# **Material Safety Data Sheet**

Version 5.1 Revision Date 09/13/2012 Print Date 03/25/2013

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Benzyldimethylhexadecylammonium chloride

Product Number : B4136 Brand : Sigma

Supplier : Sigma-Aldrich

3050 Spruce Street SAINT LOUIS MO 63103

USA

Telephone : +1 800-325-5832 Fax : +1 800-325-5052 Emergency Phone # (For : (314) 776-6555

both supplier and

manufacturer)

Preparation Information : Sigma-Aldrich Corporation

Product Safety - Americas Region

1-800-521-8956

### 2. HAZARDS IDENTIFICATION

### **Emergency Overview**

### **OSHA Hazards**

Harmful by ingestion., Harmful by skin absorption., Corrosive

#### **GHS Classification**

Acute toxicity, Dermal (Category 4)
Acute toxicity, Oral (Category 4)
Skin corrosion (Category 1B)
Serious eye damage (Category 1)
Acute aquatic toxicity (Category 1)

### GHS Label elements, including precautionary statements

Pictogram



Signal word Danger

Hazard statement(s)

H302 + H312 Harmful if swallowed or in contact with skin Causes severe skin burns and eye damage.

H400 Very toxic to aquatic life.

Precautionary statement(s)

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/ physician.

**HMIS Classification** 

Health hazard: 3 Flammability: 0 Physical hazards: 0

# NFPA Rating

Health hazard: 3
Fire: 0
Reactivity Hazard: 0

#### **Potential Health Effects**

**Inhalation** May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous

membranes and upper respiratory tract.

**Skin** May be harmful if absorbed through skin. Causes skin burns.

**Eyes** Causes eye burns.

**Ingestion** May be harmful if swallowed.

#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula :  $C_{25}H_{46}CIN$ Molecular Weight : 396.09 g/mol

Component		Concentration
Cetalkonium chloride		
CAS-No.	122-18-9	-
EC-No.	204-526-3	

#### 4. FIRST AID MEASURES

#### General advice

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

#### If inhaled

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

#### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

# In case of eye contact

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

#### If swallowed

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

### 5. FIREFIGHTING MEASURES

# Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

# Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

### **Hazardous combustion products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Hydrogen chloride gas

### 6. ACCIDENTAL RELEASE MEASURES

### **Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

### **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.

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### 7. HANDLING AND STORAGE

### Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

#### Conditions for safe storage

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

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

### Personal protective equipment

### **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).

### **Hand 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.

Immersion protection Material: Nitrile rubber

Minimum layer thickness: 0.11 mm Break through time: > 480 min

Material tested:Dermatril® (Aldrich Z677272, Size M)

Splash protection Material: Nitrile rubber

Minimum layer thickness: 0.11 mm Break through time: > 30 min

Material tested:Dermatril® (Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 873000, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

### Eve 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 and 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.

### **Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

### **Appearance**

Form solid Colour white

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# Safety data

рΗ no data available

Melting

point/freezing point

Melting point/range: 55 - 65 °C (131 - 149 °F) - lit.

**Boiling point** no data available Flash point no data available no data available Ignition temperature Autoignition no data available

temperature

Lower explosion limit no data available Upper explosion limit no data available Vapour pressure no data available no data available Density Water solubility no data available

Partition coefficient: n-octanol/water

Relative vapour

density

no data available

no data available

Odour no data available Odour Threshold no data available Evaporation rate no data available

### **10. STABILITY AND REACTIVITY**

### **Chemical stability**

Stable under recommended storage conditions.

### Possibility of hazardous reactions

no data available

### Conditions to avoid

no data available

### Materials to avoid

Strong oxidizing agents

# Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Hydrogen chloride gas

Other decomposition products - no data available

#### 11. TOXICOLOGICAL INFORMATION

### **Acute toxicity**

## Oral LD50

no data available

### **Inhalation LC50**

no data available

#### **Dermal LD50**

#### Other information on acute toxicity

no data available

### Skin corrosion/irritation

# Serious eye damage/eye irritation

Eyes - rabbit - Mild eye irritation

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Eyes - guinea pig - Moderate eye irritation

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

### 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

### **Teratogenicity**

no data available

## Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

### Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

### **Aspiration hazard**

no data available

### Potential health effects

**Inhalation** May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous

membranes and upper respiratory tract.

**Ingestion** May be harmful if swallowed.

**Skin** May be harmful if absorbed through skin. Causes skin burns.

**Eyes** Causes eye burns.

# Synergistic effects

no data available

# Additional Information

RTECS: BO6822450

### 12. ECOLOGICAL INFORMATION

### **Toxicity**

Toxicity to fish LC50 - other fish - 0.31 mg/l - 96.0 h

Toxicity to daphnia

EC50 - Daphnia magna (Water flea) - 0.02 mg/l - 48 h

and other aquatic invertebrates

Toxicity to algae IC50 - other microorganisms - 0.07 mg/l - 72 h

# Persistence and degradability

Biodegradability Result: - Readily biodegradable.

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### Bioaccumulative potential

no data available

### Mobility in soil

no data available

#### PBT and vPvB assessment

no data available

#### Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic life.

### 13. DISPOSAL CONSIDERATIONS

#### **Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

### Contaminated packaging

Dispose of as unused product.

### 14. TRANSPORT INFORMATION

DOT (US)

UN number: 3261 Class: 8 Packing group: III

Proper shipping name: Corrosive solid, acidic, organic, n.o.s. (Cetalkonium chloride)

Marine pollutant: No

Poison Inhalation Hazard: No

**IMDG** 

UN number: 3261 Class: 8 Packing group: III EMS-No: F-A, S-B Proper shipping name: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (Cetalkonium chloride)

Marine pollutant: No

IATA

UN number: 3261 Class: 8 Packing group: III

Proper shipping name: Corrosive solid, acidic, organic, n.o.s. (Cetalkonium chloride)

### 15. REGULATORY INFORMATION

### **OSHA Hazards**

Harmful by ingestion., Harmful by skin absorption., Corrosive

### **SARA 302 Components**

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

#### **SARA 313 Components**

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.

## 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

CAS-No. Revision Date

Cetalkonium chloride 122-18-9

**New Jersey Right To Know Components** 

CAS-No. Revision Date

Cetalkonium chloride 122-18-9

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# 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.

### **16. OTHER INFORMATION**

### **Further information**

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