

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: **LEISURE TIME REPLENISH**

1. PRODUCT AND COMPANY IDENTIFICATION

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

REVISION DATE: 05/03/2011
SUPERCEDES: 07/09/2010
MSDS Number: 000000012465
SYNONYMS: None
CHEMICAL FAMILY: Not Applicable/Mixture
DESCRIPTION / USE: Swimming pool water treatment
FORMULA: None established

2. HAZARDS IDENTIFICATION

OSHA Hazard Classification:	Corrosive to eyes, Moderate skin irritant, Respiratory irritant., Possible skin sensitizer, Toxic by inhalation (dust)., Oxidizer
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Routes of Entry: Inhalation, skin, eyes, ingestion
Chemical Interactions: No known interactions
Medical Conditions Aggravated: Asthma, respiratory and cardiovascular disease, Skin diseases including eczema and sensitization

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

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

Immediate (Acute) Health Effects

Inhalation Toxicity:	Harmful if inhaled. Inhalation of dust may cause mucous membrane and lung irritation with symptoms of coughing and choking. Toxic by inhalation (dust).
Skin Toxicity:	DRY MATERIAL CAUSES MODERATE SKIN IRRITATION. 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:	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. Ingestion may cause moderate to severe irritation of the gastrointestinal tract and may also cause gastrointestinal discomfort with any or all of the following symptoms: nausea, vomiting or diarrhea. Moderately toxic if swallowed.
Acute Target Organ Toxicity:	Corrosive to the eyes, moderately irritating to the skin and respiratory tract and moderately to severely irritating to the gastrointestinal 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:	There are no known or reported effects from chronic exposure except for effects (if any) similar to those experienced from acute exposure.
Ingestion:	Chronic ingestion of this product may cause severe irritation and possible corrosive effects.

Eye Contact: Prolonged contact may result in permanent damage. Corneal involvement or visual impairment is expected.

Sensitization: May cause allergic skin sensitization in some individuals.

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

<u>CAS OR CHEMICAL NAME</u>	<u>CAS #</u>	<u>% RANGE</u>
POTASSIUM PEROXYMONOSULFATE	10058-23-8	
POTASSIUM SULFATE	7778-80-5	
POTASSIUM BISULFATE	7646-93-7	
SODIUM DICHLORO-S-TRIAZINETRIONE	2893-78-9	
Sodium carbonate	497-19-8	
POTASSIUM PEROXYDISULFATE	7727-21-1	
MAGNESIUM CARBONATE	546-93-0	

4. FIRST AID MEASURES

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.

5. FIRE FIGHTING MEASURES

Flammability Summary (OSHA): Product is not known to be flammable, combustible, pyrophoric or explosive.

Flammable Properties

Fire / Explosion Hazards: Material will not ignite or burn. Will release oxygen when heated, intensifying a fire

Extinguishing Media: Water only.

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.

6. ACCIDENTAL RELEASE MEASURES

Personal Protection for Emergency Situations: Additional protective clothing must be worn to prevent personal contact with this material. Those items include but are not limited to boots, impervious gloves, hard hat, splash-proof goggles, impervious clothing, i.e., chemically impermeable suit, self-contained breathing apparatus.

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.

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. Continue to handle as described in land spill.

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. After removal, flush contaminated area thoroughly with water. Avoid runoff into storm sewers and ditches which lead to waterways.

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. Protect from moisture.

Incompatible Materials for Storage: Refer to Section 10, "Incompatible Materials."

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 : 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, boots and apron 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

General Protective Measures: An eye wash and safety shower should be provided in the immediate work area.

Exposure Limit Data

<u>CHEMICAL NAME</u>	<u>CAS #</u>	<u>Name of Limit</u>	<u>Exposure</u>
POTASSIUM PEROXYDISULFATE	7727-21-1	ACGIH	0.1 mg/m ³ TWA 1996 Adoption
MAGNESIUM CARBONATE	546-93-0	OSHA Z1	15 mg/m ³ TWA total dust
MAGNESIUM CARBONATE	546-93-0	OSHA Z1	5 mg/m ³ TWA respirable fraction

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	solid
Form	No data.
Color:	No data.
Odor:	No data.
Molecular Weight:	None established
Specific Gravity :	1.1 - 1.4 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:	
Bulk Density:	no data available
Vapor Pressure:	no data available
Vapor Density:	not applicable
Viscosity:	not applicable no data available
Solubility in Water:	250 g/l 20 °C
Partition coefficient n- octanol/water:	
Evaporation Rate:	not applicable
Oxidizing:	None established
Volatiles, % by vol.:	
VOC Content	no data available
HAP Content	

