SAFETY DATA SHEET

1. Identification

Product identifier BTC 50

Other means of identification

- Product code: 3307
- Recommended use: Biocidal product
- Recommended restrictions: For industrial use only.

Manufacturer/Importer/Supplier/Distributor information

- Manufacturer: Stepan Company
  - Address: 22 West Frontage Road
  - Company name: Northfield, IL 60093
  - USA
- Telephone: General 1-847-446-7500
  - Medical: 1-800-228-5635
  - Chemtrec: 1-800-424-9300
  - Chemtrec Int'l: +1 703-527-3887

2. Hazard(s) identification

- Physical hazards
  - Flammable liquids: Category 3

- Health hazards
  - Acute toxicity, oral: Category 4
  - Acute toxicity, inhalation: Category 2
  - Skin corrosion/irritation: Category 1
  - Serious eye damage/eye irritation: Category 1

- Environmental hazards
  - Hazardous to the aquatic environment, acute hazard: Category 1
  - Hazardous to the aquatic environment, long-term hazard: Category 1

OSHA defined hazards
- Not classified.

Label elements

Signal word: Danger

Hazard statement: Flammable liquid and vapor. Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. Fatal if inhaled. Very toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention
- Keep container tightly closed. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only outdoors or in a well-ventilated area. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection.

Response
- If swallowed: Immediately call a poison center/doctor. If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. 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. Specific treatment is urgent (see this label). Wash contaminated clothing before reuse. In case of fire: Use appropriate media to extinguish. Collect spillage.
3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alkyl dimethyl benzyl ammonium chloride (C12-18)</td>
<td></td>
<td>68391-01-5</td>
<td>50 - 51.5</td>
</tr>
<tr>
<td>Water</td>
<td></td>
<td>7732-18-5</td>
<td>43 - 46</td>
</tr>
<tr>
<td>Ethanol</td>
<td></td>
<td>64-17-5</td>
<td>5 - 5.5</td>
</tr>
</tbody>
</table>

4. First-aid measures

Inhalation
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.

Skin contact
Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Eye contact
Suddenly flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

Ingestion
Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting.

Most important symptoms/effects, acute and delayed
Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Indication of immediate medical attention and special treatment needed
If the product is ingested, probable mucosal damage may contraindicate the use of gastric lavage. Treat the affected person appropriately.

5. Fire-fighting measures

Suitable extinguishing media
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical
Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters
Firefighters should wear full protective clothing including self contained breathing apparatus.

Fire fighting equipment/instructions
In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

Specific methods
Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards
Flammable liquid and vapor.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Immediately evacuate personnel to safe areas. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Do not breathe vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained.
Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent product from entering drains. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

Environmental precautions

Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

Precautions for safe handling

Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe vapor. Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not taste or swallow. Avoid prolonged exposure. Do not get this material on clothing. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Avoid release to the environment. Do not empty into drains.

Conditions for safe storage, including any incompatibilities

DO NOT CONTAMINATE WATER, FOOD OR FEED BY STORAGE OR DISPOSAL. PESTICIDE STORAGE: Store in a dry place no lower in temperature than 50°F or higher than 120°F. Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Keep in an area equipped with sprinklers.

8. Exposure controls/personal protection

- Ensure adequate ventilation, especially in confined areas. Eye wash facilities and emergency shower must be available when handling this product.

Eye/face protection
- Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection
- Hand protection
  - Wear appropriate chemical resistant gloves.
- Other
  - Wear appropriate chemical resistant clothing. Wear protective gloves.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol (CAS 64-17-5)</td>
<td>PEL</td>
<td>1900 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 ppm</td>
</tr>
</tbody>
</table>

US. ACGIH Threshold Limit Values

<table>
<thead>
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<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol (CAS 64-17-5)</td>
<td>STEL</td>
<td>1000 ppm</td>
</tr>
</tbody>
</table>

US. NIOSH: Pocket Guide to Chemical Hazards

<table>
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<td>1900 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 ppm</td>
</tr>
</tbody>
</table>

Biological limit values

No biological exposure limits noted for the ingredient(s).
Respiratory protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Wear positive pressure self-contained breathing apparatus (SCBA).

