



# Halt™ 50

## Swimming Pool Algaecide

### ACTIVE INGREDIENT:

Didecyl dimethyl ammonium chloride .....50.0%

OTHER INGREDIENTS: .....50.0%

TOTAL: .....100.0%

**KEEP OUT OF REACH OF CHILDREN  
DANGER**

See back panel for First Aid and  
additional precautionary statements.

**Algae Growth Depressant  
•  
Efficient and Stable**

**NET CONTENTS  
32 FL. OZ (946 ml)**

### DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Effective against *Chlorella pyrenoidosa* (green algae), *Phoridium retzil* (blue-green algae), *Phoridium inundatum* (blue-green algae), *Lyngbya versicolor* (blue-green algae), *Phoridium luridum* (black algae) and *Pleurochloris meiringensis* (mustard algae).

For best results: test and adjust water balance before use, chlorinate and clarify pool water as required, shock treat pool water at least weekly, keep filtration systems clean and back-flush regularly. Call your local health department for assistance with any issue relating to good pool operating practices.

**APPLICATION:** For all applications, apply equal amounts of this product to pool water along pool edges around the circumference of the pool while filter pump is running. Run pump for at least 6 hours after application. Wait at least 15 minutes after application before entering pool.

**INITIAL APPLICATION:** When filling pool at beginning of season add 5 fl. ounces of this product per 10,000 gallons of water (2 ppm active ingredient).

**VISIBLE ALGAE:** If algae are visible, brush surfaces and then add 5 fl. ounces of this product per 10,000 gallons of water (2 ppm active ingredient). Vacuum pool and remove dead algae after 24 hours. Repeat treatment as necessary if algae are still present.

**MAINTENANCE DOSE:** When pool is free of visible algae, add 1 ½ fluid ounce of this product per 10,000 gallons water (0.6 ppm active ingredient) every week. For very hot weather or heavy bathing load, use this dosage every 5 days.

**BOOSTER DOSE:** After heavy rains or severe storms, add 5 fl. ounces of this product per 10,000 gallons water (2 ppm active ingredient).

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**DANGER! CORROSIVE.** Causes irreversible eye damage and skin burns. May be fatal if inhaled or swallowed. Harmful if absorbed through the skin. Do not get in eyes, on skin or on clothing. Do not breathe vapor. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wear protective eyewear (goggles, safety glasses or face shield), protective clothing and protective (rubber, chemical resistant) gloves. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Remove contaminated clothing and wash clothing before reuse.

#### FIRST AID

**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.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes.

**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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.

**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 treatment advice.

Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a Poison Control Center or doctor or going for treatment.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression, and convulsion may be needed.

### STORAGE AND DISPOSAL

Store in original container in areas inaccessible to children or persons unfamiliar with its proper use.

Nonrefillable container. Do not reuse or refill this container. Wrap container and put in trash or offer for recycling if available.

Distributed by:  
**Blue Wave Products**  
1745 Wallace Ave.  
St. Charles, Illinois  
60174  
**1-800-759-0977**

EPA Reg. No. 47371-58-63084  
EPA Est. No. 46043-FL-001

REV021310

32 oz.

30 oz.

28 oz.

26 oz.

24 oz.

22 oz.

20 oz.

18 oz.

16 oz.

14 oz.

12 oz.

10 oz.

8 oz.

6 oz.

4 oz.

2 oz.

# MATERIAL SAFETY DATA SHEET

Date Issued: 07/24/2009  
MSDS No: Blue Wave Halt 50  
Date Revised: 08/30/2011  
Revision No: 2

## Blue Wave Halt 50

### 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Blue Wave Halt 50

**GENERAL USE:** Algaecide

**MANUFACTURER**

Lonza, Inc.  
90 Boroline Road  
Allendale, NJ 07401  
**Emergency Phone:** 800-777-1875

**DISTRIBUTOR**

Blue Wave Products  
1745 Wallace Ave # B  
St Charles, IL 60174  
**Product Stewardship:** (800) 759-0977

### 2. HAZARDS IDENTIFICATION

**POTENTIAL HEALTH EFFECTS**

**EYES:** Direct eye contact may produce severe irritation and/or burns with possible irreversible damage.

**SKIN:** Direct skin contact may produce severe irritation and/or burns with possible irreversible damage.

**INGESTION:** May be fatal if ingested. ingesting can cause immediate burning pain in the mouth, throat and abdomen; resulting in severe swelling of the epiglottal tissue of the larynx. Ingestion can also result in muscular paralysis affecting the ability to breathe; causing circulatory shock and/or convulsions.

**INHALATION:** Inhalation of solvent vapors or aerosol mists can cause irritation of the mucous membranes. Prolonged inhalation of solvent vapors may produce drowsiness, lassitude and inability to concentrate.

