



**Arch  
Chemicals,  
Inc.**

**MATERIAL SAFETY  
DATA SHEET**

FOR ANY EMERGENCY, 24 HOURS / 7 DAYS, CALL:

FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC®:

FOR ALL MSDS QUESTIONS & REQUESTS, CALL:

1-800-654-6911 (OUTSIDE  
USA: 1-423-780-2970)

1-800-424-9300 (OUTSIDE  
USA: 1-703-527-3887)

1-800-511-MSDS (OUTSIDE  
USA: 1-423-780-2347)

**PRODUCT NAME: HTH Algae Guard**

**EPA Registration Number: 1258-1077**

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Arch Chemicals, Inc.  
501 Merritt 7 PO Box 5204  
Norwalk, CT 06856-5204**

REVISION DATE: 09/22/2010  
SUPERCEDES: 11/06/2009

MSDS Number: 000000002747  
SYNONYMS: None  
CHEMICAL FAMILY: Mixture  
DESCRIPTION / USE: algaecide  
FORMULA: Not Applicable/Mixture

## 2. HAZARDS IDENTIFICATION

OSHA Hazard  
Classification:

**Skin and respiratory irritant, Corrosive to eyes.**

Routes of Entry:

Inhalation, skin, eyes, ingestion

Chemical Interactions:

No known interactions

Medical Conditions Aggravated:

Pre-existing eye disease, Skin diseases, Respiratory diseases  
including asthma and bronchitis

### Human Threshold Response Data

Odor Threshold Not established for product.

ISOPROPYL ALCOHOL

22 ppm

Irritation Threshold Not established for product.

ISOPROPYL ALCOHOL

Approximately 400 ppm

HTH Algae Guard

REVISION DATE : 09/22/2010

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**Hazardous Materials Identification System / National Fire Protection Association Classifications**

<u>Hazard Ratings :</u>	<u>Health</u>	<u>Flammability</u>	<u>Physical / Instability</u>	<u>PPI / Special hazard.</u>
HMIS	3	1	0	
NFPA	3	1	0	

**Immediate (Acute) Health Effects**

Inhalation Toxicity:	Not expected to be toxic by inhalation. High concentrations are moderately irritating to the eyes, nose, throat, and lungs.
Skin Toxicity:	Skin contact may cause moderate irritation consisting of transient redness and swelling. This irritant effect would not be expected to result in permanent damage. Not expected to be absorbed through the skin.
Eye Toxicity:	Corrosive. Burns can occur following exposure. Direct contact may cause impairment of vision, corneal damage and/or blindness. Rinsing of the eye should take place immediately.
Ingestion Toxicity:	Ingestion may cause moderate to severe irritation of the gastrointestinal tract and may also cause gastrointestinal discomfort with any or all of the following symptoms: nausea, vomiting or diarrhea. Slightly toxic if swallowed.
Acute Target Organ Toxicity:	Corrosive to the eyes, moderately irritating to the skin and respiratory tract and moderately to severely irritating to the gastrointestinal tract.

**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.
Reproductive and Developmental Toxicity:	Not known or reported to cause reproductive or developmental toxicity.
Inhalation:	There are no known or reported effects from chronic exposure except for effects similar to those experienced from acute exposure.
Skin Contact:	There are no known or reported effects from chronic exposure except for effects (if any) similar to those experienced from acute exposure.
Skin Absorption:	Not expected to be absorbed through the skin.
Ingestion:	There are no known or reported effects from chronic ingestion except for effects similar to those experienced from single exposure.
Sensitization:	This material is not known or reported to be a skin or respiratory sensitizer.
Chronic Target Organ Toxicity:	This product has not been tested. However, chronic (repeated) exposures to this product would be expected to produce similar effects as seen from acute exposures.
Supplemental Health Hazard Information :	No additional health information available.