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, Exposure to moist air or water
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., Heavy metals such as cobalt, nickel, copper, or manganese, Halides, Avoid moisture.
Hazardous Decomposition Products:	Carbon monoxide, Carbon dioxide, Chlorine containing gases, Decomposes when heated or dampened, releasing oxygen and heat
Decomposition Temperature:	No data

11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology

Oral LD50 value:

POTASSIUM BISULFATE	LD50 = 2,340 mg/kg	rat
Sodium carbonate	LD50 = 4,090 mg/kg	rat

Component Animal Toxicology

Dermal LD50 value:

Sodium carbonate	LD50	Believed to be > 2,000 mg/kg	rabbit
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Component Animal Toxicology

Inhalation LC50 value:

Sodium carbonate	LC50 1 h	= 4.6 MG/L	rat
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Product Animal Toxicity

Oral LD50 value: LD50 Believed to be approximately 1,600 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 > 10 MG/L rat

Skin Irritation: DRY MATERIAL CAUSES MODERATE SKIN IRRITATION., The dry material is irritating to the skin. However when wet, it will produce burns to the skin.

Eye Irritation: Corrosive to eyes.

Skin Sensitization:	May cause allergic skin sensitization in some individuals.
Acute Toxicity:	Corrosive to the eyes, moderately irritating to the skin and respiratory tract and moderately to severely irritating to the gastrointestinal 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:	Not known or reported to cause reproductive or developmental toxicity.
Sodium carbonate	This chemical has been tested in laboratory animals and no evidence of teratogenicity was seen.
Mutagenicity:	Not known or reported to be mutagenic.
Sodium carbonate	This product was determined to be non-mutagenic in the Ames assay. It was also shown to be non-clastogenic in the chromosomal aberration test.
Carcinogenicity:	This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.

12. ECOLOGICAL INFORMATION

Overview: Moderately toxic to fish and other aquatic organisms.

Ecological Toxicity Values for: POTASSIUM SULFATE

Lepomis macrochirus (Bluegill sunfish)	- 96 hr. EC50 (cell growth inhibition) 96 h LC50 = 3,550 mg/l
Pimephales promelas (fathead minnow)	- 96 h LC50 = 680 mg/l
Daphnia magna (Water flea)	- 48 h EC50= 720 mg/l

Ecological Toxicity Values for: SODIUM DICHLORO-S-TRIAZINETRIONE

Lepomis macrochirus (Bluegill sunfish)	- 96 h LC50 = 0.43 mg/l
Oncorhynchus mykiss (rainbow trout)	- 96 h LC50 Believed to be approximately 0.45 mg/l
Pimephales promelas (fathead minnow)	- 96 h LC50 = 0.70 mg/l
Daphnia magna (Water flea)	- 48 h EC50 Believed to be approximately 0.195 mg/l

Ecological Toxicity Values for: Sodium carbonate

Fathead minnow (Pimephales promelas),	- (nominal, static). 96 h LC50 < 850 mg/l
Bluegill	- (nominal, static). 96 h LC50 = 320 mg/l
Mosquito fish	- (nominal, static). 96 h LC50 = 740 mg/l
Daphnia magna,	- (nominal, static). 48 h LC50= 265 mg/l
Ceriodaphnia dubia	- (nominal) 48 h EC50= 199.82 mg/l
Navicula seminulum (diatom)	- (nominal, static). 96 h EC50 = 242 mg/l

Ecological Toxicity Values for: POTASSIUM PEROXYDISULFATE

Cyprinus carpio (Carp)	- 48 h LC50 = 1,360 mg/l
Oncorhynchus mykiss (rainbow trout)	- 48 h LC50 = 234 mg/l
Poecilia reticulata (guppy)	- 48 h LC50 = 845 mg/l
Daphnia magna (Water flea)	- 48 h LC50= 92 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 : IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL

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

Potential US EPA Waste Codes : Not applicable

14. TRANSPORT INFORMATION

Land (US DOT): UN3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (SODIUM DICHLORO-S-TRIAZINE TRIONEDIHYDRATE) 9 III

Water (IMDG): UN3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.,
(SODIUM DICHLORO-S-TRIAZINE TRIONEDIHYDRATE) 9 III MARINE
POLLUTANT

Air (IATA): UN3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.,
(SODIUM DICHLORO-S-TRIAZINE TRIONEDIHYDRATE) 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 transportation within the US
if shipped in non-bulk packages.