**SIGNS AND SYMPTOMS OF OVEREXPOSURE**

**CARCINOGENICITY:** Not listed by NTP, IARC or OSHA.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS	EINECS
Didecyl Dimethyl Ammonium Chloride	50	7173-51-5	- -
Ethanol	10	64-17-5	200-578-6
Water	40	7732-18-5	231-791-2

### 4. FIRST AID MEASURES

**EYES:** Immediately flush eyes with large amounts of running water for at least 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eye and lids with water. Get immediate medical attention. If physician is not available, flush for additional 15 minutes and then transport victim to medical care.

**SKIN:** Immediately wash skin with plenty of soap and water for 15 minutes while removing contaminated clothing and shoes. Get immediate medical attention. Launder clothing before re-use and discard shoes that cannot be thoroughly cleaned.

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**INGESTION:** Immediately give 3-4 glasses of milk (if unavailable, give water). DO NOT induce vomiting. If vomiting does occur, give fluids again. Get immediate medical attention. Have physician determine if patient's condition allows for induction of vomiting or evacuation of the stomach. Do not give anything by mouth to a convulsing or unconscious person.

**INHALATION:** Remove victim to fresh air. Get immediate medical attention. If not breathing, clear airway and start artificial respiration. If victim is having trouble breathing, give supplemental oxygen, if available.

**NOTES TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage. Take measures against circulatory shock. Breathing may need support, either through use of manual or mechanical measures. Administer oxygen, if having difficulty with breathing.

## 5. FIRE FIGHTING MEASURES

**FLASHPOINT AND METHOD:** (109 °F) SETA Flash Tester CC

**FLAMMABLE LIMITS:** Not known to Not known

**AUTOIGNITION TEMPERATURE:** Not Known

**EXTINGUISHING MEDIA:** Alcohol foam, CO2, Dry Chemical, Water

**HAZARDOUS COMBUSTION PRODUCTS:** Combustion products are toxic.

**EXPLOSION HAZARDS:** Products of combustion are toxic. Heated solven vapors can travel to an ignition source and flash back.

**FIRE FIGHTING PROCEDURES:** Use water to cool containers exposed to fire.

**FIRE FIGHTING EQUIPMENT:** Firefighters should wear NIOSH/MSHA approved self-contained breathing apparaturs and protective clothing.

## 6. ACCIDENTAL RELEASE MEASURES

**COMMENTS:** DANGER! Corrosive and Flammable liquid. Remove all sources if ignition and ground all equipment before beginning cleanup. Floors may become slippery. Wear appropriate protective equipment and NIOSH/MSHA approved respirator where mists or vapors of unknown concentrations may be generated (self-contained breathing apparatus preferred.)

Dike and contain spill with inert material (sand, earth, etc.) and transfer the liquid and solid separately to containers for recovery or disposal. Keep spill out of sewers and open bodies of water.

## 7. HANDLING AND STORAGE

**STORAGE:** Store containers in compliance with the most recent NFPA code (NFPA 30). Ground all containers prior to pouring. Keep containers closed when not in use. Do not contaminate drinking water, food or feed by storage or disposal.

**STORAGE TEMPERATURE:** Maximum storage temperature - 140 degrees F.

**COMMENTS:** Container Disposal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)							
		EXPOSURE LIMITS					
		OSHA PEL		ACGIH TLV		SupplierOEL	
Chemical Name		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Ethanol	TWA	1000 ppm	1900 mg/m <sup>3</sup>	1000 ppm	1884 mg/m <sup>3</sup>	NL	NL
	STEL	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	NL	NL

**ENGINEERING CONTROLS:** In processes where mists or vapors may be generated, proper ventilation must be provided in accordance with good ventilation practices.

#### PERSONAL PROTECTIVE EQUIPMENT

**EYES AND FACE:** Wear chemical splash goggles where there is a potential for eye contact. Use safety glasses with side shields under normal use conditions.

**SKIN:** Rubber or neoprene gloves to prevent skin contact. Protective clothing (long sleeves, coveralls, or other, as appropriate) to prevent skin contact.

**RESPIRATORY:** In processes where mists or vapors may be generated, a NIOSH/MSHA jointly approved respirator is advised in the absence of proper environmental controls.

**WORK HYGIENIC PRACTICES:** Provide safety shower and eyewash station in the work area.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**ODOR:** Ethanol-like

**APPEARANCE:** Colorless to pale yellow liquid.

**pH:** 6.5 to 9.0 10% active solution

**VAPOR PRESSURE:** Not Known

**VAPOR DENSITY:** Not known.

**BOILING POINT:** Not Known

**FREEZING POINT:** -20°C

**FLASHPOINT AND METHOD:** (109 °F) SETA Flash Tester CC

**SOLUBILITY IN WATER:** Soluble

**EVAPORATION RATE:** Not Known

**SPECIFIC GRAVITY:** 0.93 / cm<sup>3</sup> @ 25 deg C

**VISCOSITY #1:** < 100 CPS at 25°C

**(VOC):** Percent Volatile: 50

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### 10. STABILITY AND REACTIVITY

**STABILITY:** Stable.

**POLYMERIZATION:** Will not occur.

**CONDITIONS TO AVOID:** None known.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal decomposition may produce toxic vapors/fumes of hydrogen chloride, amines and other organic materials, and oxides of carbon and nitrogen.

