinsing of the eye should take place immediately.

Ingestion Toxicity: May be harmful if swallowed. 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:	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.
Inhalation:	Repeated inhalation of dust may cause impairment of lung function and permanent lung damage.
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.
Eye Contact:	Prolonged contact may result in permanent damage. Corneal involvement or visual impairment is expected.
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.
Chronic Target Organ Toxicity:	There are no known or reported target organ effects from chronic exposure.
Supplemental Health Hazard Information :	No additional health information available.

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	

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.

5. FIRE FIGHTING MEASURES

Flammability Summary (OSHA):	Product is not known to be flammable, combustible, pyrophoric or explosive.
<u>Flammable Properties</u>	
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.

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.Contain all solids for treatment or disposal.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.Contain all solids for treatment or disposal.
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.Contain all solids for treatment or disposal.
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.

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.

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.

Exposure Limit Data

CHEMICAL NAME	CAS #	Name of Limit	Exposure
SODIUM DICHLORO-S-TRIAZINE TRIONEDIHYDRATE	51580-86-0	ARCH-ROEG*	0.5 mg/m3 TWA
Copper Sulfate pentahydrate	7758-99-8	NIOSH-IDLH	100 mg/m3

*ARCH-ROEG: Arch Recommended Occupational Exposure Guideline.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	solid
Form	granules
Color:	No data.
Odor:	Mild chlorine-like
Molecular Weight:	None established
Specific Gravity :	1.029 20 °C
pH :	7.0 - 7.5 10 g/l (as aqueous solution)
Boiling Point:	not applicable
Freezing Point:	no data available

Melting Point:	
	no data available
Density:	No data.
Bulk Density:	no data available
Vapor Pressure:	not applicable
Vapor Density:	not applicable
Viscosity:	no data available
Solubility in Water:	20 g/l
	20 °C soluble
Partition coefficient n-octanol/water:	No data.
Evaporation Rate:	no data available
Oxidizing:	No data
Volatiles, % by vol.:	No datanot applicable
VOC Content	no data available
HAP Content	No data

10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:	Product will not undergo hazardous polymerization.Stable under normal conditions.
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

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	> 2,000 mg/kg	Rat

Component Animal Toxicology
Inhalation LC50 value:

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

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.

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 DAYS Dietary LC50 > 10,000 mg/kg
Bobwhite quail	-	8 DAYS 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

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.

14. TRANSPORT INFORMATION

Land (US DOT):	UN3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (SODIUM DICHLORO-S-TRIAZINE TRIONEDIHYDRATE, COPPER SULFATE PENTAHYDRATE) 9 III
Water (IMDG):	UN3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (SODIUM DICHLORO-S-TRIAZINE TRIONEDIHYDRATE, COPPER SULFATE PENTAHYDRATE) 9 III Yes

Air (IATA):	UN3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (SODIUM DICHLORO-S-TRIAZINE TRIONEDIHYDRATE, COPPER SULFATE PENTAHYDRATE) 9 III
Emergency Response Guide Number:	ERG # 171
Transportation Notes**:**	Material is not regulated for ground transportation within the US if shipped in non-bulk packages. Material is not regulated as a marine pollutant for ground, rail car, or aircraft transportation within the USA if shipped in non bulk packages per marine pollutant exception 49 CFR 171.4(c).
EMS:	F-A, S-F

15. REGULATORY INFORMATION

UNITED STATES:

Toxic Substances Control Act (TSCA):	This is an EPA registered pesticide.
EPA Pesticide Registration Number:	7364-46
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

Emergency Planning & Community Right to Know (40 CFR 355, App. A):

Extremely Hazardous Substance Section 302 - Threshold Planning Quantity:

ZUS_SAR302	TPQ (threshold planning quantity)	None established

Reportable Quantity (49 CFR 172.101, Appendix):

ZUS_CERCLA	Reportable quantity	COPPER AND COMPOUNDS Value:
ZUS_SAR302	Reportable quantity	None established

Supplier Notification Requirements (40 CFR 372.45), 313 Reportable Components

ZUS_SAR313 De minimis concentration None established

Clean Air Act Toxic ARP Section 112r:
CAA 112R None established

Clean Air Act Socmi:
HON SOC None established

Clean Air Act VOC Section 111:
CAA 111 None established

Clean Air Act Haz. Air Pollutants Section 112:
ZUS_CAAHAP None established

ZUS_CAAHRP None established

CAA AP None established

State Right-to-Know Regulations Status of Ingredients

Pennsylvania:

CAS #	COMPONENT NAME
51580-86-0	SODIUM DICHLORO-S-TRIAZINE TRIONEDIHYDRATE
7758-99-8	Copper Sulfate pentahydrate

ZUSPA_RTK

Pennsylvania: Hazardous substance list
1989-08-11
1,3,5-TRIAZINE-2,4,6(1H,3H,5H)-TRIONE, 1,3-DICHLORO-, SODIUM SALT, DIHYDRATE

Pennsylvania: Hazardous substance list
1990-01-01
COPPER COMPOUNDS
Environmental hazard, hazardous substance

New Jersey:

CAS #	COMPONENT NAME
7758-99-8	Copper Sulfate pentahydrate

ZUSNJ_RTK

New Jersey Right to Know Hazardous Substance List (RTK-HSL)
1989-12-01
COPPER compounds
hazardous substance

Massachusetts:

CAS #	COMPONENT NAME
51580-86-0	SODIUM DICHLORO-S-TRIAZINE TRIONEDIHYDRATE

ZUSMA_RTK

Massachusetts Right to Know List of Chemicals and Hazard Classifications
1993-04-24
SODIUM DICHLORO-S-TRIAZINE TRIONEDIHYDRATE

California Proposition 65:

CAS #	COMPONENT NAME

ZUSCA_P65 None established

WHMIS Hazard Classification:

Ingredient Disclosure List (WHMIS)
1988-01-20
Threshold limits: 1 Weight percent
431
COPPER COMPOUNDS, N.O.S.

16. OTHER INFORMATION

MSDS REVISION STATUS :
SECTIONS REVISED: First formulated version in SAP.
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. .