SAFETY DATA SHEET
Algem Concentrate - 0290

Product Name: Algem Concentrate
Revision Date: 11/11/2022

SECTION 1 IDENTIFICATION

Supplier: Phoenix Products Company
55 Container Drive
Terryville, CT 06786
(860) 589-7502

Distributor:

U.S. PERS Emergency Telephone: 1-800-633-8253
Product Name: **Algem Concentrate**
Synonyms: 1-Decanaminium,N-decyl-N,N-dimethyl-,chloride; Bio-Dac; Bardac 22; BTC 1010
Chemical Name: Didecyl Dimethyl Ammonium Chloride
Chemical Formula: $C_{22}H_{48}ClN$
CAS Number: 7173-51-5
EPA Registration Number: 10324-69-48520
Product Use: For control of algae and algae slime growth in swimming pools.

SECTION 2 *HAZARDOUS COMPONENTS*

Danger – Corrosive

GHS Hazard Statements

H314: Causes severe skin burns and eye damage.
H304: May be fatal if swallowed and enters airways.
H332: Harmful if inhaled
H401: Toxic to aquatic life.

GHS Precautionary Statements

P210: Keep away from heat and open flames.
P234: Keep only in original container.
P260: Do not breathe vapor.
P262: Do not get in eyes, on skin, or on clothing.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P264: Wash thoroughly with soap and water after handling.
P321: Specific treatment (see First Aid Measures on this label).
P362+364: Take off contaminated clothing and wash it before reuse.

Hazardous Materials Identification System / National Fire Protection Association Classifications

HMIS: Health: 3
Flammability: 2
Physical/Instability: 0
PPI/Special Hazard:

NFPA: Health: 3
Flammability: 2
Physical/Instability: 0
PPI/Special Hazard

SECTION 2 ***HAZARDOUS COMPONENTS - Continued***

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.

SECTION 3 ***COMPOSITION/INFORMATION ON INGREDIENTS***

Component	**CAS Number**	**Percent**
Didecyl Dimethyl Ammonium Chloride	7173-51-5	50%
Ethanol	67-17-5	5%-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: 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: 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.

SECTION 4 *FIRST-AID MEASURES - Continued*

Eye Contact: 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: 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 *FIRE FIGHTING 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 (CO2) 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.

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.

Spill Mitigation Procedures

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.

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

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. 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: Impervious gloves. Boots. Apron. A full impervious suit is recommended if exposure is possible to a large portion of the body. Avoid contact with skin.

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

Chemical Name: Ethanol
CAS#: 64-17-5
Name of Limit: ACGIH
Exposure: 1,000 ppm TWA

Chemical Name: Ethanol
CAS#: 64-17-5
Name of Limit: OSHA Z1
Exposure: 1,000 ppm TWA
1,900 mg/m3 TWA

Chemical Name: Ethanol
CAS#: 64-17-5
Name of Limit: NIOSH-IDLH
Exposure: 3,300 ppm

SECTION 9 *PHYSICAL AND CHEMICAL PROPERTIES*

Physical State:	Liquid
Color:	Colorless to light straw.
Odor:	Benzaldehyde
Specific Gravity H_2O=1:	0.91 - 0.94
pH :	6.0 - 8.0
Boiling Point:	Not Available
Freezing Point:	Not Available
Melting Point:	Not Available
Density:	0.95 g/cm^3 (20 °C)
Bulk Density:	Not Available
Vapor Pressure:	Not Available
Vapor Density:	> 1
Viscosity:	Not Available
Solubility in Water:	Soluble
Partition coefficient (n-octanol/water):	Not Available
Evaporation Rate:	Not Available
Oxidizing:	None Established
Flash Point:	54.4 °C
Volatiles, % by vol.:	50%
VOC Content:	Not Available
Molecular Weight:	362.08

SECTION 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

SECTION 11 *TOXICOLOGICAL INFORMATION*

Component Animal Toxicology

Oral LD50 value:
didecyldimethylammonium chloride
LD50 = 360 mg/kg Rat
ALCOHOL DENAT. LD50 = 7,060 mg/kg Rat

Dermal LD50 value:
didecyldimethylammonium chloride
LD50 > 2,000 mg/kg Rabbit
ALCOHOL DENAT. LD50 Believed to be > 2,000 mg/kg Rabbit

Inhalation LC50 value:
didecyldimethylammonium chloride
No data
ALCOHOL DENAT. Inhalation LC50 10 h = 20,000 ppm Rat

SECTION 11 ***TOXICOLOGICAL INFORMATION - Continued***

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.

Didecyl Dimethyl Ammonium 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.

Didecyl Dimethyl Ammonium 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.

Didecyl Dimethyl Ammonium 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*

Ecological Toxicity Values for: Didecyl Dimethyl Ammonium 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

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.

Potential US EPA Waste Codes: D001

SECTION 14 *TRANSPORTATION INFORMATION*

DOT:	**UN Number:**	1903
	UN Proper Shipping Name:	DISINFECTANT LIQUID, CORROSIVE, N.O.S. (DIDECYLDIMETHYLAMMONIUM CHLORIDE)
	Transport Hazard Class:	8
	Packing Group:	II
TDG:	**UN Number:**	1903
	UN Proper Shipping Name:	DISINFECTANT LIQUID, CORROSIVE, N.O.S. (DIDECYLDIMETHYLAMMONIUM CHLORIDE)
	Transport Hazard Class:	8
	Packing Group:	II

SECTION 14 ***TRANSPORTATION INFORMATION - Continued***

MEX:	**UN Number:**	1903
	UN Proper Shipping Name:	DISINFECTANT LIQUID, CORROSIVE, N.O.S. (DIDECYLDIMETHYLAMMONIUM CHLORIDE)
	Transport Hazard Class:	8
	Packing Group:	II
IMDG:	**UN Number:**	1903
	UN Proper Shipping Name:	DISINFECTANT LIQUID, CORROSIVE, N.O.S. (DIDECYLDIMETHYLAMMONIUM CHLORIDE)
	Transport Hazard Class:	8
	Packing Group:	II
	EMS-No.:	F-A, S-B
	Marine Pollutant:	Yes
IATA:	**UN Number:**	1903
	UN Proper Shipping Name:	DISINFECTANT LIQUID, CORROSIVE, N.O.S. (DIDECYLDIMETHYLAMMONIUM CHLORIDE)
	Transport Hazard Class:	8
	Packing Group:	II

Emergency Response Guide Number: ERG # 153

SECTION 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.

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

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 SOCMI 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

SECTION 15 ***REGULATORY INFORMATION - Continued***

State Right-to-Know Regulations Status of Ingredients

Pennsylvania: CAS #: 64-17-5
COMPONENT NAME: Ethanol
ZUSPA_RTK

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

1989-08-11
ETHANOL

New Jersey: CAS #: 64-17-5
COMPONENT NAME: 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 #: 64-17-5
COMPONENT NAME: 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: None established
WHMIS Hazard Classification: None established

SECTION 16 ***OTHER INFORMATION***

No representations or warranties, either expressed or implied, of merchant ability, fitness for a particular purpose or any other nature are made hereunder with respect to information or the product to which information refers.

Date: 11/11/2022
Phoenix Products Company