**INCOMPATIBLE MATERIALS:** Strong oxidizing or reducing agents.

### 11. TOXICOLOGICAL INFORMATION

#### ACUTE

**DERMAL LD<sub>50</sub>:** 3342 mg/kg (rabbit)

**ORAL LD<sub>50</sub>:** 450 mg/kg (rat); 412 mg/kg (males); 292 mg/kg (females)

**EYE EFFECTS:** (rabbit) Extreme irritation that did not clear by day 7, post dose

**SKIN EFFECTS:** (rabbit) Severe irritation that did not clear by day 7, post dose.

**CORROSIVITY:** (rabbit - DOT) Corrosive

**SENSITIZATION:** (guinea pig) Not a sensitizer.

**REPRODUCTIVE EFFECTS:** Developmental (rat-oral): No evidence of developmental effects observed at exposure doses ranging from 10-50 mg/kg/day administered from day 6 through 15 of gestation.

Developmental (rabbit-oral): No evidence of developmental effects observed at exposure doses ranging from 10-50 mg/kg/day administered from day 6 through 15 of gestation.

**Repeated Dose** (For Didecyldimethylammonium chloride):

Subchronic dermal toxicity (rat-90 days - feeding): No adverse systemic toxicity noted.

Chronic oral toxicity (dog - 1 year - feeding): No systemic target organ effects noted.

**MUTAGENICITY:** Ames test (salmonella sp.): No mutagenic

Micronucleus (in vivo rat): No evidence of chromosomal damage in the bone marrow of rats treated with 600 mg/kg.

HGPRT (in vitro - CHO cells): Not clastogenic with or without metabolic activation.

**For Didecyldimethylammonium chloride:**

Ames test (Salmonella sp. - on): Not mutagenic

HGPRT in vitro - CHO cells) : Not clastogenic with or without metabolic activation.

Unscheduled DNA synthesis (in vitro): Not mutagenic with or without metabolic activation.

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### 12. ECOLOGICAL INFORMATION

#### AQUATIC TOXICITY (ACUTE)

96-HOUR LC<sub>50</sub>: 1.0 mg/l (Salmon)

48-HOUR EC<sub>50</sub>: .94 mg/L (Daphnia Magna)

Notes: LC50 0.32 mg/l (bluegill sunfish)

LC50 0.069 mg/l (mysid shrimp)

### 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** Dispose of in accordance with applicable local, state, and federal regulations.

### 14. TRANSPORT INFORMATION

#### DOT (DEPARTMENT OF TRANSPORTATION)

**PROPER SHIPPING NAME:** Disinfectants, Liquid, Corrosive, N.O.S (Didecyl dimethylammonium chloride)

**PRIMARY HAZARD CLASS/DIVISION:** 8

**UN/NA NUMBER:** 1903

**PACKING GROUP:** II

**OTHER SHIPPING INFORMATION:** DOT exception 173.154 - this product qualifies as a Limited Quantity when inner packaging does not exceed 0.3 gallons.

### 15. REGULATORY INFORMATION

#### UNITED STATES

##### DOT LABEL SYMBOL AND HAZARD CLASSIFICATION



Corrosive

#### SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

**311/312 HAZARD CATEGORIES:** This act requires reporting under the Community Right-To-Know provisions due to the inclusion of the following components:

N,N-Didecyl-N,N-dimethylammonium chloride - (CAS 7273-51-5) Hazard Category A

Ethanol (CAS 64-17-5) Hazard Category F

**FIRE:** Yes **PRESSURE GENERATING:** No **REACTIVITY:** No **ACUTE:** Yes **CHRONIC:** No

**313 REPORTABLE INGREDIENTS:** None.

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### 302/304 EMERGENCY PLANNING

**EMERGENCY PLAN:** None known.

### CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

**CERCLA REGULATORY:** None known.

**REPORTABLE SPILL QUANTITY:** None

### TSCA (TOXIC SUBSTANCE CONTROL ACT)

Chemical Name	CAS
Didecyl Dimethyl Ammonium Chloride	7173-51-5
Water	7732-18-5

**TSCA STATUS:** All ingredients in this mixture are in compliance with TSCA.

### STATES WITH SPECIAL REQUIREMENTS

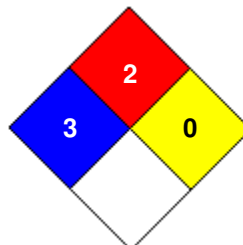
Chemical Name	Requirements
Ethanol	Ethyl Alcohol: New Jersey Workplace Hazard New Jersey Special Hazard Pennsylvania Workplace Hazard CA Proposition 65 Massachusetts Hazardous Substance New York City Hazardous Substance

**CALIFORNIA PROPOSITION 65:** There are no chemicals present known to the State of California to cause cancer.

## 16. OTHER INFORMATION

**REVISION SUMMARY:** This MSDS replaces the 08/07/2009 MSDS.

### NFPA CODES



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