

# Safety Data Sheet

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **CS-177 Quaternary Ammonium Disinfectant**

Manufacturer:

Issue Date: February 2015

**Chemical Systems**

6429 West Jones Avenue

P.O. Box 810

Zellwood, FL 32798

Phone Number: 407.886.2329



**24 Hour Emergency Number CHEMTREC: 800.424.9300**

## 2. HAZARDS IDENTIFICATION

**GHS Classification:** ACUTE TOXICITY (ORAL) – Category 4  
ACUTE TOXICITY (INHALED) – Category 4  
ACUTE TOXICITY (DERMAL) – Category 4  
SKIN CORROSION / IRRITATION – Category 1A  
SERIOUS EYE DAMAGE / EYE IRRITATION – Category 1

**Signal Word:** Danger

**Pictograms:**



**Hazard Statements:** Harmful if swallowed, in contact with skin, or inhaled.  
Causes severe skin burns and eye damage.

**Precautionary Statements:**

**Prevention:** Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep only in original container. Wash hands thoroughly after handling.

**Response:** Absorb spillage to prevent material damage.  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician.  
IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting.  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician.  
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 physician.

**Storage:** Store in corrosive resistant container with a resistant inner liner.

**Disposal:** See section 13 for waste disposal information.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>CAS Number/Name</u>		<u>Percentage</u>
68424-85-1	Alkyl dimethyl benzyl ammonium chloride	1 – 7%
32426-11-2	Octyl decyl dimethyl ammonium chloride	1 – 5%
5538-94-3	Diocetyl dimethyl ammonium chloride	1 – 5%
7173-51-5	Didecyl dimethyl ammonium chloride	1 – 5%

## 4. FIRST AID MEASURES

<b>Eye Contact:</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
<b>Skin Contact:</b>	Take off immediately all contaminated clothing. Rinse skin with water or shower. Get medical attention immediately. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Inhalation:</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately.
<b>Ingestion:</b>	Get medical attention immediately. Rinse mouth. Do not induce vomiting.
<b>Note to Physician:</b>	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

## 5. FIRE FIGHTING MEASURES

<b>Flash Point:</b>	Non-flammable
<b>Method:</b>	Non-flammable
<b>Autoignition Temperature:</b>	Non-flammable
<b>Flammable Limits in Air, by Volume:</b>	<b>Upper:</b> Non-flammable <b>Lower:</b> Non-flammable
<b>Extinguishing Media:</b>	Non-flammable/Non-combustible Use water spray to keep fire-exposed containers cool.
<b>Fire Fighting Procedures:</b>	Use water to cool containers, but avoid getting water into containers. Wear NIOSH/MSHA approved positive-pressure self-contained breathing apparatus and full protective clothing.
<b>Fire and Explosion Hazard:</b>	None known.

## 6. ACCIDENTAL RELEASE MEASURES

### **Personal Precautions**

Evacuate unnecessary personnel.

Follow protective measures provided under Personal Protection in Section 8.

### **Environmental Precautions**

According to CERCLA regulations, environmental releases that exceed the RQ must be reported to the National Response Center at 1.800.424.8802. State and local response centers may also need to be contacted. Contain liquids and prevent discharges to streams or sewers. Large leaks may require environmental consideration and possible evacuation. Do not apply water to the leak.

This product may react strongly with bases.

NEVER FLUSH TO SEWER.

### **Methods for Cleaning Up**

Dry material can be shoveled up. Liquid material can be removed with a vacuum truck. Neutralize remaining traces with any dilute inorganic base. Flush spill area with water followed by a liberal covering of sodium carbonate. All clean-up material should be removed for proper treatment or disposal. Affected soils should be removed and placed in approved containers.

## 7. HANDLING AND STORAGE

### **Handling**

Avoid breathing the mist or vapors. Do not get in eyes, on skin, or on clothing. Wash contaminated clothing before reuse. Do not take internally. Wear personal protective equipment as described in Exposure Controls/Personal Protection (Section 8) of the SDS. Wash thoroughly after handling; exposure can cause burns, which are not immediately painful or visible.

Avoid contact with bases to avoid possible violent reaction.

Containers, even those that have been emptied, will retain product residue and vapor and should be handled as if they were full.

### **Special Mixing and Handling Instructions**

When making solutions, ALWAYS wear ALL protective clothing described in Section 8 of this SDS. NEVER add water to product. ALWAYS add product, with constant stirring, slowly to surface lukewarm (80°F to 100°F) water, to assure product is being completely mixed as it is added. Avoid contact with aluminum, tin, zinc, and alloys containing these metals. Do not mix with products that contain chlorine bleach.

Before adding product, ALWAYS empty and clean containers of all residues to avoid a possible VIOLENT reaction between product and unknown residue. Returnable containers should be shipped in accordance with supplier's recommendations. Return shipments should comply with all federal, state, and DOT regulations. All residues should be removed from containers prior to disposal.

