


# MATERIAL SAFETY DATA SHEET

## Aqua Silk Sanitizer

1. Product And Company Identification			
<b>Supplier</b> Advantis Technologies 1400 Bluegrass Lakes Parkway Alpharetta, GA 30004 United States  Telephone Number: (770) 521-5999 FAX Number: (770) 521-5959 Web Site: www.poolspacare.com		<b>Manufacturer</b> Advantis Technologies 1400 Bluegrass Lakes Parkway Alpharetta, GA 30004 United States  Telephone Number: (770) 521-5999 FAX Number: (770) 521-5959 Web Site: www.poolspacare.com	
<b>Supplier Emergency Contacts &amp; Phone Number</b> CHEMTREC - DAY OR NIGHT: (800) 424-9300		<b>Manufacturer Emergency Contacts &amp; Phone Number</b> CHEMTREC - DAY OR NIGHT: (800) 424-9300	
Issue Date: 12/15/2008  Product Name: Aqua Silk Sanitizer CAS Number: Not Established Chemical Family: Biguanide Chemical Formula: None Established EPA Registry Number: 1258-1265 MSDS Number: 414			
2. Composition/Information On Ingredients			
Ingredient Name		CAS Number	Percent Of Total Weight
POLYAMINOPROPYLBIGUANIDE		27083-27-8	
Ingredients listed in this section have been determined to be hazardous as defined in 29CFR 1910.1200. Materials determined to be health hazards are listed if they comprise 1% or more of the composition. Materials identified as carcinogens are listed if they comprise 0.1% or more of the composition. Information on proprietary materials is available in 29CFR 1910.1200(i)(1).			
EMERGENCY OVERVIEW			
Eye, skin and respiratory irritant, Possible skin sensitizer			
Hazards Identification (Pictograms)			
			
3. Hazards Identification			
<b>Primary Routes(s) Of Entry</b> Skin, eyes, ingestion			
<b>Eye Hazards</b> 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.			
<b>Skin Hazards</b> Not expected to be absorbed through the skin. Skin contact may cause moderate irritation consisting of transient redness and swelling. This irritant effect would not be expected to result in permanent damage.			

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### 3. Hazards Identification - Continued

#### Ingestion Hazards

Moderately toxic if swallowed. Ingestion may cause irritation of the gastrointestinal tract and gastrointestinal discomfort with any or all of the following symptoms: nausea, vomiting or diarrhea.

#### Inhalation Hazards

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.

#### Subchronic (Target Organ Effects)

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

#### Chronic/Carcinogenicity Effects

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

#### Reproductive Effects

Not known or reported to cause reproductive or developmental toxicity.

#### Conditions Aggravated By Exposure

There are no known or reported effects to humans from repeated exposure to this product. 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.

### 4. First Aid Measures

#### Eye

In case of contact, hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or a poison control center immediately.

#### Skin

Remove contaminated clothing and shoes. In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Get medical attention immediately if irritation (redness, rash, blistering) develops and persists.

#### Ingestion

Call a physician or a poison control center immediately. DO NOT induce vomiting unless directed to do so by a physician. Have the person sip a glass of water if able to swallow. Never give anything by mouth to an unconscious victim.

#### Inhalation

If inhaled, remove to fresh air. If not breathing, give artificial respiration. Call a physician or a poison control center immediately.

### 5. Fire Fighting Measures

Flash Point: >201 °F >93 °C  
Autoignition Point: N/A °F N/A °C  
Flammability Class: Combustible above 93 deg C  
Lower Explosive Limit: N/A  
Upper Explosive Limit: N/A

#### Fire And Explosion Hazards

Material may be ignited only if preheated to high temperatures, for example in a fire.

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### 5. Fire Fighting Measures - Continued

#### Extinguishing Media

Use the appropriate extinguishing media for the surrounding fire.

#### Fire Fighting Instructions

Firefighters should wear self-contained breathing apparatus and full protective gear. Water can be used to cool and protect exposed material.

### 6. Accidental Release Measures

#### Air release:

Hazardous concentrations in air may be found in local spill area and immediately downwind. Contain all liquid 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 liquids for treatment or disposal.

