

# Benzethonium hydroxide solution: sc-280610



The Power to Question

## MATERIAL SAFETY DATA SHEET

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Benzethonium hydroxide solution

**Product Number:** sc-280610

**Supplier:** Santa Cruz Biotechnology, Inc.  
2145 Delaware Avenue  
Santa Cruz, CA 95060  
800.457.3801 or 831.457.3800

**Emergency:** ChemWatch  
Within the US & Canada: 877-715-9305  
Outside the US & Canada: +800 2436 2255 (1-800-CHEMCALL) or call +613 9573 3112

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

**Formula :** C<sub>27</sub>H<sub>43</sub>NO<sub>3</sub>

**Weight:** 429.64 g/mol

<i>CAS-No.</i>	<i>EC-No.</i>	<i>Index-No.</i>	<i>Concentration</i>
<b>Benzethonium hydroxide</b> 498-77-1	-	-	42 - 44 %
<b>Methanol</b> 67-56-1	200-659-6	603-001-00-X	56 - 58 %

### 3. HAZARDS IDENTIFICATION

#### Emergency Overview

#### OSHA Hazards

Flammable liquid, target organ effect, toxic by inhalation., toxic by ingestion, toxic by skin absorption, corrosive

#### Target Organs

Eyes, Kidney, Liver, Heart, Central nervous system

#### HMIS Classification

**Health hazard:** 3

**Chronic Health Hazard:** \*

**Flammability:** 3

**Physical hazards:** 0

#### NFPA Rating

**Health hazard:** 4

**Fire:** 3

**Reactivity Hazard:** 0

#### Potential Health Effects

**Inhalation** Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

**Skin** Toxic if absorbed through skin. Causes skin burns.

**Eyes** Causes eye burns.

**Ingestion** Toxic if swallowed. Causes burns.

### 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. Take victim immediately to hospital. Consult a physician.

**In case of eye contact**

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

**If swallowed**

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

**5. FIRE-FIGHTING MEASURES****Flammable properties**

Flash point 11 °C – closed cup

Ignition temperature no data available

**Suitable extinguishing media**

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

**Special protective equipment for fire-fighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**Further information**

Use water spray to cool unopened containers.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions**

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapors can accumulate in low areas.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods for cleaning up**

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

**7. HANDLING AND STORAGE****Handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition – No smoking. Take measures to prevent the build up of electrostatic charge.

**Storage**

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place. Recommended storage temperature: 4° C

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Update	Basis
Methanol	67-56-1	TWA	200 ppm	2007-01-01	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Headache Eye damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Danger of cutaneous absorption				

		STEL	250 ppm	2007-01-01	USA. ACGIH Threshold Limit Values (TLV)
Headache Eye damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Danger of cutaneous absorption					
		TWA	200 ppm 260 mg/m3	1989-01-19	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
Skin notation					
		STEL	250 ppm 325 mg/m3	1989-01-19	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
Skin notation					
		TWA	200 ppm 260 mg/m3	1997-08-04	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
The value in mg/m3 is approximate.					

#### Personal protective equipment

##### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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.

##### Eye protection

Tightly fitting safety goggles. Faceshield (8-inch minimum).

##### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the workplace

##### Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	liquid	pH	13.8
Melting point	no data available	Boiling point	no data available
Flash point	11° C – closed cup	Ignition temperature	no data available
Lower explosion limit	no data available	Upper explosion limit	no data available
Density	0.940 g/cm3	Water solubility	no data available

## 10. STABILITY AND REACTIVITY

##### Storage stability

Stable under recommended storage conditions.

##### Conditions to avoid

Heat, flames and sparks.

##### Materials to avoid

Acids, Oxidizing agents, Alkali metals, Acid chlorides, Acid anhydrides, Reducing agents

##### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. – Carbon oxides, nitrogen oxides (NOx)

### **Hazardous reactions**

Vapours may form explosive mixture with air.

## **11. TOXICOLOGICAL INFORMATION**

### **Acute toxicity**

no data available

### **Irritation and corrosion**

no data available

### **Sensitisation**

no data available

### **Chronic exposure**

**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.

### **Signs and Symptoms of Exposure**

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

### **Potential Health Effects**

**Inhalation** Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

**Skin** Toxic if absorbed through skin. Causes skin burns.

**Eyes** Causes eye burns.

**Ingestion** Toxic if swallowed. Causes burns.

**Target Organs** Eyes, Kidney, Liver, Heart, Central nervous system,

## **12. ECOLOGICAL INFORMATION**

### **Toxicity**

no data available

### **Bioaccumulative potential**

no data available

### **PBT and vPvB assessment**

no data available

### **Persistence and degradability**

no data available

### **Mobility in soil**

no data available

### **Other adverse effects**

no data available

## **13. DISPOSAL CONSIDERATIONS**

### **Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

### **Contaminated packaging**

Dispose of as unused product.

## **14. TRANSPORT INFORMATION**

### **DOT (US)**

UN-Number: 3286 Class: 3 (6.1, 8)

Packing group: II

Proper shipping name: Flammable liquid, toxic, corrosive, n.o.s. (Benzethonium hydroxide, Methanol)

Reportable Quantity (RQ): 8621 lbs

Marine pollutant: No

Poison Inhalation Hazard: No

**IMDG**

UN-Number: 3286 Class: 3 (6.1, 8) Packing group: II EMS-No: F-E, S-C  
Proper shipping name: FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (Methanol, Benzethonium hydroxide)  
Marine pollutant: No

**IATA**

UN-Number: 3286 Class: 3 (6.1, 8) Packing group: II  
Proper shipping name: Flammable liquid, toxic, corrosive n.o.s. (Methanol, Benzethonium hydroxide)  
IATA Passenger: Not permitted for transport

**15. REGULATORY INFORMATION****OSHA Hazards**

Flammable liquid, target organ effect, toxic by inhalation., toxic by ingestion, toxic by skin absorption, corrosive

**DSL Status**

This product contains the following components that are not on the Canadian DSL nor NDSL lists.

Benzethonium hydroxide CAS-No.: 498-77-1

**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**

Methanol CAS-No. 67-56-1

**SARA 311/312 Hazards**

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

Methanol CAS-No. 67-56-1

**Pennsylvania Right To Know Components**

Methanol CAS-No. 67-56-1  
Benzethonium hydroxide CAS-No.: 498-77-1

**New Jersey Right To Know Components**

Methanol CAS-No. 67-56-1  
Benzethonium hydroxide CAS-No.: 498-77-1

**California Prop. 65 Components**

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

**16. OTHER INFORMATION**

*The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.*

2/9/2011