### **Storage**

Keep container tightly closed and properly labeled.  
Dikes should hold 110% of storage volume.

## **8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

### **CAS Number/Name**

68424-85-1 Alkyl dimethyl benzyl ammonium chloride

### **Exposure Limits**

PEL: ND  
TLV: ND

### **CAS Number/Name**

32426-11-2 Octyl decyl dimethyl ammonium chloride

### **Exposure Limits**

PEL: ND  
TLV: ND

### **CAS Number/Name**

5538-94-3 Dioctyl dimethyl ammonium chloride

### **Exposure Limits**

PEL: ND  
TLV: ND

### **CAS Number/Name**

7173-51-5 Didecyl dimethyl ammonium chloride

### **Exposure Limits**

PEL: ND  
TLV: ND

### **Engineering Controls**

No special ventilation required under normal use.

Where engineering controls are not feasible use adequate local exhaust ventilation wherever mist, spray, or vapor may be generated.

### **Personal Protection**

#### **Respiratory:**

Respiratory protection is not required under normal use.

If needed, wear an approved NIOSH/MSHA respirator.

#### **Eye/Face:**

Wear chemical safety goggles. (ANSI Z87.1)

When appropriate, use a face shield to protect against splashing.

#### **Skin:**

Wear chemical resistant gloves such as rubber, neoprene, or vinyl.

Wash contaminated clothing and dry before reuse.

Whenever there is a possibility of splash or contact, wear chemical resistant clothing and boots.

Discard shoes that cannot be decontaminated.

#### **Other:**

Emergency shower and eyewash facility should be in close proximity. (ANSI Z358.1)

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Clear pale pink
Odor	Mild
Boiling Point	212°F
Melting Point	N/A
Specific Gravity (Water =1)	1.000
Solubility in Water	Completely soluble
Vapor Pressure (Air = 1) (100% Acid)	1
Vapor Density (Air = 1)	1
Evaporation Rate (Butyl acetate = 1)	1

## 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable  
**Reacts with:** Chlorine bleach  
**Hazardous Polymerization:** Will not occur

**Comments:**

Product is corrosive to tin, aluminum, zinc, and alloys containing these metals and will react with these metals in powder form. Avoid contact with products that contain chlorine bleach. See Handling and Storage in Section 7.

**Hazardous Decomposition Products:** None

## 11. TOXICOLOGICAL INFORMATION

**May cause burns to the eyes, skin, and mucous membrane. May cause permanent eye damage. Inhalation of mist or spray can produce burns of the respiratory tract.**

**Potential Health Effects**

Routes of entry: Inhalation, Ingestion, Skin Contact  
Target Organs: Eyes, skin, respiratory tract, and gastrointestinal tract  
Irritancy: Liquid, vapors, or mist may be irritating to eyes, skin, and respiratory tract.  
Sensitizing Capability: None known  
Reproductive Effects: None known  
Cancer Information: None known

**Short Term Exposure (Acute)**

**Inhalation:** Exposure to vapor, mist, or liquid can produce burns of the respiratory tract. Excessive exposures could result in chemical pneumonia.

**Eyes:** Contact can cause tissue damage including burns and possibly blindness.

**Skin:** Contact can cause severe burns and tissue destruction. Effects may be delayed.

**Ingestion:** Corrosive. Severe burns of mucous membranes of mouth, throat, and stomach.

**Repeated Exposure (Chronic)**

None known

**Synergistic Materials**

None known

**Medical Conditions Aggravated by Exposure**

None known

## 12. ECOLOGICAL INFORMATION

Keep out of sewers, drainage areas, and waterways. Report spills and releases, as applicable, under federal and state guidelines.

## 13. DISPOSAL INFORMATION

Dispose of all waste and contaminated equipment in accordance with all applicable federal, state, and local health and environmental regulations.

## 14. TRANSPORT INFORMATION

DOT Identification Number:	UN 1903
DOT Proper Shipping Name:	Disinfectant, liquid, corrosive, n.o.s. ( <i>Quaternary Ammonium Chloride</i> )
DOT Hazard Class:	8 (corrosive)
DOT Packaging Group:	III
DOT Hazardous Substance:	Not applicable
DOT Marine Pollutant(s):	Not applicable
Additional Description Requirement:	Not applicable
ERG Number:	154

## 15. REGULATORY INFORMATION

### SARA Title III

To aid our customers in complying with regulatory requirements, the following chemicals fall under SARA Title III Hazard categories as listed in 40.CFR.370. Please consult these regulations for details.

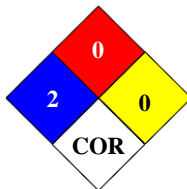
### Chemical Name

None

### CAS Number

## 16. OTHER INFORMATION

2	Health
0	Flammability
0	Physical Hazard
B	Protective Equipment



For additional non-emergency health, safety, or environmental information, contact:



### Chemical Systems

6429 West Jones Avenue  
P.O. Box 810  
Zellwood, FL 32798  
Phone Number: 407.886.2329

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