

## Material Safety Data Sheet

Version 5.2

Revision Date 01/22/2013

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## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : (3-Acrylamidopropyl)trimethylammonium chloride solution

Product Number : 448281  
Brand : Aldrich

Supplier : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

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

Preparation Information : Sigma-Aldrich Corporation  
Product Safety - Americas Region  
1-800-521-8956

## 2. HAZARDS IDENTIFICATION

## Emergency Overview

## OSHA Hazards

Irritant

## GHS Classification

Acute toxicity, Dermal (Category 5)

Skin irritation (Category 2)

Eye irritation (Category 2A)

Specific target organ toxicity - single exposure (Category 3), Respiratory system

## GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

Hazard statement(s)

H313 May be harmful in contact with skin.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

Precautionary statement(s)

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

## HMIS Classification

Health hazard: 2  
Chronic Health Hazard: \*  
Flammability: 0  
Physical hazards: 0

## NFPA Rating

Health hazard: 2  
Fire: 0  
Reactivity Hazard: 0

## Potential Health Effects

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation.  
**Skin** May be harmful if absorbed through skin. Causes skin irritation.  
**Eyes** Causes eye irritation.  
**Ingestion** May be harmful if swallowed.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C<sub>9</sub>H<sub>19</sub>ClN<sub>2</sub>O  
Molecular Weight : 206.71 g/mol

Component	Classification	Concentration
<b>(3-Acrylamidopropyl)trimethylammonium chloride</b>		
CAS-No.	45021-77-0	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H315, H319, H335
EC-No.	256-181-3	

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

## 4. FIRST AID MEASURES

## General advice

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

## If inhaled

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

## In case of skin contact

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.

## If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## 5. FIREFIGHTING MEASURES

## Conditions of flammability

Not flammable or combustible.

## 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 (NO<sub>x</sub>), Hydrogen chloride gas

## 6. ACCIDENTAL RELEASE MEASURES

## Personal precautions

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

## Environmental precautions

Do not let product enter drains.

## Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

### 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 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. 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.

#### Eye protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin and body protection

Impervious clothing. 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	liquid
Colour	no data available

### Safety data

pH	no data available
Melting point/freezing point	no data available
Boiling point	no data available
Flash point	no data available
Ignition temperature	no data available
Auto-ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Density	1.11 g/mL at 25 °C (77 °F)
Water solubility	no data available

Partition coefficient: n-octanol/water	no data available
Relative vapor density	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

no data available

### Hazardous decomposition products

Other decomposition products - no data available

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

Contains the following stabiliser(s):

Mequinol (0.3 %)

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

Oral LD50
Inhalation LC50
Dermal LD50
no data available

### Other information on acute toxicity

#### Skin corrosion/irritation

#### Serious eye damage/eye irritation

#### Respiratory or skin sensitization

#### Germ cell mutagenicity

#### 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

#### Teratogenicity

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

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

**Aspiration hazard****Potential health effects**

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation.  
**Ingestion** May be harmful if swallowed.  
**Skin** May be harmful if absorbed through skin. Causes skin irritation.  
**Eyes** Causes eye irritation.

**Signs and Symptoms of Exposure**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Synergistic effects**

no data available

**Additional Information**

RTECS: Not available

**12. ECOLOGICAL INFORMATION****Toxicity****Persistence and degradability****Bioaccumulative potential****Mobility in soil****PBT and vPvB assessment**

no data available

**Other adverse effects****13. DISPOSAL CONSIDERATIONS****Product**

Contact a licensed professional waste disposal service to dispose of this material. Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

**14. TRANSPORT INFORMATION****DOT (US)**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

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

Irritant

**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
(3-Acrylamidopropyl)trimethylammonium chloride	45021-77-0	
Water	7732-18-5	

**New Jersey Right To Know Components**

	CAS-No.	Revision Date
(3-Acrylamidopropyl)trimethylammonium chloride	45021-77-0	
Water	7732-18-5	

**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.

**16. OTHER INFORMATION****Text of H-code(s) and R-phrases mentioned in Section 3**

Eye Irrit.	Eye irritation
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
Skin Irrit.	Skin irritation
STOT SE	Specific target organ toxicity - single exposure

**Further information**

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