Safety Data Sheet

Cat. # BAQ010

CasPASE™-3, 7,10 Assay: Ac-DEVD-AFC substrate

Size: 100 assays
SECTION 1: Identification

1.1. Identification
Product form : Mixture
Product name : Ac-DEVD-AFC Substrate Solution (1mM)
Product code : 007A

1.2. Recommended use and restrictions on use
No additional information available

1.3. Supplier
Geno Technology, Inc./ G-Biosciences
9800 Page Avenue
Saint Louis, 63132-1429 - United States
T 800-628-7730 - F 314-991-1504
technical@GBiosciences.com - www.GBiosciences.com

1.4. Emergency telephone number
Emergency number : Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture
GHS US classification
Flammable liquids Category 4  H227  Combustible liquid
Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements
GHS US labeling
Signal word (GHS US) : Warning
Hazard statements (GHS US) : H227 - Combustible liquid
Precautionary statements (GHS US) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240 - Keep out of the reach of children.
P242 - Store in a well-ventilated place. Keep cool.
P262 - Avoid eye contact. Take off contaminated clothing.
P370+P378 - In case of fire: Use media other than water to extinguish the fire.
P403+P235 - Store in a well-ventilated place. Keep cool.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards which do not result in classification
No additional information available

2.4. Unknown acute toxicity (GHS US)
Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures
This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of HazCom 2012

SECTION 4: First-aid measures

4.1. Description of first aid measures
First-aid measures general : If you feel unwell, seek medical advice.
First-aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact : Rinse with water. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.
First-aid measures after eye contact : Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.
Ac-DEVD-AFC Substrate Solution (1mM)
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations


4.2. Most important symptoms and effects (acute and delayed)
Symptoms/effects after inhalation: No effects known.
Symptoms/effects after skin contact: Slight irritation. ON CONTINUOUS EXPOSURE/CONTACT: Red skin. Skin rash/inflammation. Breath has characteristic odour. Symptoms similar to those listed under ingestion.
Symptoms/effects after eye contact: Slight irritation. Redness of the eye tissue.

4.3. Immediate medical attention and special treatment, if necessary
Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media
Unsuitable extinguishing media: Water (quick-acting extinguisher, reel); risk of puddle expansion. Water; risk of puddle expansion.

5.2. Specific hazards arising from the chemical
Fire hazard: DIRECT FIRE HAZARD: Material presenting a fire hazard. INDIRECT FIRE HAZARD: Temperature above flashpoint: higher fire/explosion hazard. Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard: INDIRECT EXPLOSION HAZARD: Reactions with explosion hazards: see "Reactivity Hazard".

5.3. Special protective equipment and precautions for fire-fighters
Precautionary measures fire: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions: Cool tanks/drums with water spray/remove them into safety. Dilute toxic gases with water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Protective equipment: Gloves. Protective clothing.

6.1.2. For emergency responders
Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
For containment: Contain released product, pump into suitable containers. Plug the leak, cut off the supply.
Methods for cleaning up: For minor spillages wash down with excess of water. Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite or kieselguhr. Scoop absorbed substance into closing containers. Spill must not return in its original container. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
Other information: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections
For further information refer to section 13.
Ac-DEVD-AFC Substrate Solution (1mM)
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Ensure good ventilation of the work station. Wear personal protective equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a well-ventilated place. Keep cool.

Storage temperature: -20 °C

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ac-DEVD-AFC Substrate Solution (1mM)
No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.

Environmental exposure controls: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Materials for protective clothing:
GIVE GOOD RESISTANCE: butyl rubber, chloroprene rubber, neoprene, tetrafluoroethylene, latex, nitrile rubber. GIVE POOR RESISTANCE: PVC, PVA, viton, nitrile rubber, natural rubber

Hand protection: Gloves

Eye protection: Safety glasses

Skin and body protection: Protective clothing

Respiratory protection: Full face mask with filter type A at conc. in air > exposure limit

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid
Color: Clear
Odor: Odourless
Odor threshold: No data available
pH: No data available
Melting point: Not applicable
Freezing point: No data available
Boiling point: No data available
Flash point: No data available
Relative evaporation rate (butyl acetate=1): No data available
Flammability (solid, gas): Not applicable.
Vapor pressure: No data available
Relative vapor density at 20 °C: No data available
Relative density: No data available
Solubility: No data available
Log Pow: No data available
Ac-DEVD-AFC Substrate Solution (1mM)
Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
Reacts violently with many compounds e.g.: with (strong) oxidizers, with (some) halogens compounds and with (some) acids: (increased) risk of fire/explosion.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials
No additional information available

