

Section 1. Product and Company Identification

**Product Name** Didecyldimethylammonium Chloride  
**CAS Number** 7173-51-5

**Parchem - fine & specialty chemicals**  
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Section 2. Hazards Identification

**Classification of the substance or mixture**  
**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Acute toxicity, Oral (Category 3), H301  
Skin corrosion (Category 1B), H314  
Serious eye damage (Category 1), H318  
Acute aquatic toxicity (Category 1), H400  
Chronic aquatic toxicity (Category 2), H411

**GHS Label Elements**

**Pictograms:**



**Signal word:** DANGER

**Hazard and precautionary statements**

**Hazard statements**

H301 Toxic if swallowed.  
H314 Causes severe skin burns and eye damage.  
H318 Causes serious eye damage.  
H400 Very toxic to aquatic life.  
H411 Toxic to aquatic life with long lasting effects.

**Precautionary statements**

P260 Do not breathe dust or mist.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink, or smoke when using this product.  
P273 Avoid release to the environment.



P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
Rinse mouth.  
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.  
Rinse skin with water/shower.  
P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.  
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 or doctor/physician.  
P363 Wash contaminated clothing before reuse.  
P391 Collect spillage.  
P405 Store locked up.  
P501 Dispose of contents/container to an approved waste disposal plant.

**Hazards not otherwise classified (HNOC) or not covered by GHS:** None

Section 3. Composition / Information on Ingredients

**Common Name** Didecyldimethylammonium Chloride  
**Formula**  $C_{22}H_{48}N \cdot Cl$   
**CAS Number** 7173-51-5

COMPONENT	CAS NUMBER	CONCENTRATION
Didecyldimethylammonium Chloride	7173-51-5	<= 100%

Section 4. First Aid Measures

**Description of first-aid measures**

**General Advice:** Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.

**Inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**Skin Contact:** Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

**Eye Contact:** Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**Ingestion:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**Most important symptoms and effects, both acute and delayed:** The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

**Indication of any immediate medical attention and special treatment needed:** No data available



Section 5. Firefighting Measures

**Extinguishing media**

**Suitable extinguishing media:** Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

**Special hazards arising from the substance or mixture:** Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Hydrogen chloride gas

**Advice for firefighters:** Wear self-contained breathing apparatus for firefighting if necessary.

**Further information:** No data available

Section 6. Accidental Release Measures

**Personal precautions, protective equipment, and emergency procedures:** Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

**Environmental precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**Methods and materials for containment and cleaning up:** Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

**Reference to other sections:** For disposal see section 13.

Section 7. Handling and Storage

**Precautions for safe handling:** Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.

**Conditions for safe storage, including any incompatibilities**

Keep container tightly closed in a dry and well-ventilated place.

**Storage class (TRGS 510):** Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

Section 8. Exposure Controls / Personal Protection

**Control parameters**

**Components with workplace control parameters:** Contains no substances with occupational exposure limit values.



### Exposure controls

**Appropriate engineering controls:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

### Personal protective equipment

**Eye/face protection:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Body Protection:** Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection:** Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and: approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of environmental exposure:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## Section 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

**Appearance:** Amorphous

**Color:** Colorless - light yellow

**Odor:** Characteristic

**Odor Threshold:** No data available

**pH:** 6.8 - 6.9 at 25°C (77°F)

**Melting point/freezing point:** 94 - 100°C (201 - 212°F) - OECD Test Guideline 102

**Initial boiling point and boiling range:** > 180°C (> 356°F) - OECD Test Guideline 103 - Decomposes below the boiling point.

