SAFETY DATA SHEET

Revision Date 13-Dec-2019

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier
Product Name KC-644
Other means of identification Product Code 20644
Recommended use of the chemical and restrictions on use
Recommended Use Cleaner and Sanitizer
Uses advised against Follow the directions for use on the label when applying this product
Details of the supplier of the safety data sheet
Manufacturer Address PSSI Chemical Innovations
3729 Peddle Hollow Road
Kieler, WI 53812
Emergency telephone number
Company Phone Number 888-671-5366
Emergency Telephone Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification
OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Classification</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 1</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Acute toxicity - Oral</td>
<td>Category 4</td>
</tr>
</tbody>
</table>

Label elements

Appearance Aqueous solution
Physical state Liquid
Odor Benzaldehyde

Emergency Overview

Danger
Hazard statements
Causes serious eye damage
Causes skin irritation
Harmful if swallowed

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves/eye protection/face protection

Precautionary Statements - Response
Specific treatment (see Section 4 on SDS)
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 or doctor
IF ON SKIN: Wash with plenty of water and soap. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse
IF SWALLOWED: Call a poison center or doctor if you feel unwell. Rinse mouth

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazard not otherwise classified (HNOC)
Not Applicable

Other Information
• Very toxic to aquatic life with long lasting effects
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>88.5-89</td>
</tr>
<tr>
<td>Alkyl (C14, 50%; C12, 40%; C16-10%) Dimethyl Benzyl Ammonium Chloride</td>
<td>68424-85-1</td>
<td>4</td>
</tr>
<tr>
<td>Octyl Decyl Dimethyl Ammonium Chloride</td>
<td>32426-11-2</td>
<td>3</td>
</tr>
<tr>
<td>Dioctyl Dimethyl Ammonium Chloride</td>
<td>5538-94-3</td>
<td>1.5</td>
</tr>
<tr>
<td>Didecyl Dimethyl Ammonium Chloride</td>
<td>7173-51-5</td>
<td>1.5</td>
</tr>
<tr>
<td>Ethyl Alcohol</td>
<td>64-17-5</td>
<td>1-1.5</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures
General advice
Have the product container, label, or SDS with you when calling a poison control center or doctor or going for treatment.

Eye contact
Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

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 advice.

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 treatment advice.

Ingestion
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
Symptoms
See Section 11 for symptom information.

Indication of any immediate medical attention and special treatment needed
Note to physicians
Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical
No information available.

Hazardous combustion products

Explosion data

Sensitivity to Mechanical Impact
None.

Sensitivity to Static Discharge
None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers with flooding quantities of water until well after fire is out. Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Personal precautions
Use personal protection recommended in Section 8. Wear respirator. Ensure adequate ventilation, especially in confined areas.

For emergency responders
Isolate area. Keep unnecessary personnel away.

Environmental precautions
Prevent entry into waterways, sewers, basements or confined areas. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up
Methods for containment
Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
Small spills may be mopped up, flushed away with water or absorbed on some absorbent material and incinerated. For large spills: Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.

7. HANDLING AND STORAGE

Precautions for safe handling
Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Use only in well-ventilated areas. Avoid breathing vapors or mists. Wash thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice.
### Conditions for safe storage, including any incompatibilities

**Storage Conditions**
Keep containers tightly closed in a dry, cool and well-ventilated place. Keep from freezing. Store only in original container. Keep this product under locked storage sufficient to make it inaccessible to children or persons unfamiliar with its proper use.

**Incompatible materials**

---

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**Exposure Guidelines**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Alcohol 64-17-5</td>
<td>STEL: 1000 ppm</td>
<td>TWA: 1000 ppm, 1900 mg/m³</td>
<td>IDLH: 3300 ppm</td>
</tr>
</tbody>
</table>

**Appropriate engineering controls**
Showers, eyewash stations, ventilation system.

**Individual protection measures, such as personal protective equipment**

- **Eye/face protection**
  - Splash proof chemical goggles and face shield.

- **Skin and body protection**
  - Wear protective Neoprene™ gloves or rubber gloves. Wear suitable protective clothing and rubber boots.

- **Respiratory protection**
  - If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations**
Wash face, hands and any exposed skin thoroughly after handling. Wash contaminated clothing and shoes before reuse. Do not eat, drink or smoke when using this product.

---

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical state</strong></td>
<td>Liquid</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Appearance</strong></td>
<td>Aqueous solution</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>Clear, Yellow</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Odor</strong></td>
<td>Benzaldehyde</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Odor threshold</strong></td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>7</td>
<td>±1 @ 21°C</td>
<td></td>
</tr>
<tr>
<td><strong>Melting point/freezing point</strong></td>
<td>1.7 °C / 35 °F</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Boiling point / boiling range</strong></td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>&gt; 93.3 °C / &gt; 200 °F</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Flammability Limit in Air</strong></td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Upper flammability limit</strong></td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Lower flammability limit</strong></td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vapor pressure</strong></td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vapor density</strong></td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Specific Gravity</strong></td>
<td>0.986 g/cc</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Water solubility</strong></td>
<td>Soluble in water</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Solubility in other solvents</strong></td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Partition coefficient</strong></td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Autoignition temperature</strong></td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Kinematic viscosity</strong></td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dynamic viscosity</strong></td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Explosive properties</strong></td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Oxidizing properties</strong></td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>VOC Content (%)</strong></td>
<td>1.4% (0.115 lbs/gal)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### 10. STABILITY AND REACTIVITY

**Reactivity**
No data available.

**Chemical stability**
Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**
None under normal processing.

**Conditions to avoid**
None known.

**Incompatible materials**
Hazardous Decomposition Products

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation
Inhalation of vapors in high concentration may cause irritation of respiratory system. Vapors may be irritating to eyes, nose, throat, and lungs.