10.6. Hazardous decomposition products
Hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified
Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
Specific target organ toxicity – single exposure : Not classified
Specific target organ toxicity – repeated exposure : Not classified
Aspiration hazard : Not classified
Viscosity, kinematic : No data available

Symptoms/effects after inhalation : No effects known
Symptoms/effects after skin contact : Slight irritation. ON CONTINUOUS EXPOSURE/CONTACT: Red skin. Skin rash/inflammation. Breath has characteristic odour. Symptoms similar to those listed under ingestion.
Symptoms/effects after eye contact : Slight irritation. Redness of the eye tissue.

Symptoms/effects after inhalation : No effects known.
Symptoms/effects after skin contact : Slight irritation. ON CONTINUOUS EXPOSURE/CONTACT: Red skin. Skin rash/inflammation. Breath has characteristic odour. Symptoms similar to those listed under ingestion.
Symptoms/effects after eye contact : Slight irritation. Redness of the eye tissue.
### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods


### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

Not regulated

**Transportation of Dangerous Goods**

**Transport by sea**

Not regulated

**Air transport**

Not regulated

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

No additional information available

#### 15.2. International regulations

**CANADA**

*EU-Regulations*

**National regulations**

No additional information available

#### 15.3. US State regulations

### SECTION 16: Other information

accredited to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 05/11/2017
Full text of H-phrases:

| H227 | Combustible liquid |

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
SECTION 1: Identification

1.1. Identification
Product form: Mixture
Product name: CasPASE™ Assay Buffer [2X]
Product code: 087C

1.2. Recommended use and restrictions on use
No additional information available

1.3. Supplier
Geno Technology, Inc./G-Biosciences
9800 Page Avenue
Saint Louis, 63132 - 1429 - United States
T 800-628-7730 - F 314-991-1504
technical@GBiosciences.com - www.GBiosciences.com

1.4. Emergency telephone number
Emergency number: Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture
GHS US classification: Not classified

2.2. GHS Label elements, including precautionary statements
GHS US labelling: No labeling applicable

2.3. Other hazards which do not result in classification
No additional information available

2.4. Unknown acute toxicity (GHS US)
Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Common Name (Synonyms)</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS US classification</th>
</tr>
</thead>
</table>
| 3((3-cholamidopropyl)dimethylammonio)-1-propanesulfonate,dihydrate | 1-propanaminium, N,N-dimethyl-3-sulfo-N-(3-(((3alpha,5beta,7alpha,12alpha)-3,7,12-trihydroxy-24-oxocholan-24-y)l)amino)propyl)-hydroxide, inner salt | (CAS-No.) 75621-03-3 | 0.05 - 0.5 | Skin Irrit. 2, H315
| | | | | Eye Irrit. 2, H319
| | | | | STOT SE 3, H335

Full text of hazard classes and H-statements: see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures
First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact: Wash skin with plenty of water.
First-aid measures after eye contact: Rinse eyes with water as a precaution.
First-aid measures after ingestion: Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)
No additional information available

4.3. Immediate medical attention and special treatment, if necessary
Treat symptomatically.
SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

5.2. Specific hazards arising from the chemical
No additional information available

5.3. Special protective equipment and precautions for fire-fighters
Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Emergency procedures: Ventilate spillage area.

6.1.2. For emergency responders
Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Take up liquid spill into absorbent material.
Other information: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections
For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>CasPASE™ Assay Buffer [2X]</th>
</tr>
</thead>
<tbody>
<tr>
<td>No additional information available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3((3-cholamidopropyl)dimethylammonio)1-propanesulfonate,dihydrate (75621-03-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No additional information available</td>
</tr>
</tbody>
</table>

8.2. Appropriate engineering controls
Appropriate engineering controls: Ensure good ventilation of the work station.
Environmental exposure controls: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

   **Hand protection:**
   Protective gloves

   **Eye protection:**
   Safety glasses

   **Skin and body protection:**
   Wear suitable protective clothing
Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information

No additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available.

10.6. Hazardous decomposition products

Hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (oral)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (dermal)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
</tbody>
</table>
CasPASE™ Assay Buffer [2X]  
Safety Data Sheet  
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Risk Category</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Specific target organ toxicity – single exposure: Not classified

<table>
<thead>
<tr>
<th>Substance</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>3((3-cholamidopropyl)dimethylammonio)1-propanesulfonate,dihydrate (75621-03-3)</td>
<td></td>
</tr>
</tbody>
</table>

Specific target organ toxicity – single exposure: May cause respiratory irritation.