EMS: F-A, S-F

15. REGULATORY INFORMATION

UNITED STATES:

Toxic Substances Control Act (TSCA): This product is regulated under the Federal Insecticide,
Fungicide and Rodenticide Act. It must be used for purposes
consistent with its labeling.

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

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
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Reportable Quantity (49 CFR 172.101, Appendix):

ZUS_CERCLA	Reportable quantity	Adipic acid Value: 5,000lbs
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
7727-21-1	POTASSIUM PEROXYDISULFATE
	adipic acid
2893-78-9	SODIUM DICHLORO-S-TRIAZINETRIONE

ZUSPA_RTK

Pennsylvania: Hazardous substance list

1989-08-11

PEROXYDISULFURIC ACID ([(HO)S(O)2]2O2), DIPOTASSIUM SALT

Pennsylvania: Hazardous substance list

1989-08-11

HEXANEDIOIC ACID

Environmental hazard

Pennsylvania: Hazardous substance list

1989-08-11

1,3,5-TRIAZINE,2,4,6(1H,3H,5H)-TRIONE, 1,3-DICHLORO-, SODIUM SALT

New Jersey:

CAS #	COMPONENT NAME
546-93-0	MAGNESIUM CARBONATE
7646-93-7	POTASSIUM BISULFATE
7727-21-1	POTASSIUM PEROXYDISULFATE
	adipic acid
2893-78-9	SODIUM DICHLORO-S-TRIAZINETRIONE

ZUSNJ_RTK

New Jersey Right to Know Hazardous Substance List (RTK-HSL)

2007-03-01

MAGNESITE CARBONIC ACID, MAGNESIUM SALT (1:1)

New Jersey Right to Know Hazardous Substance List (RTK-HSL)

2007-03-01

POTASSIUM HYDROGEN SULFATE POTASSIUM BISULFATE SULFURIC ACID,
MONOPOTASSIUM SALT

Special Health Hazard - Corrosive

New Jersey Right to Know Hazardous Substance List (RTK-HSL)

2007-03-01

POTASSIUM PERSULFATE PEROXYDISULFURIC ACID, ((HO)S(O)2)2O2),
DIPOTASSIUM SALT

New Jersey Right to Know Hazardous Substance List (RTK-HSL)

2007-03-01

ADIPIC ACID HEXANEDIOIC ACID

New Jersey Right to Know Hazardous Substance List (RTK-HSL)

2007-03-01

SODIUM DICHLOROISOCYANURATE 1,3,5-TRIAZINE-2,4,6 (1H,3H,5H)-TRIONE, 1,3-
DICHLORO-, SODIUM SALT SODIUM DICHLORO-S-TRIAZINETRIONE

Special Health Hazard - Reactive - Second Degree

Massachusetts:

CAS #	COMPONENT NAME
546-93-0	MAGNESIUM CARBONATE
7727-21-1	POTASSIUM PEROXYDISULFATE
	adipic acid
2893-78-9	SODIUM DICHLORO-S-TRIAZINETRIONE

ZUSMA_RTK

Massachusetts Right to Know List of Chemicals and Hazard Classifications

1991-07-01
MAGNESITE DUST
massachusetts hazardous substance

Massachusetts Right to Know List of Chemicals and Hazard Classifications
1993-04-24
POTASSIUM PERSULFATE

Massachusetts Right to Know List of Chemicals and Hazard Classifications
1993-04-24
ADIPIC ACID

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

California Proposition 65:

CAS #	COMPONENT NAME
ZUSCA_P65	None established

WHMIS Hazard Classification:

Ingredient Disclosure List (WHMIS)
2007-08-24
Threshold limits: 1 Weight percent
1513
Potassium hydrogen sulfate

Ingredient Disclosure List (WHMIS)
1988-01-20
Threshold limits: 0.1 Weight percent
1252
PERSULFATE COMPOUNDS

Ingredient Disclosure List (WHMIS)
2007-08-24
Threshold limits: 1 Weight percent
392
Sodium carbonate

Ingredient Disclosure List (WHMIS)

2007-08-24

Threshold limits: 1 Weight percent

53

Adipic acid

Ingredient Disclosure List (WHMIS)

2007-08-24

Threshold limits: 1 Weight percent

667

Dichloroisocyanuric acid, sodium salt

16. OTHER INFORMATION

MSDS REVISION STATUS :

SECTIONS REVISED:

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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. .