SECTION 1. IDENTIFICATION

Product name: HTH Salt Care Algaecide

Manufacturer or supplier’s details
Company: Arch Chemicals, Inc.
1200 Bluegrass Lakes Parkway
Alpharetta, GA
30004
United States of America (USA)

E-mail address: sds@lonza.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Skin corrosion: Category 1B
Serious eye damage: Category 1
Short-term (acute) aquatic hazard: Category 1
Long-term (chronic) aquatic hazard: Category 2

GHS label elements
Hazard pictograms:

Signal word: Danger
Hazard statements: H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements: Prevention:
P264 Wash skin thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
HTH Salt Care Algaecide

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P363 Wash contaminated clothing before reuse.
P391 Collect spillage.

Storage:
P405 Store locked up.

Disposal:
P501 Dispose of contents/container in accordance with local regulation.

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

<table>
<thead>
<tr>
<th>Chemical name / Synonyms</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides</td>
<td>68391-01-5</td>
<td>5 - 15</td>
</tr>
<tr>
<td>Propan-2-ol ; Isopropanol</td>
<td>67-63-0</td>
<td>0.5 - 2.5</td>
</tr>
</tbody>
</table>

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.

If inhaled : 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.

In case of 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.

In case of 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.

If swallowed : 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.
Most important symptoms and effects, both acute and delayed: None known.

SECTION 5. FIREFIGHTING MEASURES

Suitable 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.

Specific hazards during firefighting: Material may be ignited only if preheated to high temperatures, for example in a fire.

Further information: 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.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use the personal protective equipment recommended in Section 8 and a NIOSH approved self-contained breathing apparatus. 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.

SECTION 7. HANDLING AND STORAGE

Advice on safe 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.

Conditions for safe storage: Store in a cool dry ventilated location, away from sources of ignition or other incompatible conditions and chemicals. Keep container(s) closed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
</table>
### Biological occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Sampling time</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propan-2-ol</td>
<td>67-63-0</td>
<td>Acetone</td>
<td>Urine</td>
<td>End of shift at end of work week.</td>
<td>40 mg/l</td>
<td>ACGIH BEI</td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>67-63-0</td>
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<td>End of shift at end of work week.</td>
<td>40 mg/l</td>
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</tr>
</tbody>
</table>

**Engineering measures**: 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.

**Personal protective equipment**

**Hand protection**

**Remarks**: 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.

**Skin and body protection**: Impervious

**Protective measures**: An eye wash and safety shower should be provided in the immediate work area.
SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : clear
Colour : blue
Odour : Amine
Odour Threshold : no data available
pH : 6.0 - 8.5
Melting point/freezing point : no data available
Boiling point/boiling range : no data available
Flash point : no data available
Evaporation rate : no data available
Flammability (solid, gas) : Combustible above 93 deg. C / 200 deg. F.
Flammability (liquids) : no data available
Upper explosion limit : Not applicable
Lower explosion limit : Not applicable
Vapour pressure : no data available
Relative vapour density : no data available
Relative density : 0.99
Density : no data available
Water solubility : completely miscible
Partition coefficient: n-octanol/water : no data available
Auto-ignition temperature : no data available
Decomposition temperature : no data available
Viscosity, dynamic : no data available
Viscosity, kinematic : no data available
Oxidizing properties : no data available

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid : Sparks, open flame, other ignition sources, and elevated temperatures.
Incompatible materials : Strong oxidizing agents
Hazardous decomposition products : Carbon monoxide, Carbon dioxide ammonium compounds

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, skin, eyes, ingestion

Acute toxicity
Acute oral toxicity : LD50 (Rat): Believed to be 3,000 - 4,000 mg/kg

Acute inhalation toxicity : Acute toxicity estimate: > 40 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Skin corrosion/irritation
Remarks: Corrosive to skin

Serious eye damage/eye irritation
Remarks: Corrosive to eyes

Respiratory or skin sensitisation
Remarks: This material is not known or reported to be a skin or respiratory sensitizer.

Carcinogenicity

IARC
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA
No component of this product present at levels greater than or equal to 0.1% is on OSHA’s list of regulated carcinogens.

