

FOR ANY EMERGENCY, 24 HOURS / 7 DAYS, CALL:

FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC®:

FOR ALL MSDS QUESTIONS &amp; REQUESTS, CALL:

1-800-654-6911 (OUTSIDE  
USA: 1-423-780-2970)1-800-424-9300 (OUTSIDE  
USA: 1-703-527-3887)1-800-511-MSDS (OUTSIDE  
USA: 1-423-780-2347)**PRODUCT NAME: QUANTUM GRANULAR****1. PRODUCT AND COMPANY IDENTIFICATION****Supplier****Quantum Biochemical  
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:

10/12/2011

SUPERCEDES:

08/03/2011

MSDS Number:

000000012583

SYNONYMS:

Sodium dichlor; sodium  
dichloroisocyanurate, dihydrate; Sodium  
dichloro-s-triazinetriene dihydrate

CHEMICAL FAMILY:

Chloroisocyanurates

DESCRIPTION / USE

swimming pool sanitizer

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**

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

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:	Harmful 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:	This chemical 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 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.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

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<u>CAS OR CHEMICAL NAME</u>	<u>CAS #</u>	<u>% RANGE</u>
SODIUM DICHLORO-S-TRIAZINE TRIONEDIHYDRATE	51580-86-0	

### 4. FIRST AID MEASURES

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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

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

Flammable Properties

Flash Point: Not applicable

Autoignition Temperature: Not applicable

Extinguishing Media: Choose extinguishing media suitable for surrounding materials. 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: Not applicable

Lower Flammable / Explosive Limit, % in air: Not applicable

## 6. ACCIDENTAL RELEASE MEASURES

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**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:**

Hazardous concentrations in air may be found in local spill area and immediately downwind. Vapors may be suppressed by the use of alcohol foam. Contain all solids for treatment or disposal.

**Water Release:**

This material is soluble in water. Notify all downstream users of possible contamination. 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. 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.

## 7. HANDLING AND STORAGE

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**Handling:**

Do not take internally. Avoid contact with skin, eyes and clothing by wearing proper protective equipment. 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." 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 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

<u>CHEMICAL NAME</u>	<u>CAS #</u>	<u>Name of Limit</u>	<u>Exposure</u>
SODIUM DICHLORO-S-TRIAZINE TRIONEDIHYDRATE	51580-86-0	ARCH-ROEG*	0.5 mg/m <sup>3</sup> TWA

\*ARCH-ROEG: Arch Recommended Occupational Exposure Guideline.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	solid
Form	crystalline powder
Color:	white
Odor:	Mild chlorine-like
Molecular Weight:	No data
Specific Gravity :	no data available
pH :	5.5 - 7.0 10 g/l (as aqueous solution)
Boiling Point:	not applicable
Freezing Point:	240 - 250 °C 464 - 482 °F

Melting Point:	240 - 250 °C 464 - 482 °F
Density:	No data
Bulk Density:	no data available
Vapor Pressure:	not applicable
Vapor Density:	no data available
Viscosity:	no data available
Fat Solubility:	No data
Solubility in Water:	soluble
Partition coefficient n-octanol/water:	No data
Evaporation Rate:	not applicable
Oxidizing:	Product has oxidizing properties.
Volatiles, % by vol.:	not applicable
VOC Content	not applicable
HAP Content	Not applicable

## 10. STABILITY AND REACTIVITY

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Stability and Reactivity Summary:	Stable under normal conditions. Not sensitive to mechanical shock. Not sensitive to static discharge. Product will not undergo hazardous polymerization. Considered to be an OSHA oxidizer per 29 CFR 1910.1200. Not an oxidizer according to the criteria established by the 49 CFR DOT regulations. NFPA Oxidizer Class: Meets the criteria of an NFPA Class 1 Oxidizer
Conditions to Avoid:	Sparks, open flame, other ignition sources, and elevated temperatures., Avoid high humidity., 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., (Incompatible materials for packaging: paper, cardboard)
Hazardous Decomposition Products:	Chlorine, Nitrogen trichloride, Carbon monoxide
Decomposition Temperature:	No data

## 11. TOXICOLOGICAL INFORMATION

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Component Animal Toxicology  
Oral LD50 value:

QUANTUM GRANULAR

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SODIUM DICHLORO-S- LD50 = 735 mg/kg Rat  
 TRIAZINE  
 TRIONEDIHYDRATE

Component Animal Toxicology

Dermal LD50 value:

SODIUM DICHLORO-S- LD50 > 2,000 mg/kg Rabbit  
 TRIAZINE  
 TRIONEDIHYDRATE

Component Animal Toxicology

Inhalation LC50 value:

SODIUM DICHLORO-S- Inhalation LC50 1 h (aerosol dust), (Nose Only) Approximately 2.16 MG/L Rat  
 TRIAZINE  
 TRIONEDIHYDRATE  
 SODIUM DICHLORO-S- Inhalation LC50 4 h (aerosol dust), (Nose Only) Approximately 0.54 MG/L Rat  
 TRIAZINE  
 TRIONEDIHYDRATE

Product Animal Toxicity

Oral LD50 value: LD50 = 735 mg/kg Rat

Dermal LD50 value: LD50 > 2,000 mg/kg Rabbit

Inhalation LC50 value: Inhalation LC50 1 h (aerosol dust), (Nose Only) Approximately 2.16 MG/L Rat  
 Inhalation LC50 4 h (aerosol dust), (Nose Only) Approximately 0.54 MG/L Rat

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: This chemical has been tested in laboratory animals and no evidence of teratogenicity or fetotoxicity was seen.

Mutagenicity: This product was determined to be non-mutagenic in the Ames assay.

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: Highly toxic to fish and other aquatic organisms.

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

Rainbow trout ( <i>Salmo gairdneri</i> ),	- (nominal, flow-through) 96 h LC50 = 0.22 mg/l
Bluegill	- (nominal, flow-through) 96 h LC50 = 0.28 mg/l
Water flea ( <i>Daphnia magna</i> ),	- (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

## 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.

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**

Flash Point: Not applicable  
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**

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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

**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 None established  
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
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

**New Jersey:**

CAS #	COMPONENT NAME
ZUSNJ_RTK	None established

**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
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ZUSCA\_P65

None established

**WHMIS Hazard Classification:**

None established

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**16. OTHER INFORMATION**

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MSDS REVISION STATUS :

SECTIONS REVISED:

3, 5, 10

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. .