Thermal hazards: Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations: When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance
- Physical state: Liquid.
- Form: Not available.
- Color: Not available.
- Odor: Not available.
- Odor threshold: Not available.
- pH: Not available.
- Melting point/freezing point: Not available.
- Initial boiling point and boiling range: Not available.
- Flash point: 126.0 °F (52.2 °C) Pensky-Martens Closed Cup
- Evaporation rate: Estimated slower than ethyl ether
- Flammability (solid, gas): Not available.

Upper/lower flammability or explosive limits
- Flammability limit - lower (%): Not available.
- Flammability limit - upper (%): Not available.
- Explosive limit - lower (%): Not available.
- Explosive limit - upper (%): Not available.

Vapor pressure: Not determined or unknown

Vapor density: Estimated heavier than air

Relative density: Not available.

Solubility(ies)
- Solubility (water): Not available.
- Auto-ignition temperature: Not available.
- Decomposition temperature: Not available.

Viscosity: 75 cP @ 25C

Other information
- Density: 8.10 lb/gal @ 25C
- pH in aqueous solution: 7.5 - 8.5 (10% in H2O)
- Pour point: 18 °F (-7.78 °C)

10. Stability and reactivity

Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability: Material is stable under normal conditions.

Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use.

Conditions to avoid: Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Incompatible materials: Strong oxidizing agents. Anionic surfactants

Hazardous decomposition products: Upon decomposition, this product may yield oxides of nitrogen and ammonia, carbon dioxide, carbon monoxide and other low molecular weight hydrocarbons.
11. Toxicological information

Information on likely routes of exposure

- **Inhalation**: Not likely, due to the form of the product.
- **Skin contact**: Causes severe skin burns.
- **Eye contact**: Causes serious eye damage.
- **Ingestion**: Harmful if swallowed. Causes digestive tract burns.

**Symptoms related to the physical, chemical and toxicological characteristics**

- Burning pain and severe corrosive skin damage. Causes serious eye damage.

Information on toxicological effects

**Acute toxicity**

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTC 50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rabbit</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Mist</td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td></td>
<td>0.054 - 0.51 mg/l</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>&gt; 500 mg/kg</td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation**

- Causes severe skin burns and eye damage.

**Serious eye damage/eye irritation**

- Causes serious eye damage.

**Respiratory or skin sensitization**

- **Respiratory sensitization**: Not available.
- **Skin sensitization**: This product is not expected to cause skin sensitization.

**Germ cell mutagenicity**

- No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity**

- This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

- **IARC Monographs. Overall Evaluation of Carcinogenicity**
  - Not listed.
  - Not regulated.
- **US. National Toxicology Program (NTP) Report on Carcinogens**
  - Not listed.

**Reproductive toxicity**

- This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure**

- Not applicable.

**Specific target organ toxicity - repeated exposure**

- Not applicable.

**Aspiration hazard**

- Not applicable.

12. Ecological information

**Ecotoxicity**

- Very toxic to aquatic life with long lasting effects.

<table>
<thead>
<tr>
<th>Product</th>
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<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTC 50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Algae</td>
<td>EC50</td>
<td>0.126 ppm, 96 hours</td>
</tr>
<tr>
<td>Species</td>
<td>Test Results</td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>LC50 0.0116 - 0.032 ppm, 48 hours</td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>LC50 0.056 ppm, 96 hours</td>
<td></td>
</tr>
</tbody>
</table>

**Persistence and degradability**
- Readily biodegradable.

**Bioaccumulative potential**
- No data available.

**Partition coefficient n-octanol / water (log Kow)**
- Ethanol: -0.31

**Mobility in soil**
- No data available.

**Other adverse effects**
- No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### 13. Disposal considerations

**Disposal instructions**
- PESTICIDE DISPOSAL - Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

- CONTAINER DISPOSAL - Nonrefillable Container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse empty container with water. Then offer for recycling or reconditioning. If not available, puncture and dispose in a sanitary landfill.

