

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: **AQUA SILK ALGAECIDE**

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Supplier
Aqua Silk
1400 Bluegrass Lakes Parkway ,
Alpharetta, GA, 30004
USA

Telephone: +17705215999
Telefax: +17705215959
Web: www.poolspacare.com

REVISION DATE:	02/22/2016
SUPERCEDES:	05/26/2015
MSDS Number:	000000024510
SYNONYMS:	None
CHEMICAL FAMILY:	None
DESCRIPTION / USE	Water treatment chemical
FORMULA:	None established




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

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids	:	Category 3
Acute toxicity (Oral)	:	Category 4
Skin corrosion	:	Category 1B
Serious eye damage	:	Category 1

GHS label elements

Hazard pictograms	:	  
Signal word	:	Danger
Hazard statements	:	H226 Flammable liquid and vapour. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage.
Precautionary statements	:	<p>Prevention:</p> <p>P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.</p> <p>P233 Keep container tightly closed.</p> <p>P240 Ground/bond container and receiving equipment.</p> <p>P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.</p> <p>P242 Use only non-sparking tools.</p> <p>P243 Take precautionary measures against static discharge.</p> <p>P260 Do not breathe vapours.</p> <p>P264 Wash hands thoroughly after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>Response:</p> <p>P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.</p> <p>P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.</p> <p>P330 Rinse mouth.</p> <p>P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P310 Immediately call a POISON CENTER/doctor.</p> <p>P321 Specific treatment (see supplemental first aid instructions on this label).</p> <p>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>Storage:</p> <p>P403 + P235 Store in a well-ventilated place. Keep cool.</p> <p>P405 Store locked up.</p> <p>Disposal:</p> <p>P501 Dispose of contents/container in accordance with local regulation.</p>

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>CAS OR CHEMICAL NAME</u>	<u>CAS #</u>	<u>% RANGE</u>
didecyldimethylammonium chloride	7173-51-5	50 - 52
Ethanol	64-17-5	8 - 10

SECTION 4. FIRST AID MEASURES

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. Measures against circulatory shock, respiratory depression and convulsions may be needed.

SECTION 5. FIREFIGHTING MEASURES

Flammability Summary (OSHA): Combustible material

Flammable Properties

Flash Point: 54.4 °C

Autoignition Temperature: no data available

Fire / Explosion Hazards:	Vapors may be ignited by sparks, flames or other sources of ignition if material is above the flash point giving rise to a flash fire. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors may form explosive mixture with air.
Extinguishing Media:	Water fog Dry powder Carbon dioxide (CO ₂) Alcohol foam
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 spray to cool unopened containers.
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:	no data available
Lower Flammable / Explosive Limit, % in air:	no data available

SECTION 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.
<u>Spill Mitigation Procedures</u>	
Air Release:	Keep people away from and upwind of spill/leak.
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.
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 :	Prevent further leakage or spillage if safe to do so. Use personal protective equipment as required. Evacuate personnel to safe areas. Remove all sources of ignition.

SECTION 7. HANDLING AND STORAGE

Handling:	Do not take internally. Avoid contact with skin, eyes and clothing. If in eyes or on skin, rinse well with water. Avoid contact with material, avoid breathing vapors, use only in a well ventilated area, use bonding and grounding when transferring quantities of material.
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."

Do Not Store At temperatures Above: 60 °C

Empty Container Warning: Empty containers retain hazardous residue, dispose of accordingly.

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., A NIOSH approved full-face or half-face respirator in combination with chemical goggles., A NIOSH approved half-face air purifying respirator with organic vapor cartridge. 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 : Avoid contact with skin. Impervious gloves Boots Apron A full impervious suit is recommended if exposure is possible to a large portion of the body.

Eye Protection: Chemical resistant goggles must be worn. Face-shield

Protective Clothing Type: Impervious clothing

General Protective Measures: Ensure that eyewash stations and safety showers are close to the workstation location.

Components with workplace control parameters

Components (CAS-No.)	Value	Control parameters	Basis (Update)
Ethanol (64-17-5)	STEL	1,000 ppm	ACGIH (02 2014)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: liquid
 Form: <** Phrase does not exist: LONZA - SX0900048460 **>
 Color: <** Phrase does not exist: LONZA - SX0900048460 **>
 Odor: <** Phrase does not exist: LONZA - SX0900048460 **>
 Molecular Weight: None established
 pH : 6.0 - 8.0
 ()
 Boiling Point: no data available
 Melting point/freezing point: no data available
 Density: no data available

Bulk Density:	() no data available
Vapor Pressure:	no data available
Vapor Density:	> 1
Viscosity:	no data available
Solubility in Water:	soluble in cold water
Partition coefficient n-octanol/water:	no data available
Evaporation Rate:	no data available
Oxidizing:	None established
Volatiles, % by vol.:	50%
VOC Content	This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM 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 available

SECTION 10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:	Stable under normal conditions., Product will not undergo hazardous polymerization.
Conditions to Avoid:	Heat, flames and sparks., Avoid freezing., Product is sensitive to electrical static discharge.
Chemical Incompatibility:	Strong oxidizing agents, Reducing agents
Hazardous Decomposition Products:	Carbon oxides, Hydrogen, Nitrogen oxides (NOx), Hydrogen chloride, aromatic amines, Organic materials, Carbon dioxide (CO2)
Decomposition Temperature:	No data

SECTION 11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology

Oral LD50 value:

didecyldimethylammonium chloride	LD50 = 360 mg/kg	Rat
Ethanol	LD50 = 7,060 mg/kg	Rat

Component Animal Toxicology

Dermal LD50 value:

didecyldimethylammonium chloride	LD50 > 2,000 mg/kg	Rabbit
Ethanol	LD50 Believed to be > 2,000 mg/kg	Rabbit

Component Animal Toxicology

Inhalation LC50 value:

didecyldimethylammonium chloride	no data available
----------------------------------	-------------------

um chloride

Ethanol Inhalation LC50 10 h = 20000 ppm Rat

Product Animal ToxicityOral LD50 value: LD50 Believed to be 450 mg/kg RatDermal LD50 value: LD50 Believed to be > 2,000 mg/kg RabbitInhalation LC50 value: no data available

Skin Irritation: Corrosive to skin

Eye Irritation: Corrosive to eyes

Skin Sensitization: This material is not known or reported to be a skin or respiratory sensitizer. The active ingredient in this product tested negative for skin sensitization in humans and laboratory animals.

didecyldimethylammonium chloride This material tested negative for skin sensitization in humans and laboratory animals.