**Flash point (Closed Cup):** 26.5°C (79.7°F) - ISO 2719

**Evaporation rate:** No data available

**Flammability (solid, gas):** The product is not flammable. - Flammability (solids)

**Upper/lower flammability or explosive limits:** No data available

**Vapor pressure:** < 0.0058 hPa (< 0.0044 mmHg) at 25 °C (77 °F) - OECD Test Guideline 104

**Vapor density:** No data available

**Relative density:** 0.87 g/cm<sup>3</sup> at 20°C (68°F) - OECD Test Guideline 109

**Water solubility:** 0.39 g/l at 25°C (77°F)

**Partition coefficient (n-Octanol/Water):** log Pow: 2.58 at 20°C (68°F) - OECD Test Guideline 107

**Auto-ignition temperature:** 403°C (757°F) - Tested according to Directive 92/69/EEC.

**Decomposition temperature:** No data available



**Viscosity:** No data available  
**Explosive properties:** Not explosive  
**Oxidizing properties:** No data available

**Other safety information**

**Surface tension:** 25.82 mN/m at 20°C (68°F)

Section 10. Stability and Reactivity

**Reactivity:** No data available  
**Chemical stability:** Stable under recommended storage conditions.  
**Possibility of hazardous reactions:** No data available  
**Conditions to avoid:** No data available  
**Incompatible materials:** Strong oxidizing agents

**Hazardous decomposition products**

Other decomposition products: No data available  
In the event of fire: see section 5

Section 11. Toxicological Information

**Information on toxicological effects**

**Acute toxicity**

LD50 Oral - Rat: 84 mg/kg

**Remarks: Behavioral:** Somnolence (general depressed activity).

**Inhalation:** No data available

LD50 Dermal - Rat (male and female): > 2,000 mg/kg  
(OECD Test Guideline 402)

**Skin corrosion/irritation**

Skin - Rabbit

Result: Causes burns.

(OECD Test Guideline 404)

**Serious eye damage/eye irritation:** No data available

**Respiratory or skin sensitization**

in vivo assay - Guinea pig

Result: Did not cause sensitization on laboratory animals.

(OECD Test Guideline 406)

**Germ cell mutagenicity:** No data available

Ames test

Salmonella typhimurium

**Result:** Not mutagenic in Ames Test.



### **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.

**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.

**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.

**OSHA:** No component of this product, present at levels greater than or equal to 0.1%, is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:** No data available

**Specific target organ toxicity - single exposure:** No data available

**Specific target organ toxicity - repeated exposure:** No data available

**Aspiration hazard:** No data available

### **Additional Information**

Repeated dose toxicity - Rat - male and female - Oral - No observed adverse effect level - 45.5 mg/kg

**RTECS:** BP6560000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea

## Section 12. Ecological Information

### **Toxicity**

#### **Toxicity to fish**

LC50 - Brachydanio rerio (zebrafish) - 0.49 mg/l - 96 h

#### **Toxicity to daphnia and other aquatic invertebrates**

EC50 - Daphnia magna (Water flea) - 0.094 mg/l - 48 h

### **Persistence and degradability**

Biodegradability aerobic - Exposure time 28 d

Result: 69% - Readily biodegradable.

(OECD Test Guideline 301D)

**Bioaccumulative potential:** No data available

**Mobility in soil:** No data available

**Results of PBT and vPvB assessment:** PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life.



Section 13. Disposal Considerations

**Waste Treatment Methods:** Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

**DOT (US)**

**UN Number:** 2923

**Class:** 8(6.1)

**Packing group:** II

**Proper shipping name:** Corrosive Solids, Toxic, N.O.S. (Didecyldimethylammonium chloride)

**Reportable Quantity (RQ):** N/A

**Poison Inhalation Hazard:** No

**IMDG**

**UN Number:** 2923

**Class:** 8(6.1)

**Packing group:** II

**EMS-No:** F-A, S-B

**Proper shipping name:** Corrosive Solid, Toxic, N.O.S. (Didecyldimethylammonium chloride)

**Marine pollutant:** Yes

**IATA**

**UN number:** 2923

**Class:** 8(6.1)

**Packing group:** II

**Proper shipping name:** Corrosive Solid, Toxic, N.O.S. (Didecyldimethylammonium chloride)

Section 15. Regulatory Information

**SARA 302 Components:** No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components:** 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.

**SARA 311/312 Hazards:** Acute Health Hazard

**Massachusetts Right to Know Components**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right to Know Components**

Didecyldimethylammonium chloride (CAS-No. 7173-51-5)

**New Jersey Right to Know Components**

Didecyldimethylammonium chloride (CAS-No. 7173-51-5)



**California Prop. 65 Components:** This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**HMIS Rating**

**Health:** 3

**Flammability:** 0

**Reactivity:** 0

**NFPA Rating**

**Health:** 3

**Flammability:** 3

**Reactivity:** 0

Section 16. Other Information

**Disclaimer:** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

REVISION DATE: 1/27/2016

