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: **Salt Solutions by Ultima Salt Startup**

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

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

REVISION DATE:	05/26/2015
SUPERCEDES:	
MSDS Number:	000000025691
SYNONYMS:	
CHEMICAL FAMILY:	None
DESCRIPTION / USE	None established
FORMULA:	None established

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Corrosive to metals	:	Category 1
Serious eye damage	:	Category 1
Reproductive toxicity	:	Category 1B
Specific target organ toxicity - single exposure	:	Category 1
Specific target organ toxicity - single exposure	:	Category 3 (Respiratory system)

GHS Label element

Hazard pictograms :

Signal word	:	Danger
Hazard statements	:	H290 May be corrosive to metals. H318 Causes serious eye damage.

H335 May cause respiratory irritation.
H360 May damage fertility or the unborn child.
H370 Causes damage to organs.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P234 Keep only in original container.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin 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:
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P390 Absorb spillage to prevent material damage.
Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P406 Store in corrosive resistant stainless steel container with a resistant inner liner.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS OR CHEMICAL NAME	CAS #	% RANGE
Sodium tetraborate pentahydrate	12179-04-3	2 - 8
Aluminum Sulfate	17927-65-0	3 - 9
1,3,5-TRIAZINE-2,4,6(1H,3H,5H)-TRIONE	108-80-5	70 - 75

Hexametaphosphate	68915-31-1	12 - 18
MAGNESIUM CARBONATE	546-93-0	0 - 2

SECTION 4. FIRST AID MEASURES

Inhalation:	IF INHALED: Remove individual to fresh air. Seek medical attention if breathing becomes difficult or if respiratory irritation develops.
Skin Contact:	IF ON SKIN: Flush skin with water for 15 minutes. Take off all contaminated clothing. Seek medical attention if irritation develops.
Eye Contact:	IF IN EYES: Flush eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation develops.
Ingestion:	IF SWALLOWED: Immediately drink water to dilute. Seek medical attention if symptoms develop. Never give anything by mouth to an unconscious person.

SECTION 5. FIREFIGHTING MEASURES

Flammability Summary (OSHA):	The product is not flammable., Not combustible., The substance or mixture is not classified as pyrophoric., Not explosive

Flammable Properties

Fire / Explosion Hazards:	0 - Will not burn
Extinguishing Media:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Fire Fighting Instructions:	In case of fire, use normal fire-fighting equipment and the personal protective equipment recommended in Section 8 to include a NIOSH approved self-contained breathing apparatus. Use water to cool containers.
Hazardous Combustion Products:	During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Protection for Emergency Situations:	Use the personal protective equipment recommended in Section 8 and a NIOSH approved self-contained breathing apparatus.

Spill Mitigation Procedures

Air Release:	Keep people away from and upwind of spill/leak.
Water Release:	This material is soluble in water.If the product contaminates rivers and lakes or drains inform respective authorities.

Land Release:	Sweep up and shovel into suitable containers for disposal.Avoid dust generation.Do not contaminate ponds, waterways or ditches with chemical or used container.
Additional Spill Information :	Prevent further leakage or spillage if safe to do so. Evacuate personnel to safe areas. Use personal protective equipment as required.

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 and well ventilated place. Keep containers tightly closed when not in use.
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.
Respirator Type :	Wear a NIOSH approved N95 respirator.
Skin Protection :	Wear impervious gloves to avoid skin contact.
Eye Protection:	Use safety glasses with side shields.
Protective Clothing Type:	Impervious
General Protective Measures:	Emergency eyewash should be provided in the immediate work area.

Components with workplace control parameters

Components (CAS-No.)	Value	Control parameters	Basis (Update)
Sodium tetraborate pentahydrate (12179-04-3)	TWA	2 mg/m3	ACGIH (02 2014)
	STEL	6 mg/m3	ACGIH (02 2014)
Aluminum Sulfate (17927-65-0)	TWA	1 mg/m3	ACGIH (02 2014)
1,3,5-TRIAZINE-2,4,6(1H,3H,5H)-TRIONE (108-80-5)	TWA	10 mg/m3	WEEL (2012)

	TWA	5 mg/m3	WEEL (2012)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	granular
Form	No data.
Color:	white
Odor:	No data.
Molecular Weight:	None established
pH :	6.0 - 7.0 () 1% solution
Boiling Point:	
Melting point/freezing point	Not applicable
Density	0.910 - 0.940 g/cm3
Vapor Pressure:	no data available
Vapor Density:	no data available
Viscosity:	No data
Solubility in Water:	Not applicable
Partition coefficient n-octanol/water:	Not applicable
Evaporation Rate:	Not applicable
Oxidizing:	None established
Volatiles, % by vol.:	no data available
VOC Content	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.
Conditions to Avoid:	Heat
Chemical Incompatibility:	Oxidizing agents
Hazardous Decomposition Products:	Carbon oxides, Oxides of nitrogen, Sulphur oxides, phosphorus oxides, cyanic acid
Decomposition Temperature:	No data

SECTION 11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology
Oral LD50 value:

