



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

PRODUCT NAME: **AQUA SILK CHLORINE-FREE SANITIZER**  
EPA Registration Number: 1258-1265-74849

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Supplier**  
**Aqua Silk**  
**1400 Bluegrass Lakes Parkway ,**  
**Alpharetta, GA, 30004**  
**United States**

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

REVISION DATE: 05/12/2011  
SUPERCEDES: 02/10/2011

MSDS Number: 000000012540  
SYNONYMS: NoneNone  
CHEMICAL FAMILY: None  
DESCRIPTION / USE: None established  
FORMULA: None established

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

### 2. HAZARDS IDENTIFICATION

OSHA Hazard  
Classification:

**Possible skin sensitizer, Eye, skin and respiratory irritant**

Routes of Entry: Skin, eyes, ingestion  
Chemical Interactions: No known or reported interactions.  
Medical Conditions Aggravated: None known



## MATERIAL SAFETY DATA SHEET

### 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	2	0	0	
NFPA	2	0	0	

### Immediate (Acute) Health Effects

Inhalation Toxicity:	Not expected to be toxic by inhalation. Vapors and/or aerosols which may be formed at elevated temperatures may be irritating to eyes and upper respiratory tract.
Skin Toxicity:	Not expected to be absorbed through the skin. This irritant effect would not be expected to result in permanent damage. Skin contact may cause moderate irritation consisting of transient redness and swelling. This irritant effect would not be expected to result in permanent damage.
Eye Toxicity:	Contact may cause moderate irritation consisting of transient redness, swelling, and mucous membrane discharge to the conjunctiva. Any visual impairment or corneal damage (opacity) would be expected to clear within several days.
Ingestion Toxicity:	Ingestion may cause irritation of the gastrointestinal tract and gastrointestinal discomfort with any or all of the following symptoms: nausea, vomiting or diarrhea. Moderately toxic if swallowed.
Acute Target Organ Toxicity:	May cause skin, eye and mucous membrane irritation (includes upper respiratory tract). Ingestion may cause gastrointestinal discomfort.

### 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 reproductive toxicity was seen.
Inhalation:	There are no known or reported effects from chronic exposure.

Skin Contact:	Repeated or prolonged skin contact may cause some individuals to develop skin rash and other skin complications due to allergic skin sensitization. PHMB when tested at 1.0% in the HRIPT, PHMB did not produce irritation or allergic skin reactions.
Ingestion:	There are no known or reported effects from chronic ingestion except for effects similar to those experienced from single exposure.
Sensitization:	Possible skin sensitizer based on animal tests PHMB when tested at 1.0% in the HRIPT, PHMB did not produce irritation or allergic skin reactions.
Chronic Target Organ Toxicity:	There are no known or reported effects to humans from repeated exposure to this product.
Supplemental Health Hazard Information :	Polyaminopropyl Biguanide, the biocidal active in this product, has been extensively studied for its toxicity to mammalian systems. Repeated inhalation exposure in rats over a period of 4 weeks resulted in eye and respiratory irritation and pneumonitis. Long term feeding studies in dogs show that the liver and kidney are target organs and the effect occur only at very high doses. Polyaminopropyl Biguanide has been shown in animal studies to produce skin sensitization. Polyaminopropyl Biguanide is not readily bioavailable if ingested and is not well absorbed through skin., PHMB when tested at 1.0% in the HRIPT, PHMB did not produce irritation or allergic skin reactions.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

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<u>CAS OR CHEMICAL NAME</u>	<u>CAS #</u>	<u>% RANGE</u>
POLYAMINOPROPYL BIGUANIDE	27083-27-8 [TSCA, AICS]/133029-32- 0 [INCI]/32289-58- 0 [DSL, CH, PH]	

### 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.
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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

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Flammability Summary (OSHA):	Product is not known to be flammable, combustible, pyrophoric or explosive.
<u>Flammable Properties</u>	
Flash Point:	does not flash
Fire / Explosion Hazards:	Material will not ignite or burn.
Extinguishing Media:	Choose extinguishing media suitable for surrounding materials.
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:	Carbon monoxide, Carbon dioxide
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:	Use the personal protective equipment recommended in Section 8 and a NIOSH approved self-contained breathing apparatus.
<u>Spill Mitigation Procedures</u>	
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: Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Do not contaminate ponds, waterways or ditches with chemical or used container.

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. Upon contact with skin or eyes, wash off with water. Avoid breathing (dust, vapor, mist, gas). Minimize dust generation and accumulation.

Storage: Store in a cool, dry and well ventilated place. Keep containers tightly closed when not in use.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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Ventilation: Local exhaust ventilation is recommended if vapors, mists or aerosols are generated. Otherwise, use general exhaust ventilation.

### Protective Equipment for Routine Use of Product

Respiratory Protection : If vapors, mists or aerosols are generated, wear a NIOSH approved respirator., A NIOSH approved disposable P95 Acid Gases Respirator with Exhalation Valve.

Skin Protection : Use impervious gloves. When exposure to high concentrations are prolonged or repeated use protective boots and apron in addition to gloves.

Eye Protection: Use chemical goggles.