### 3. COMPOSITION / INFORMATION ON INGREDIENTS

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<u>CAS OR CHEMICAL NAME</u>	<u>CAS #</u>	<u>% RANGE</u>
Water	7732-18-5	85 - 95
QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C12-18-ALKY	68391-01-5	5 - 15
ISOPROPYL ALCOHOL	67-63-0	0.5 - 2.5

### 4. FIRST AID MEASURES

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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.

### 5. FIRE FIGHTING MEASURES

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Flammability Summary (OSHA):	Combustible above 93 deg. C / 200 deg. F.
<u>Flammable Properties</u>	
Flash Point:	> 93 DEG°C / 200 DEG°F
Autoignition Temperature:	Not applicable



Fire / Explosion Hazards:	Material may be ignited only if preheated to high temperatures, for example in a fire.
Extinguishing Media:	Use alcohol foam, carbon dioxide, dry chemical or water spray when fighting fires. Water or foam may cause frothing if liquid solvent or oil is burning but it still may be a useful extinguishing agent if carefully applied to the fire.
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.
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:	Not applicable
Lower Flammable / Explosive Limit, % in air:	Not applicable

## 6. ACCIDENTAL RELEASE MEASURES

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Personal Protection for Emergency Situations:	Use the personal protective equipment recommended in Section 8 and a NIOSH approved self-contained breathing apparatus.
<u>Spill Mitigation Procedures</u>	
Air Release:	Hazardous concentrations in air may be found in local spill area and immediately downwind. Vapors may be suppressed by the use of water fog. Contain all liquids for treatment or disposal.
Water Release:	This material is miscible in water. Notify all downstream users of possible contamination. Divert water flow around spill if possible and safe to do so. Contain all liquids for treatment or disposal.
Land Release:	Create a dike or trench to contain materials. Absorb spill with inert material (e.g., dry sand, clay, earth or commercial absorbent), then place in a chemical waste container. Decontaminate all clothing and the spill area using a detergent and flush with large amounts of water. Avoid runoff into storm sewers and ditches which lead to waterways. Contain all liquids for treatment or disposal.
Additional Spill Information :	Remove all sources of ignition. Stop source of spill as soon as possible and notify appropriate personnel. Utilize emergency response personal protection equipment prior to the start of any response. Evacuate all non-essential personnel. Dispose of spill residues per guidelines under Section 13, Disposal Consideration.



## 7. HANDLING AND STORAGE

Handling: Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water. Avoid breathing mist or vapor.

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."

## 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.

Respirator Type : A NIOSH approved full-face air purifying respirator with organic vapor / P100 cartridge. Air purifying respirator should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.

Skin Protection : Avoid skin contact by wearing gloves, an apron and other protective equipment. Wash hands and other exposed areas thoroughly with soap and water immediately after any contact.

Eye Protection: Use chemical goggles and a faceshield.

Protective Clothing Type: Impervious

General Protective Measures: An eye wash and safety shower should be provided in the immediate work area.

### Exposure Limit Data

<u>CHEMICAL NAME</u>	<u>CAS #</u>	<u>Name of Limit</u>	<u>Exposure</u>
ISOPROPYL ALCOHOL	67-63-0	ACGIH	200 ppm TWA
ISOPROPYL ALCOHOL	67-63-0	ACGIH	400 ppm STEL
ISOPROPYL ALCOHOL	67-63-0	OSHA Z1	400 ppm TWA 980 mg/m3 TWA



ISOPROPYL ALCOHOL

67-63-0

NIOSH-IDLH

2,000 ppm

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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Physical State:	liquid
Form	clear
Color:	blue
Odor:	Amine
Molecular Weight:	Not applicable/Mixture
Specific Gravity :	0.9900
pH :	6.0 - 8.5
Boiling Point:	100 DEG°C / 212 DEG°F
Freezing Point:	No data
Melting Point:	No data
Density:	No data
Vapor Pressure:	No data
Vapor Density:	No data
Viscosity:	No data
Fat Solubility:	No data
Solubility in Water:	Completely miscible
Partition coefficient n-octanol/water:	No data
Evaporation Rate:	No data
Oxidizing:	No data
Volatiles, % by vol.:	No data
VOC Content	No data
HAP Content	0.00 wt%/wt / 0.00 lb/gal