Specific target organ toxicity – repeated exposure: Not classified

Aspiration hazard: Not classified

Viscosity, kinematic: No data available

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Substance</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>3((3-cholamidopropyl)dimethylammonio)1-propanesulfonate,dihydrate (75621-03-3)</td>
<td>Biodegradability in water: no data available.</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Substance</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>3((3-cholamidopropyl)dimethylammonio)1-propanesulfonate,dihydrate (75621-03-3)</td>
<td>No bioaccumulation data available.</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

SECTION 14: Transport information

Department of Transportation (DOT)
In accordance with DOT
Not applicable

Transportation of Dangerous Goods
Not applicable

Transport by sea
Not applicable

Air transport
Not applicable
SECTION 15: Regulatory information

15.1. US Federal regulations

<table>
<thead>
<tr>
<th>3(CHOLAMIDOPROPYL)DIMETHYLAMMONIOPROPANESULFONATE, DIHYDRATE (75621-03-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
</tbody>
</table>

15.2. International regulations

CANADA

EU-Regulations

National regulations
No additional information available

15.3. US State regulations

SECTION 16: Other information

Full text of H-phrases:

<table>
<thead>
<tr>
<th>H315</th>
<th>Causes skin irritation</th>
</tr>
</thead>
<tbody>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
</tbody>
</table>

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
SECTION 1: Identification

1.1. Identification

<table>
<thead>
<tr>
<th>Product form</th>
<th>Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product name</td>
<td>CasPASE™ Lysis Buffer</td>
</tr>
<tr>
<td>Product code</td>
<td>093C</td>
</tr>
</tbody>
</table>

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Geno Technology, Inc./GBiosciences
9800 Page Avenue
Saint Louis, 63132-1429 - United States
T 800-628-7730 - F 314-991-1504
technical@GBiosciences.com - www.GBiosciences.com

1.4. Emergency telephone number

Emergency number : Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification
Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labeling
No labeling applicable

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Common Name (Synonyms)</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS US classification</th>
</tr>
</thead>
</table>
| 3((3-cholamidopropyl)dimethylammonio)1-propanesulfonate,dihydrate | 1-propanaminium, N,N-dimethyl-3-sulfo-N-(3-((3alpha,5beta,7alpha,12alpha,3,7,12-trihydroxy-24-oxocholan-24-yllamino)propyl)-hydroxide,inner salt | (CAS-No.) 75621-03-3 | 0.05 - 0.5 | Skin Irrit. 2, H315
|                     |                       |                   |    | Eye Irrit. 2, H319    |
|                   |                        |                   |    | STOT SE 3, H335       |

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

No additional information available

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.
**SECTION 5: Fire-fighting measures**

<table>
<thead>
<tr>
<th>5.1.</th>
<th>Suitable (and unsuitable) extinguishing media</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>5.2.</th>
<th>Specific hazards arising from the chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No additional information available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5.3.</th>
<th>Special protective equipment and precautions for fire-fighters</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.</td>
</tr>
</tbody>
</table>

**SECTION 6: Accidental release measures**

<table>
<thead>
<tr>
<th>6.1.</th>
<th>Personal precautions, protective equipment and emergency procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>6.1.1.</strong> For non-emergency personnel</td>
</tr>
<tr>
<td></td>
<td>Emergency procedures: Ventilate spillage area.</td>
</tr>
<tr>
<td></td>
<td><strong>6.1.2.</strong> For emergency responders</td>
</tr>
<tr>
<td></td>
<td>Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: &quot;Exposure controls/personal protection&quot;.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6.2.</th>
<th>Environmental precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Avoid release to the environment.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6.3.</th>
<th>Methods and material for containment and cleaning up</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Other information: Dispose of materials or solid residues at an authorized site.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6.4.</th>
<th>Reference to other sections</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>For further information refer to section 13.</td>
</tr>
</tbody>
</table>

**SECTION 7: Handling and storage**

<table>
<thead>
<tr>
<th>7.1.</th>
<th>Precautions for safe handling</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Precautions for safe handling: Ensure good ventilation of the work station. Wear personal protective equipment.</td>
</tr>
<tr>
<td></td>
<td>Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7.2.</th>
<th>Conditions for safe storage, including any incompatibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Storage conditions: Store in a well-ventilated place. Keep cool.</td>
</tr>
</tbody>
</table>

