



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 ALGAECIDE**

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: 10/05/2012
SUPERCEDES: 12/14/2010
MSDS Number: 000000012596
SYNONYMS:
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:

Corrosive to skin, Corrosive to eyes, Toxic by ingestion, Combustible Liquid

Routes of Entry: Eyes Skin Ingestion Inhalation
Chemical Interactions: None known.
Medical Conditions Aggravated: None known.

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

Hazard Ratings :	Health	Flammability	Physical / Instability	PPI / Special hazard.
HMIS	3	2	0	
NFPA	3	2	0	

Immediate (Acute) Health Effects

Inhalation Toxicity: Inhalation of mist or vapor may cause irritation to the mucous membranes of the respiratory tract. Inhalation may cause central nervous system effects.

Skin Toxicity: Causes skin burns. Not expected to be toxic from dermal contact.

Eye Toxicity: Causes eye burns.

Ingestion Toxicity: Causes digestive tract burns. Toxic if swallowed.

Acute Target Organ Toxicity: Corrosive to skin, Corrosive to eyes, Central nervous system

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. The carcinogenicity of the active ingredient in this product has been evaluated through animal study and it was found not to be carcinogenic.

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.

Inhalation: There are no known or reported effects from chronic exposure.

Skin Contact: There are no known or reported effects from chronic exposure.

Skin Absorption: There are no known or reported effects from chronic exposure.

Ingestion: There are no known or reported effects from chronic exposure.

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.

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>
didecyldimethylammonium chloride	7173-51-5	
Ethanol	64-17-5	

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.

5. FIRE FIGHTING MEASURES

Flammability Summary (OSHA):	Combustible material
<u>Flammable Properties</u>	
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.
Lower Flammable / Explosive Limit, % in air:	No data.

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:	If the product contaminates rivers and lakes or drains inform respective authorities. soluble
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.

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.

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.

Exposure Limit Data

<u>CHEMICAL NAME</u>	<u>CAS #</u>	<u>Name of Limit</u>	<u>Exposure</u>
Ethanol	64-17-5	ACGIH	1,000 ppm TWA

Ethanol	64-17-5	OSHA Z1	1,000 ppm TWA 1,900 mg/m3 TWA
Ethanol	64-17-5	NIOSH-IDLH	3,300 ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	liquid
Form	No data.
Color:	No data.
Odor:	No data.
Molecular Weight:	None established
Specific Gravity :	0.91 - 0.94
	20 °C
pH :	6.0 - 8.0
Boiling Point:	no data available
Freezing Point:	no data available
Melting Point:	no data available
Density:	No data.
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.
Evaporation Rate:	no data available
Oxidizing:	None established
Volatiles, % by vol.:	50%
VOC Content	no data available
HAP Content	No data

10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:	Stable under normal conditions.
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

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

Ethanol Inhalation LC50 10 h = 20,000 ppm Rat

Product Animal Toxicity

Oral LD50 value: LD50 Believed to be 450 mg/kg rat

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

Inhalation 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.

Acute Toxicity: Corrosive to eyes Corrosive to skin Central nervous system

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. 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 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.

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
	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

	Fathead minnow (Pimephales promelas),	-	(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

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.

Potential US EPA Waste Codes : D001

14. TRANSPORT INFORMATION

Land (US DOT): UN1903 DISINFECTANT LIQUID, CORROSIVE, N.O.S.
(DIDECYLDIMETHYLAMMONIUM CHLORIDE) 8 II

Water (IMDG): UN1903 DISINFECTANT LIQUID, CORROSIVE, N.O.S.,
(DIDECYLDIMETHYLAMMONIUM CHLORIDE) 8 II MARINE
POLLUTANT

Air (IATA): UN1903 DISINFECTANT LIQUID, CORROSIVE, N.O.S.,
(DIDECYLDIMETHYLAMMONIUM CHLORIDE) 8 II

Emergency Response Guide Number: ERG # 153

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). Under specific circumstances, this product can ship under two transport exceptions, Limited Quantity or Consumer Commodity. See Bill of Lading for proper shipping description.

EMS: F-A, S-B

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):



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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

US. EPA Clean Air Act (CAA) Section 111 SOCM I Intermediate or Final Volatile Organic Compounds (40 CFR 60.489)
01 1996
ETHYL ALCOHOL

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
64-17-5	Ethanol

ZUSPA_RTK

Pennsylvania: Hazardous substance list
1990-01-01
ETHANOL
hazardous substance

Pennsylvania: Hazardous substance list
1990-01-01
DENATURED ALCOHOL
hazardous substance

Pennsylvania: Hazardous substance list
1989-08-11
ETHANOL

New Jersey:

CAS #	COMPONENT NAME
64-17-5	Ethanol

ZUSNJ_RTK

New Jersey Right to Know Hazardous Substance List (RTK-HSL)
2007-03-01
ETHYL ALCOHOL ALCOHOL METHYLCARBINOL ETHANOL
Special Health Hazard - Carcinogen, Special Health Hazard - Flammable - Third Degree,
Special Health Hazard - Mutagen, Special Health Hazard - Teratogen

Massachusetts:

CAS #	COMPONENT NAME
64-17-5	Ethanol

ZUSMA_RTK

Massachusetts Right to Know List of Chemicals and Hazard Classifications
1993-04-24
ETHYL ALCOHOL DENATURED ALCOHOL ETHANOL
Teratogen. Sufficient evidence of teratogenic risk in humans.

California Proposition 65:

CAS #	COMPONENT NAME
ZUSCA_P65	None established

WHMIS Hazard Classification:

None established

16. OTHER INFORMATION

MSDS REVISION STATUS :

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. .