Sodium tetraborate pentahydrate	LD50	3,200 - 3,400 mg/kg	=	Rat
Aluminum Sulfate	LD50	anhydrous substance	= 6,207 mg/kg	Mouse
	LD50	anhydrous substance	= 1,930 mg/kg	Rat

1,3,5-TRIAZINE-2,4,6(1H,3H,5H)-TRIONE	LD50	>	10,000 mg/kg	Rat
Hexametaphosphate	LD50	=	3,053 mg/kg	Rat

Component Animal Toxicology
Dermal LD50 value:

Sodium tetraborate pentahydrate	LD50	>	2,000 mg/kg	Rabbit
Aluminum Sulfate	LD50	anhydrous substance Believed to be >	2,000 mg/kg	Rabbit
1,3,5-TRIAZINE-2,4,6(1H,3H,5H)-TRIONE	LD50	>	7,940 mg/kg	Rabbit
Hexametaphosphate	no data available			

Component Animal Toxicology
Inhalation LC50 value:

Sodium tetraborate pentahydrate	Inhalation LC50	4 h >	2 mg/l	Rat
Aluminum Sulfate	No data			
1,3,5-TRIAZINE-2,4,6(1H,3H,5H)-TRIONE	No data			
Hexametaphosphate	LC50	4 h >	3.69 mg/l	Rat

Product Animal Toxicity

Oral LD50 value:	LD50 Believed to be > 5,000 mg/kg Rat
Dermal LD50 value:	LD50 Believed to be > 2,000 mg/kg Rabbit
Inhalation LC50 value:	no data available
Skin Irritation:	Not expected to be irritating.
Eye Irritation:	This material is expected to be slightly irritating.
Skin Sensitization:	This material is not known or reported to be a skin or respiratory sensitizer.
Acute Toxicity:	May cause mild eye irritation. Inhalation of dust may cause mild mucous membrane irritation (includes upper respiratory tract). Ingestion may cause gastrointestinal discomfort.
Subchronic / Chronic Toxicity:	Target organ damage to the kidneys from ingestion due to precipitation of crystals of cyanuric acid which results in formation of kidney stones.
Reproductive and Developmental Toxicity:	Not known or reported to cause reproductive or developmental toxicity. An ingredient in this product has been tested and reproductive and developmental toxicity was observed in laboratory animals only at high doses that were maternally toxic.
Sodium tetraborate pentahydrate	Boric acid has been evaluated in several laboratory animal species and in only one species was found to cause fetotoxicity at maternally toxic doses. Based on

this data, this product may have the potential to cause developmental toxicity.

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.

Carcinogenicity: This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA. The carcinogenicity of the active ingredient in this product has been evaluated through animal study and it was found not to be carcinogenic.

SECTION 12. ECOLOGICAL INFORMATION

Overview: No data for product. Individual constituents are as follows:

Ecological Toxicity Values for: Sodium tetraborate pentahydrate

Rainbow trout (embryo - larval stage)	-	24 day LC50 (chronic toxicity) = 88 mg/l
Daphnia magna,	-	24 h EC50= 242 mg/l
Green algae (Scenedesmus subspicatus)	-	96 h EC10 = 24 mg/l

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: 1,3,5-TRIAZINE-2,4,6(1H,3H,5H)-TRIONE

Bluegill sunfish	-	(static). 96 h LC50 > 2,100 mg/l
Pimephales promelas (fathead minnow)	-	(static). 96 h LC50 > 2,100 mg/l
Rainbow trout (Salmo gairdneri),	-	(static). 96 h LC50 > 2,100 mg/l
Daphnia magna,	-	(static). 48 h LC50> 1,000 mg/l
Algae	-	96 h EC50 = 655 mg/l
Bobwhite quail	-	8 day dietary LC50 > 10,000 ppm
Mallard duck	-	8 day dietary LC50 > 10,000 ppm

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

SECTION 14. TRANSPORT INFORMATION

DOT
Not dangerous goods

TDG
Not dangerous goods

IATA
Not dangerous goods

IMDG-CODE
Not dangerous goods

SECTION 15. REGULATORY INFORMATION

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

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Aluminum Sulfate	17927-65-0	5000	

SARA 302

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

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

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:

Aluminum Sulfate	17927-65-0	6 %

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

Aluminum Sulfate	17927-65-0	6 %

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

Aluminum Sulfate	17927-65-0
Sodium tetraborate pentahydrate	12179-04-3
Magnesium carbonate	546-93-0

Pennsylvania Right To Know

Cyanuric acid	108-80-5
polyphosphoric acids, sodium salts	68915-31-1
Aluminum Sulfate	17927-65-0
Sodium tetraborate pentahydrate	12179-04-3

New Jersey Right To Know

Cyanuric acid	108-80-5
polyphosphoric acids, sodium salts	68915-31-1
Aluminum Sulfate	17927-65-0
Sodium tetraborate pentahydrate	12179-04-3
Magnesium carbonate	546-93-0

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 : The components of this product are listed on the TSCA Inventory of Existing Chemical Substances.

: Sodium tetraborate pentahydrate
: Aluminum Sulfate

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

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. .