## 10. STABILITY AND REACTIVITY

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Stability and Reactivity Summary:	Stable under normal conditions. Not sensitive to mechanical shock. Not sensitive to static discharge. Product will not undergo hazardous polymerization.
Conditions to Avoid:	Sparks, open flame, other ignition sources, and elevated temperatures.
Chemical Incompatibility:	Strong oxidizing agents
Hazardous Decomposition Products:	Carbon monoxide, Carbon dioxide, ammonium compounds
Decomposition Temperature:	Not applicable

## 11. TOXICOLOGICAL INFORMATION

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### Component Animal Toxicology



Oral LD50 value:

QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C12-18-ALKYL ISOPROPYL ALCOHOL      No data  
LD50 = 5,045 mg/kg      Rat

Component Animal Toxicology

Dermal LD50 value:

QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C12-18-ALKYL ISOPROPYL ALCOHOL      No data  
LD50 = 13,000 mg/kg      Rabbit

Component Animal Toxicology

Inhalation LC50 value:

QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C12-18-ALKYL ISOPROPYL ALCOHOL      No data  
Inhalation LC50 8 h = 16,000 ppm      Rat

Product Animal Toxicity

Oral LD50 value:      LD50 Believed to be <\*\* Phrase does not exist: 3 - 4 g/kg \*\*>      Rat

Dermal LD50 value:      LD50 Believed to be > 2 g/kg      Rabbit

Inhalation LC50      LC50      No data

value:

Skin Irritation:      This material is expected to be moderately irritating.

Eye Irritation:      This material is expected to cause irreversible effects to the cornea with impairment of vision or corrosion to the eyes.

Skin Sensitization:      This material is not known or reported to be a skin or respiratory sensitizer.

Acute Toxicity:      Corrosive to the eyes, moderately irritating to the skin and respiratory tract and moderately to severely irritating to the gastrointestinal tract.

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

QUATERNARY AMMONIUM  
COMPOUNDS, BENZYL-C12-18-ALKYL

This product has been tested for Subchronic toxicity in laboratory animals and no systemic toxicity or target organ effects occurred in the test animals.

Reproductive and      Not known or reported to cause reproductive or developmental toxicity.



Developmental Toxicity:

QUATERNARY AMMONIUM  
COMPOUNDS, BENZYL-C12-18-ALKY

At high doses, maternal toxicity was observed.  
However, no developmental effects were observed.

ISOPROPYL ALCOHOL

This material at concentrations above the occupational exposure limits has caused developmental effects in animals. However, these effects were observed only at those doses that resulted in maternal toxicity.

Mutagenicity:

Not known or reported to be mutagenic. A similarly structured compound was tested in a mutagenicity assay and was found to be non-mutagenic under the conditions of the test.

QUATERNARY AMMONIUM  
COMPOUNDS, BENZYL-C12-18-ALKY  
ISOPROPYL ALCOHOL

This chemical has been tested and was shown to be non-mutagenic.

This material has been shown not to be mutagenic based on a battery of assays.

Carcinogenicity:

This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.

QUATERNARY AMMONIUM  
COMPOUNDS, BENZYL-C12-18-ALKY  
ISOPROPYL ALCOHOL

The carcinogenicity has been evaluated through animal study and it was found not to be carcinogenic. 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.