NTP
No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
HTH Salt Care Algaecide

Further information
Remarks: no data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity
no data available

Persistence and degradability
no data available

Bioaccumulative potential

Components:

Propan-2-ol:
Partition coefficient: n-octanol/water : log Pow: 0.05 (25 °C)

Mobility in soil
no data available

Other adverse effects

Ozone-Depletion Potential : Regulation: US. EPA Clean Air Act (CAA) Section 602 Ozone-Depleting Substances (40 CFR 82, Subpt. A, App A & B) Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : No data for product. Individual constituents are as follows:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : 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.

SECTION 14. TRANSPORT INFORMATION
HTH Salt Care Algaecide

DOT

<table>
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<tr>
<th>UN number</th>
<th>1760</th>
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<tr>
<td>Proper shipping name</td>
<td>Corrosive liquids, n.o.s. (Alkyldimethylbenzylammonium chloride)</td>
</tr>
<tr>
<td>Transport hazard class</td>
<td>8</td>
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<td>Packing group</td>
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TDG

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<tr>
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IMDG

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</tr>
<tr>
<td>Packing group</td>
<td>II</td>
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<tr>
<td>Labels</td>
<td>8</td>
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<tr>
<td>EmS Number 1</td>
<td>F-A</td>
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<td>EmS Number 2</td>
<td>S-B</td>
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<tr>
<td>Environmental hazards</td>
<td>Marine pollutant: yes</td>
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</table>

ADR

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<th>UN number</th>
<th>1760</th>
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</thead>
<tbody>
<tr>
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</tr>
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<td>Packing group</td>
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<td>Hazard Identification Number</td>
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<td>Environmental hazards</td>
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</tbody>
</table>
RID

UN number : 1760  
Proper shipping name : CORROSIVE LIQUID, N.O.S.  
(Alkylidimethylbenzylammonium chloride)  
Transport hazard class : 8  
Packing group : II  
Classification Code : C9  
Hazard Identification Number : 80  
Labels : 8  
Environmental hazards : yes

Special precautions for user : none  
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable

SECTION 15. REGULATORY INFORMATION

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals.

EPA Registration number : 1258-1077  
Signal word : DANGER!  
Hazard statements : Harmful if absorbed through skin.  
Corrosive. Causes skin burns.  
Corrosive - causes irreversible eye damage.  
This pesticide is toxic to fish.

EPCRA - Emergency Planning and Community Right-to-Know Act

SARA 311/312 Hazards

See above: SECTION 2. Hazard Identification-GHS Classification

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).  
This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propan-2-ol</td>
<td>67-63-0</td>
<td>0.5 - 2.5 %</td>
</tr>
</tbody>
</table>

This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450.

Clean Water Act

This product does not contain any Hazardous Chemicals listed under the U.S. Clean Water Act, Section 311, Table 117.3.

This product does not contain any Hazardous Substances listed under the U.S. Clean Water Act, Section 311, Table 116.4A.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307.

US State Regulations

Massachusetts Right To Know

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propan-2-ol</td>
<td>67-63-0</td>
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</table>

Pennsylvania Right To Know

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
</tr>
<tr>
<td>Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides</td>
<td>68391-01-5</td>
</tr>
</tbody>
</table>

New Jersey Right To Know

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
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<tbody>
<tr>
<td>Water</td>
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<td>Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides</td>
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</tr>
<tr>
<td>Propan-2-ol</td>
<td>67-63-0</td>
</tr>
</tbody>
</table>

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Canadian lists

NPRI

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propan-2-ol</td>
<td>67-63-0</td>
</tr>
</tbody>
</table>

The components of this product are reported in the following inventories:

TSCA : This is an EPA registered pesticide.
SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH : US. ACGIH Threshold Limit Values
ACGIH BEI : US. ACGIH. BEIs: Biological Exposure Indices
NIOSH/GUIDE : US. NIOSH: Pocket Guide to Chemical Hazards
OSHA_TRANS : US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Z1A : US. OSHA Table Z-1-A (29 CFR 1910.1000)

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMI - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50% of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Arch is a wholly-owned subsidiary of Lonza and continues to operate as Arch Chemicals, Inc.

Revision Date : 2018.10.10

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Date format : yyyy/mm/dd