Eye contact
Risk of serious damage to eyes. Corrosive to the eyes and may cause severe damage including blindness.

Skin Contact
Corrosive. Contact causes severe skin irritation and possible burns.

Ingestion
Harmful if swallowed. May cause burning pain in mouth, throat, abdomen, severe swelling of the larynx, skeletal muscle paralysis affecting the ability to breathe, circulatory shock, convulsions when swallowed.

Chemical Name

<table>
<thead>
<tr>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alkyl (C14, 50%; C12, 40%; C16-10%) Dimethyl Benzyl Ammonium Chloride</td>
<td>426 mg/kg (Rat)</td>
<td>-</td>
</tr>
<tr>
<td>Octyl Decyl Dimethyl Ammonium Chloride</td>
<td>238 mg/kg</td>
<td>3342 mg/kg</td>
</tr>
<tr>
<td>Diocyl Dimethyl Ammonium Chloride</td>
<td>238 mg/kg</td>
<td>3342 mg/kg</td>
</tr>
<tr>
<td>Didocyl Dimethyl Ammonium Chloride</td>
<td>84 mg/kg (Rat)</td>
<td>&gt; 1000 mg/kg (Rat)</td>
</tr>
<tr>
<td>Ethyl Alcohol</td>
<td>7060 mg/kg (Rat)</td>
<td>-</td>
</tr>
</tbody>
</table>

Information on toxicological effects

Symptoms
No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization
No information available.

Germ cell mutagenicity
No information available.

Carcinogenicity
Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage.

Chemical Name

<table>
<thead>
<tr>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Alcohol - 64-17-5</td>
<td>A3</td>
<td>-</td>
<td>Known</td>
</tr>
</tbody>
</table>

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen
NTP (National Toxicology Program)
Known - Known Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity
No information available.

STOT - single exposure
No information available.

STOT - repeated exposure
No information available.

Aspiration hazard
No information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity
0% of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document

<table>
<thead>
<tr>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Mist</th>
</tr>
</thead>
<tbody>
<tr>
<td>862.00 mg/kg</td>
<td>34,259.00 mg/kg</td>
<td>9,976.00 mg/l</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecotoxicity
Very toxic to aquatic life with long lasting effects
0.005% of the mixture consists of components(s) of unknown hazards to the aquatic environment

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Alcohol</td>
<td>13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through</td>
<td>9268 - 14221: 48 h Daphnia magna mg/L LC50</td>
</tr>
<tr>
<td>64-17-5</td>
<td>12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static</td>
<td>10800: 24 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>100: 96 h Pimephales promelas mg/L LC50 static</td>
<td>2: 48 h Daphnia magna mg/L EC50 Static</td>
<td></td>
</tr>
</tbody>
</table>

Persistence and degradability
No information available.

Bioaccumulation

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Alcohol - 64-17-5</td>
<td>-0.32</td>
</tr>
</tbody>
</table>

Mobility
Soluble in water.

Other adverse effects
No information available
13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Disposal of wastes
Contaminated packaging
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Dispose of in accordance with federal, state and local regulations.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Alcohol - 64-17-5</td>
<td>Toxic Ignitable</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT

<table>
<thead>
<tr>
<th>UN/ID No.</th>
<th>1903</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper shipping name</td>
<td>Disinfectants, liquid, corrosive, n.o.s. (contains quaternary ammonium compounds)</td>
</tr>
<tr>
<td>Hazard Class</td>
<td>8</td>
</tr>
<tr>
<td>Packing Group</td>
<td>II</td>
</tr>
<tr>
<td>Emergency Response Guide Number</td>
<td>153</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>TSCA</th>
<th>Complies</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSL/NDSL</td>
<td>Complies</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>Complies</td>
</tr>
</tbody>
</table>

Legend:

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

- Acute health hazard: Yes
- Chronic Health Hazard: No
- Fire hazard: No
- Sudden release of pressure hazard: No
- Reactive Hazard: No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65
Ethyl alcohol is only a considered a Proposition 65 developmental hazard when it is ingested as an alcoholic beverage.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Alcohol - 64-17-5</td>
<td>Carcinogen Developmental</td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Alcohol - 64-17-5</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

EPA Pesticide Registration Number

63679-2

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and Chemical Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>Corrosive</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Personal protection</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>C (safety glasses, gloves, synthetic apron)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health hazards</th>
<th>Flammability</th>
<th>Physical hazards</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Prepared By
Technical Department

Issue Date
30-Nov-2018

Revision Date
13-Dec-2019
Dislaimer
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 health hazards given on this SDS apply to this product in its concentrated form (as supplied) and may differ significantly at use dilution. The signs and symptoms of exposure apply only to negligence in handling or misuse of the concentrated product and not to the routine exposure of the diluted product under conditions of ordinary use.

End of Safety Data Sheet