## 12. ECOLOGICAL INFORMATION

Overview:

No data for product. Individual constituents are as follows:

Ecological Toxicity Values for: QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C12-18-ALKY

Bluegill sunfish	- (static). 96 h LC50 = 0.52 mg/l
Rainbow trout ( <i>Salmo gairdneri</i> ),	- (static). 96 h LC50 = 0.93 mg/l
Sheepshead minnow	- (static). 96 h LC50 = 0.86 mg/l
Daphnia magna,	- (static). 48 h EC50= 0.058 mg/l
Mysid shrimp	- (static). 96 h LC50= 0.092 mg/l

Ecological Toxicity Values for: ISOPROPYL ALCOHOL

Bluegill	- (nominal, static). 96 h LC50 > 1,400 mg/l
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Fathead minnow (Pimephales promelas),	- (measured, flow-through) 96 h LC50 10,400 mg/l
Mosquito fish	- (nominal, static). 96 h LC50 > 1,400 mg/l
Daphnia magna,	- (nominal, static). 24 h EC50 9,714 mg/l
Common shrimp (Crangon crangon)	- (nominal, renewal). 48 h LC50 1,400 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 DOES NOT meet the criteria of a hazardous waste as defined under 40 CFR 261, in that it does not exhibit the characteristics of hazardous waste of Subpart C, nor is it listed as a hazardous waste under Subpart D.

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

Potential US EPA Waste Codes : Not applicable

### 14. TRANSPORT INFORMATION

Land (US DOT):	UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (QUATERNARY AMMONIUM COMPOUND) 9 III
Water (IMDG):	UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (QUATERNARY AMMONIUM COMPOUND) 9 III MARINE POLLUTANT

Air (IATA):	Flash Point: 93.33 DEG°C > UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (QUATERNARY AMMONIUM COMPOUND) 9 III
Emergency Response Guide Number:	ERG # 171



**Transportation Notes:**

Material is not regulated for ground transportation within the US if shipped in non-bulk packages. Material is not regulated as a marine pollutant for ground transportation within the US if shipped in non-bulk packages.

**EMS:**

F-A, S-F

## 15. REGULATORY INFORMATION

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**UNITED STATES:**

Toxic Substances Control Act (TSCA): This is an EPA registered pesticide.  
EPA Pesticide Registration Number: 1258-1077

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	None

**Emergency Planning & Community Right to Know (40 CFR 355, App. A):**

**Extremely Hazardous Substance Section 302 - Threshold Planning Quantity:**

ZUS_SAR302	TPQ (threshold planning quantity)	None established
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**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	Isopropyl alcohol (Manufacturing-strong acid process, no supplier notification) Value: 1%
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**Clean Air Act Toxic ARP Section 112r:**

CAA 112R	None established
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**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

ISOPROPYL 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
67-63-0	2-PROPANOL

ZUSPA\_RTK

Pennsylvania: Hazardous substance list

1990-01-01

2-PROPANOL

Environmental hazard, hazardous substance

Pennsylvania: Hazardous substance list

1989-08-11

2-PROPANOL

Environmental hazard

**New Jersey:**

CAS #	COMPONENT NAME
67-63-0	2-PROPANOL

ZUSNJ\_RTK

New Jersey Right to Know Hazardous Substance List (RTK-HSL)

1989-12-01

ISOPROPYL ALCOHOL (manufacture-strong acid process)

hazardous substance

New Jersey Right to Know Hazardous Substance List (RTK-HSL)



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2007-03-01  
ISOPROPYL ALCOHOL ISOPROPANOL 2-PROPANOL  
Special Health Hazard - Flammable - Third Degree

**Massachusetts:**

CAS #	COMPONENT NAME
67-63-0	2-PROPANOL

ZUSMA\_RTK

Massachusetts Right to Know List of Chemicals and Hazard Classifications  
1993-04-24  
ISOPROPYL ALCOHOL 2-PROPANOL

**California Proposition 65:**

CAS #	COMPONENT NAME
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ZUSCA\_P65

None established

**WHMIS Hazard Classification:**

Ingredient Disclosure List (WHMIS)  
2007-08-24  
Threshold limits: 1 Weight percent  
1050  
Isopropanol

## 16. OTHER INFORMATION

MSDS REVISION STATUS :  
SECTIONS REVISED: 1  
Major References : Available upon request.



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**MATERIAL SAFETY  
DATA SHEET**

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. .