#### Land release:

Create a dike or trench to contain materials. Absorb spill with inert material (e.g., dry sand, clay, earth or commercial absorbant), then place in a chemical waste container. Contain all liquids for treatment or disposal. Avoid runoff into storm sewers and ditches which lead to waterways.

#### Additional Spill Information:

Utilize emergency response personal protection equipment prior to the start of any response. Evacuate all non-essential personnel. Stop source of spill as soon as possible and notify appropriate personnel.

### 7. Handling And Storage

#### Handling Precautions

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).

#### Storage Precautions

Store in a cool dry ventilated location, away from sources of ignition or other incompatible conditions and chemicals. Keep container(s) closed.

#### Work/Hygienic Practices

Empty containers retain product residue (liquid and/or vapor) and can be dangerous.

### Protective Clothing (Pictograms)



### 8. Exposure Controls/Personal Protection

#### Engineering Controls

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

#### Eye/Face Protection

Use chemical goggles

#### Skin Protection

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

#### 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).

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### 9. Physical And Chemical Properties

#### Appearance

Blue Liquid

#### Odor

None

Chemical Type: Mixture

Physical State: Liquid

Boiling Point: 210 °F 98 °C

Specific Gravity: 1.0400

pH Factor: 5.0-6.0

Solubility: Soluble in Water

### 10. Stability And Reactivity

Stability: Stable under normal conditions

Hazardous Polymerization: Will not occur

#### Conditions To Avoid (Stability)

Avoid contamination.

#### Incompatible Materials

copper, silver, sodium hydroxide, metals

#### Hazardous Decomposition Products

Carbon monoxide, Carbon dioxide, nitrogen oxides, Ammonia, Halogens, halogen acids, possible trace amounts of carbonyl halide

### 11. Toxicological Information

#### Acute Studies

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

#### Eye Effects

This material is expected to be moderately irritating.

#### Skin Effects

##### **Component:**

Dermal LD50:

Polyaminopropyl Biguanide      LD50    > 2,000 mg/kg    Rabbit

##### **Product:**

Dermal LD50: Believed to be > 2,000 mg/kg    Rabbit

Moderate Skin Irritant

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

#### Acute Oral Effects

##### **Component:**

Oral LD50:

Polyaminopropyl Biguanide      LD50    Approximately 1,000 mg/kg      Rat

##### **Product:**

Oral LD50: Believed to be approximately 1,000 mg/kg    Rat

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### 11. Toxicological Information - Continued

#### Acute Inhalation Effects

**Component:**

Inhalation LC50:  
Polyaminopropyl Biguanide      No Data

**Product:**

Inhalation LC50: No Data

#### Subchronic (Target Organ Effects)

Not known or reported to cause subchronic or chronic toxicity.

#### Chronic/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.

#### Reproductive Effects

Not known or reported to cause reproductive or developmental toxicity.

#### Mutagenicity (Genetic Effects)

Not known or reported to be mutagenic.

### 12. Ecological Information

#### Ecotoxicological Information

Polyaminopropyl Biguanide is highly/very toxic to aquatic species. It is unlikely to bioaccumulate or persist in the aquatic environment.

#### Acute Toxicity - Fish And Invertebrates

Polyaminopropyl Biguanide:

Rainbow trout (*Salmo gairdneri*) - 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) = 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 4 hr EC50 was 38 mg/L and the NOEC = 12 mg/L

#### Environmental Fate Information

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.

### 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

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### 13. Disposal Considerations - Continued

laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

If this product becomes a waste, it will be a nonhazardous waste according to US RCRA regulations. Dispose of in accordance with all local, state, federal, and provincial environmental regulations.

### 14. Transport Information

#### Proper Shipping Name

Not Regulated

#### Hazard Class

None Assigned

#### DOT Identification Number

NONE

### 15. Regulatory Information


#### U.S. Regulatory Information

TSCA: This is an EPA registered pesticide.

FIFRA (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.

#### State Regulations

California Proposition 65: None established

<b>NFPA</b>	<b>HMIS</b>								
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### 16. Other Information

#### Revision/Preparer Information

MSDS Preparer: JHW

#### Disclaimer

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Advantis Technologies