



## MATERIAL SAFETY DATA SHEET

**Product Name** Azure Algaecide 50  
**Product id** 2006-AZ  
**Revision date** 10/12/2006 **Revision: 2**  
**Supersedes** 16/01/2006

### 1. Identification of the substance & the company

**Trade name** Algaecide 50  
**Chemical family** Quaternary Ammonium Compound  
**Type of product and use** Algaecide  
**Supplier** NAVA Water Products  
95 MacCorkle Ave. SW, South Charleston, WV 25303, USA  
Tel: (304) 746-3000  
**Emergency Telephone** Chemtrec (800)424-9300  
Medical 1-800-420-9236

### 2. Composition / information on ingredients

Components CAS	Weight %	ACGIH-TLV Data	OSHA (PEL) Data
Alkyl dimethyl benzyl ammonium chloride (C12-16) 68424-85-1	50	Not determined	Not determined
Ethanol 64-17-5	5	1000 ppm	1000 ppm; 1900 mg/m <sup>3</sup>
Water 7732-18-5	45	Not determined	Not determined

### 3. Hazards identification

**Emergency overview** *Clear, colorless to straw colored liquid  
Corrosive to the eyes, skin, gastrointestinal tract, and respiratory system*

**Potential Health Effects:**

- **Eye Contact** Causes burns and may result in permanent injury to eyes including blindness
- **Skin contact** Causes burns. Brief exposures may cause irritation and defatting of the skin.



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**- Inhalation** Mists and vapors can irritate the throat and respiratory tract. High vapor concentrations may cause central nervous system effects. Symptoms may include headaches, dizziness and drowsiness.

**- Ingestion** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea and even death

**Chronic effects/Carcinogenicity** Ingestion of ethanol by pregnant women can cause reproductive toxicity to the fetus

**NFPA Ratings (Scale 0-4)** Health = 3, Fire = 2, Reactivity = 0.

**HMIS Ratings (Scale 0-4)** Health = 3, Fire = 2, Reactivity = 0.

### 4. First-aid measures

**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 advise.

**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 advise.

**Inhalation** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advise.

**Ingestion** Call poison control center, or doctor immediately for treatment advise.  
Have person sip a glass of water if able to swallow.  
Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

**Note to physician** Probable mucosal damage may contraindicate the use of gastric lavage.

### 5. Fire - fighting measures

**Flash point** 130°F (54.4°C) Pinsky Martin Closed Cup

**Flammable/Explosion limits** Not available

**Suitable extinguishing media** Carbon dioxide, dry chemicals, foam, water spray (fog).



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**Fire fighting procedure** Cool containers with water spray. Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA).

**Unusual fire and explosion hazards** Vapour may travel considerable distance to source of ignition and flash back. Vapours can form explosive mixtures with air.

### 6. Accidental release measures

**Personal precautions** Isolate spill area and restrict non essential personnel. Wear protective equipment to avoid skin contact, eye contact and breathing vapors. Stop leak if possible without personal risk.  
Stay upwind. Keep out of low areas where vapors may accumulate. Avoid heat, flames, sparks and other sources of ignition.

**Methods for cleaning up** Ventilate closed spaces before entering. All equipment used when handling the product must be grounded. Floor will be slippery. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Prevent entry into waterways, sewers, basements or confined areas. Absorb on sand, earth or vermiculite. Keep in suitable, closed containers for disposal.  
Use non sparking tools in cleanup operations.  
Large Spills: Dike far ahead of liquid spill for later disposal. Water spray may reduce vapor but will increase foaming. Water may not prevent ignition in closed spaces.

### 7. Handling and storage

**Handling** Avoid contact with skin and eyes. Keep containers tightly closed.

**Storage** Keep away from heat, sparks and open flame.  
Keep from freezing. Store in a cool, well-ventilated area away from incompatible materials (see "materials to avoid").  
Prevent electrostatic charge buildup by using common bonding and grounding techniques.



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### 8. Exposure controls / personal protection

**Ventilation requirements** Provide adequate ventilation.

**Personal protective equipment:**

- **Respiratory protection** NIOSH approved respirator
- **Hand protection** Impervious gloves (rubber or neoprene)
- **Eye protection** Chemical safety goggles Use a face shield if splashing is possible.
- **Skin and body protection** Body covering clothes and boots

**Hygiene measures**

Safety shower and eye bath should be provided.  
Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking

### 9. Physical and chemical properties

<b>Appearance</b>	Clear, colourless to straw colored liquid with benzaldehyde (organic) odor
<b>Vapour pressure</b>	~44mmHg (68°F)
<b>Vapor density</b>	Estimated to be heavier than air
<b>Evaporation rate (ether=1)</b>	Not determined
<b>Viscosity</b>	Not determined
<b>Solubility:</b>	
- <b>Solubility in water</b>	Soluble
<b>Specific gravity</b>	0.96 (8 lbs/gal)
<b>Voc content(%)</b>	10%
<b>pH</b>	6-8 for 10% Aqueous Solution

### 10. Stability and reactivity

<b>Stability</b>	Stable under normal conditions
<b>Materials to avoid</b>	Strong oxidizing agents Reducing agents
<b>Conditions to avoid</b>	Keep away from heat.
<b>Hazardous decomposition products</b>	CO <sub>2</sub> , CO and HCl
<b>Hazardous polymerization</b>	Will not occur



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### 11. Toxicological information

**Acute toxicity:**

- Rat oral LD50 880 mg/kg
- Rat dermal LD50 >2000 mg/kg
- Eye irritation (rabbit) Corrosive
- Dermal irritation (rabbit) Corrosive

**Carcinogenicity** Not classified by IARC.  
Not included in NTP 11th Report on Carcinogens.

### 12. Ecological information

**Information on ecological effects** No information available

### 13. Disposal considerations

**Waste disposal** This substance, when discarded or disposed of, is a characteristic hazardous waste according to Federal regulation (40 CFR 261) and is assigned the EPA Hazardous Waste Number of D001. The discarding or disposal of this material must be done at a properly permitted facility in accordance with the regulations of 40 CFR 262, 263, 264 and 268. Additionally, the discarding or disposal of this material may be further regulated by state, regional, or local regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate.

### 14. Transportation information

**UN No.** 1903

**DOT** Disinfectant Liquid Corrosive (Quaternary Ammonium Compound)  
Class: 8 - Corrosives  
Label: CORROSIVE (8)  
Packing Group: III

**IMO** Class: 8 - Corrosives  
Label: CORROSIVE (8)  
Packing Group: III



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<b>ICAO/IATA</b>	Class: 8 Hazard Label (s): Corrosive Packing group: III
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### 15. Regulatory information

**USA** All the ingredients in this preparation are reported in the EPA TSCA Inventory.  
This product is subject to registration under FIFRA

**Sara 313** Not listed  
**Sara (311, 312) hazard class** This product is categorized as an immediate health hazard, and fire hazard

**- Massachusetts right-to-know list** Listed

**- New Jersey right-to-know list** Listed

**- Pennsylvania right to know list** Listed

**- Illinois toxic substances list** Listed

**Canada** Listed in DSL

**WHMIS hazard class** B3 combustible liquids  
E corrosive material

**EU** Reported in EINECS

**Japan** One or more ingredients are not listed on the ENCS inventory

**China inventory** Listed

**Korea** Listed in ECL

**Philippines** Listed in PICCS

### 16. Other information

This data sheet contains changes from the previous version in section(s)

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The information in this Material Safety Data Sheet 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. Additionally, if this Material Safety Data Sheet is more than three years old, you should contact NAVA Water products at the phone number listed below to make certain that this sheet is current.

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**End of safety data sheet**