Acute Toxicity: Corrosive to eyesCorrosive to skinCentral nervous system

Subchronic / Chronic Toxicity: Not known or reported to cause subchronic or chronic toxicity.

Ethanol Prolonged or repeated ingestion may cause liver damage.

Reproductive and Developmental Toxicity: Not known or reported to cause reproductive or developmental toxicity. The active 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.

didecyldimethylammonium chloride This chemical has been tested in laboratory animals and no evidence of teratogenicity was seen., Reproductive and/or developmental toxicity was observed in laboratory animals only at high doses that were maternally toxic.

Ethanol This chemical has been tested in laboratory animals and developmental and/or teratogenic effects were seen following ingestion.

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.

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

Ethanol This product has been tested for mutagenicity. Tests revealed both positive and negative results. Based on the weight of evidence, we judge this product NOT to be a mutagenic hazard.

Carcinogenicity: This product is not known or reported to be carcinogenic by any reference

AQUA SILK ALGAECIDE

REVISION DATE : 02/22/2016

Page 7 of 12

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.

didecyldimethylammonium chloride	This material did not cause cancer in long-term animal studies.
Ethanol	The International Agency for Research on Cancer (IARC) has classified this product or a component of this product as a Group 3 substance, Unclassifiable as to Its Carcinogenicity to Humans. The FDA determined that this product is not carcinogenic in laboratory animals.

SECTION 12. ECOLOGICAL INFORMATION

Overview: There is no data available for this product.

Ecological Toxicity Values for: didecyldimethylammonium chloride

Bluegill sunfish	-	96 h LC50 = 0.32 mg/l
Atlantic Salmon	-	96 h LC50 = 1.0 mg/l
Daphnia magna,	-	48 h EC50 0.94 mg/l
Pseudokirchneriella subcapitata (green algae)	-	Growth inhibition 96 h ErC50 0.026 mg/l
Bobwhite quail	-	Oral LD50 = 229 mg/kg
Bobwhite quail	-	Dietary LC50 > 5,620 ppm
Mallard duck	-	Dietary LC50 > 5,620 ppm

Ecological Toxicity Values for: Ethanol

Pimephales promelas (fathead minnow)	-	(nominal, static). 96 h LC50 = 14,700 mg/l
Rainbow trout (Salmo gairdneri),	-	(nominal, static). 96 h LC50 = 13,000 mg/l
Brine shrimp	-	(nominal, static). 48 h LC50= 25.5 mg/l
Daphnia pulex	-	(nominal, static). 18 h LC50= 12,100 mg/l
Daphnia magna,	-	(nominal, static). 48 h EC50> 10,000 mg/l
Daphnia magna,	-	(nominal, static). 48 h LC50= 9,248 mg/l
Ceriodaphnia dubia	-	(nominal, static). 48 h LC50= 8,808 mg/l

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 : If this product becomes a waste, it meets the criteria of a hazardous waste as defined under 40 CFR 261 and would have the following EPA hazardous waste number: D001.

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

SECTION 14. TRANSPORT INFORMATION

DOT

UN number : 1903
 Description of the goods : Disinfectants, liquid, corrosive n.o.s.
 : (Didecyldimethylammonium chloride)
 Class : 8
 Packing group : II
 Labels : 8
 Emergency Response : 153
 Guidebook Number

TDG

UN number : 1903
 Description of the goods : DISINFECTANT, LIQUID, CORROSIVE, N.O.S.
 : (Didecyldimethylammonium chloride)
 Class : 8
 Packing group : II
 Labels : 8

IATA

UN number : 1903
 Description of the goods : Disinfectant, liquid, corrosive, n.o.s.
 : (Didecyldimethylammonium chloride)
 Class : 8
 Packing group : II
 Labels : 8
 Packing instruction (cargo aircraft) : 855
 Packing instruction (passenger aircraft) : 851
 Packing instruction (passenger aircraft) : Y840

IMDG-CODE

UN number : 1903
Description of the goods : DISINFECTANT, LIQUID, CORROSIVE, N.O.S.
(Didecyldimethylammonium chloride)
Class : 8
Packing group : II
Labels : 8
EmS Number 1 : F-A
EmS Number 2 : S-B

Marine pollutant : yes

SECTION 15. REGULATORY INFORMATION

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals.

Signal word : DANGER!
Hazard statements : Causes substantial but temporary eye injury.
Harmful if absorbed through skin.
May be fatal if inhaled.
Corrosive. Causes skin burns.
Corrosive. Causes irreversible eye damage.
This pesticide is toxic to fish.

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

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

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 112 (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 SOCMl Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

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

Ethanol	64-17-5
---------	---------

Pennsylvania Right To Know

Didecyldimethylammonium chloride	7173-51-5
Ethanol	64-17-5

New Jersey Right To Know

Didecyldimethylammonium chloride	7173-51-5
Ethanol	64-17-5

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

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), 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. .