**SECTION 8: Exposure controls/personal protection**

<table>
<thead>
<tr>
<th>8.1.</th>
<th>Control parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>CasPASE™ Lysis Buffer</strong></td>
</tr>
<tr>
<td></td>
<td>No additional information available</td>
</tr>
<tr>
<td></td>
<td>3(3-cholamidopropyl)dimethylammonio)1-propanesulfonate,dihydrate (75621-03-3)</td>
</tr>
<tr>
<td></td>
<td>No additional information available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8.2.</th>
<th>Appropriate engineering controls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Appropriate engineering controls: Ensure good ventilation of the work station.</td>
</tr>
<tr>
<td></td>
<td>Environmental exposure controls: Avoid release to the environment.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8.3.</th>
<th>Individual protection measures/Personal protective equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Hand protection:</strong> Protective gloves</td>
</tr>
<tr>
<td></td>
<td><strong>Eye protection:</strong> Safety glasses</td>
</tr>
<tr>
<td></td>
<td><strong>Skin and body protection:</strong> Wear suitable protective clothing</td>
</tr>
<tr>
<td></td>
<td><strong>Respiratory protection:</strong></td>
</tr>
</tbody>
</table>

---

06/28/2019 EN (English US) 2/5
In case of insufficient ventilation, wear suitable respiratory equipment.

**SECTION 9: Physical and chemical properties**

### 9.1. Information on basic physical and chemical properties

- **Physical state**: Gas
- **Color**: No data available
- **Odor**: No data available
- **Odor threshold**: No data available
- **pH**: No data available
- **Melting point**: No data available
- **Freezing point**: No data available
- **Boiling point**: No data available
- **Flash point**: No data available
- **Relative evaporation rate (butyl acetate=1)**: No data available
- **Flammability (solid, gas)**: No data available
- **Vapor pressure**: No data available
- **Relative vapor density at 20 °C**: No data available
- **Relative density**: No data available
- **Solubility**: No data available
- **Log Pow**: No data available
- **Auto-ignition temperature**: No data available
- **Decomposition temperature**: No data available
- **Viscosity, kinematic**: No data available
- **Viscosity, dynamic**: No data available
- **Explosion limits**: No data available
- **Explosive properties**: No data available
- **Oxidizing properties**: No data available

#### 9.2. Other information

No additional information available.

**SECTION 10: Stability and reactivity**

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

No additional information available.

### 10.6. Hazardous decomposition products

Hazardous decomposition products.

**SECTION 11: Toxicological information**

### 11.1. Information on toxicological effects

- **Acute toxicity (oral)**: Not classified
- **Acute toxicity (dermal)**: Not classified
- **Acute toxicity (inhalation)**: Not classified
- **Skin corrosion/irritation**: Not classified
- **Serious eye damage/irritation**: Not classified
Respiratory or skin sensitization: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
Specific target organ toxicity – single exposure: Not classified

3(3-cholamidopropyl)dimethylammonio)1-propanesulfonate,dihydrate (75621-03-3)

Specific target organ toxicity – single exposure: May cause respiratory irritation.

Aspiration hazard: Not classified
Viscosity, kinematic: No data available

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

12.2. Persistence and degradability

3(3-cholamidopropyl)dimethylammonio)1-propanesulfonate,dihydrate (75621-03-3)
Persistence and degradability: Biodegradability in water: no data available.

12.3. Bioaccumulative potential

3(3-cholamidopropyl)dimethylammonio)1-propanesulfonate,dihydrate (75621-03-3)
Bioaccumulative potential: No bioaccumulation data available.

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
Effect on global warming: No known effects from this product.

SECTION 13: Disposal considerations

13.1. Disposal methods

SECTION 14: Transport information

Department of Transportation (DOT)
In accordance with DOT
Not applicable

Transportation of Dangerous Goods
Not applicable

Transport by sea
Not applicable

Air transport
Not applicable
SECTION 15: Regulatory information

15.1. US Federal regulations

3-(3-cholamidopropyl)dimethylammonio)1-propanesulfonate,dihydrate (75621-03-3)
Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

EU-Regulations

National regulations
No additional information available

15.3. US State regulations

SECTION 16: Other information

Revision date : 05/11/2017

Full text of H-phrases:

<table>
<thead>
<tr>
<th>H315</th>
<th>Causes skin irritation</th>
</tr>
</thead>
<tbody>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
</tbody>
</table>

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.