Protective Clothing Type: Impervious

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>
No Data Found			

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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Physical State:	liquid
Form	No data.
Color:	blue
Odor:	none
Molecular Weight:	None established
Specific Gravity :	1.0400
	20 °C
pH :	5.0 - 6.0
Boiling Point:	98 °C
	210 °F
Freezing Point:	
	not applicable
Melting Point:	
	not applicable
Density:	
Bulk Density:	no data available
Vapor Pressure:	no data available
Vapor Density:	no data available
Viscosity:	no data available
Solubility in Water:	soluble in cold water
Partition coefficient n- octanol/water:	Not applicable
Evaporation Rate:	no data available
Oxidizing:	None established
Volatiles, % by vol.:	no data available
VOC Content	no data available
HAP Content	Not applicable

## 10. STABILITY AND REACTIVITY

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Stability and Reactivity Summary:	Stable under normal conditions.
Conditions to Avoid:	Contact with incompatible substances
Chemical Incompatibility:	Strong oxidizing agents, Copper, Metals, silver, sodium hydroxide
Hazardous Decomposition Products:	Carbon monoxide, Carbon dioxide, Ammonia, nitrogen oxides, Halogens, halogen acids, possible trace amounts of carbonyl halide
Decomposition Temperature:	No data

### 11. TOXICOLOGICAL INFORMATION

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#### Component Animal Toxicology

##### Oral LD50 value:

POLYAMINOPROPYL LD50 = 501 mg/kg rat female  
BIGUANIDE  
POLYAMINOPROPYL LD50 = 549 mg/kg rat male  
BIGUANIDE

#### Component Animal Toxicology

##### Dermal LD50 value:

POLYAMINOPROPYL LD50 > 5,000 mg/kg rat  
BIGUANIDE

#### Component Animal Toxicology

##### Inhalation LC50 value:

POLYAMINOPROPYL This product has been tested for acute inhalation toxicity. However, due to the  
BIGUANIDE physical nature of the product, an aerosol dust of desired particle size could not be  
generated. Therefore, no animals could be exposed and no LC50 could be obtained.

#### Product Animal Toxicity

Oral LD50 value: LD50 Approximately 2,500 mg/kg rat female LD50 Approximately 2,700  
mg/kg rat male

Dermal LD50 value: LD50 > 5,000 mg/kg rabbit

Inhalation LC50 no data available

##### value:

Skin Irritation: Moderate Skin Irritant

Eye Irritation: This material is expected to be moderately irritating.

Skin Sensitization: Possible skin sensitizer based on animal tests, PHMB when tested at 1.0% in the  
HRIPT, PHMB did not produce irritation or allergic skin reactions.

Acute Toxicity: May cause skin, eye and mucous membrane irritation (includes upper respiratory  
tract). Ingestion may cause gastrointestinal discomfort.

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 reproductive toxicity  
was seen.

**POLYAMINOPROPYL BIGUANIDE**

This chemical has been tested in laboratory animals and there was no evidence of reproductive toxicity or teratogenicity.

**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.

**POLYAMINOPROPYL BIGUANIDE**

This chemical has been tested in a battery of mutagenicity/genotoxicity assays and the results were negative.

**Carcinogenicity:**

This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.

**POLYAMINOPROPYL BIGUANIDE**

PHMB, when administered to mice at very high doses, induced an increased incidence of cancer in mice. Under the conditions of anticipated use of this product, PHMB does not represent a risk to man.

## 12. ECOLOGICAL INFORMATION

**Overview:**

**Ecotoxicity:** Polyaminopropyl Biguanide is highly/very toxic to aquatic species. It is unlikely to bioaccumulate or persist in the aquatic environment.,  
**Environmental fate:** Polyaminopropyl Biguanide will be predominantly absorbed onto sludge solids; the remainder is unlikely to be readily or inherently biodegraded or abiotically degraded with the exception of low molecular weight species., Polyaminopropyl Biguanide could be slightly inhibitory to sewage treatment systems. However, at the low concentrations typically discharged to and received by treatment systems, adverse impacts are unlikely. Polyaminopropyl Biguanide is unlikely to adversely affect plants or soil indigenous species.

**Ecological Toxicity Values for: POLYAMINOPROPYL BIGUANIDE**

Rainbow trout ( <i>Salmo gairdneri</i> ),	-	96 h LC50 = 0.026 mg/l
Bluegill sunfish	-	96 h LC50 0.11 mg/l
Fish	-	chronic toxicity The No Observable Effect Concentration (NOEC): = 0.010 mg/l
Fish	-	chronic toxicity The Lowest Observable Effect Concentration (LOEC): > 0.010 mg/l
Daphnia magna,	-	48 h EC50= 0.04 mg/l
Brown Shrimp	-	96 h LC50= 9 mg/l
Daphnia magna,	-	21 day NOEC (chronic toxicity) The No Observable Effect Concentration (NOEC):= 0.0036 mg/l



- Green algae, - 96 h EC50 = 0.49 - 0.87 mg/l  
- In an assessment of the effect of PHMB on nitrification of activated sludge micro-organisms the 4hr EC50 was 38 mg/l and the NOEC = 12 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 : Spent or discarded material is not expected to be a hazardous waste.

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): UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (POLY(HEXAMETHYLENEBIGUANIDE) HYDROCHLORIDE) 9 III

Water (IMDG): UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (POLY(HEXAMETHYLENEBIGUANIDE) HYDROCHLORIDE) 9 III  
MARINE POLLUTANT

Air (IATA): UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (POLY(HEXAMETHYLENEBIGUANIDE) HYDROCHLORIDE) 9 III

Emergency Response Guide Number: ERG # 171



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Transportation Notes: 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). Material is not regulated 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 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: 1258-1265-74849

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	None

#### 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	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
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#### Clean Air Act Toxic ARP Section 112r:



## 16. OTHER INFORMATION

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MSDS REVISION STATUS :  
SECTIONS REVISED: 6, 9  
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. .