**Hazardous waste code**
- The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products**
- Not available.

**Contaminated packaging**
- Not available.

### 14. Transport information

**DOT**
- UN number: UN2920
- UN proper shipping name: Corrosive liquid, flammable, N.O.S. (Quaternary ammonium chloride, Ethanol)
- Transport hazard class(es):
  - Class: 8
  - Subsidiary risk: 3
  - Packing group: II
- Special precautions for user: Not available.

**IATA**
- UN number: UN2920
- UN proper shipping name: Corrosive liquid, flammable, N.O.S. (Quaternary ammonium chloride, Ethanol)
- Transport hazard class(es):
  - Class: 8
  - Subsidiary risk: 3
  - Packing group: II
- Environmental hazards: Yes
- Special precautions for user: Not available.

**IMDG**
- UN number: UN2920
- UN proper shipping name: Corrosive liquid, flammable, N.O.S. (Quaternary ammonium chloride, Ethanol), MARINE POLLUTANT
- Transport hazard class(es):
  - Class: 8
  - Subsidiary risk: 3
  - Packing group: II
  - Environmental hazards:
    - Marine pollutant: Yes
    - EmS: F-E, S-C
- Special precautions for user: Not available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
- Not available.
15. Regulatory information

**US federal regulations**

This product is a U.S. EPA registered pesticide.

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**SARA 304 Emergency release notification**

Not regulated.


Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical**

Yes

- Classified hazard categories
  - Flammable (gases, aerosols, liquids, or solids)
  - Acute toxicity (any route of exposure)
  - Skin corrosion or irritation
  - Serious eye damage or eye irritation

**SARA 313 (TRI reporting)**

Not regulated.
Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace
Ethanol (CAS 64-17-5) Low priority

FIFRA Information
This chemical is a pesticide product registered by the 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, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Signal word DANGER
Hazard statement Corrosive.
Causes irreversible eye damage and skin burns.
May be fatal if swallowed or inhaled.
Harmful if absorbed through skin.
Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.
This pesticide is toxic to fish and aquatic invertebrates.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory (NZIoC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Taiwan Inventory (TCSI)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 08-14-2014
Revision date 05-07-2018
Version # 04

Disclaimer
Terms and Conditions. This SDS is designed only as guidance for the products to which it applies. To the greatest extent permitted by applicable law, nothing contained herein creates any legal obligation including contractual obligations, expressed or implied warranties, including any warranties of merchantability or fitness for particular purpose; or confers any intellectual property rights, including rights to use trademarks or a license to use patents, issued or pending. The information contained herein is based on the manufacturer's own study and the work of others, and is subject to change at any time without further notice. There is no warranty, expressed or implied, as to the accuracy, completeness or adequacy of the information contained herein, and neither the provider nor the manufacturer (nor the agents, directors, officers, contractors or employees of either) are liable to any party for any damages of any nature, including direct, special or consequential damages arising out of or in connection with the accuracy, completeness, adequacy or furnishing of any information in this SDS, or in any other way related (directly or indirectly) to this SDS. The receipt and use of this information constitutes consent to these terms and conditions.
Revision information

Identification: Recommended restrictions
Hazard(s) identification: Hazard statement
Hazard(s) identification: Disposal
Hazard(s) identification: Prevention
Hazard(s) identification: GHS Symbols
Hazard(s) identification: Supplemental information
Composition / Information on Ingredients: Disclosure Overrides
Physical & Chemical Properties: Multiple Properties
Toxicological information: Specific target organ toxicity - single exposure
HazReg Data: International Inventories
GHS: Classification