Safety Data Sheet

Cat. # 786-320

Fluoro™ Protease Assay

Size: 1000 Assays
## 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>FITC-casein protease substrate</td>
</tr>
<tr>
<td>Product code</td>
<td>121F</td>
</tr>
</tbody>
</table>

### 1.2. Recommended use and restrictions on use

Use of the substance/mixture: Research and development

### 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

<table>
<thead>
<tr>
<th>GHS-US classification</th>
<th>H319</th>
<th>Causes serious eye irritation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/eye irritation Category 2</td>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>Respiratory sensitization, Category 1</td>
<td>H317</td>
<td>May cause an allergic skin reaction</td>
</tr>
<tr>
<td>Skin sensitization, Category 1</td>
<td>H334</td>
<td>May cause an allergy or asthma symptoms or breathing difficulties if inhaled</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure) Category 3</td>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
</tbody>
</table>

Full text of H statements: see section 16

### 2.2. GHS Label elements, including precautionary statements

#### GHS-US labeling

- **Hazard pictograms (GHS-US):**
  - ![Warning Symbol]  
  - ![Two Persons Symbol]

- **Signal word (GHS-US):** Danger

- **Hazard statements (GHS-US):**
  - H317 - May cause an allergic skin reaction  
  - H319 - Causes serious eye irritation  
  - H334 - May cause an allergy or asthma symptoms or breathing difficulties if inhaled  
  - H335 - May cause respiratory irritation

- **Precautionary statements (GHS-US):**
  - P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.  
  - P264 - Wash hands, forearms and face thoroughly after handling.  
  - P271 - Use only outdoors or in a well-ventilated area.  
  - P272 - Contaminated work clothing must not be allowed out of the workplace  
  - P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
  - P284 - [In case of inadequate ventilation] wear respiratory protection.  
  - P302+P352 - If on skin: Wash with plenty of water  
  - P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing  
  - P304+P341 - If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing  
  - P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
  - P312 - Call a poison center or doctor if you feel unwell  
  - P321 - Specific treatment (see supplemental first aid instruction on this label)  
  - P333+P313 - If skin irritation occurs: Get medical advice/attention.  
  - P337+P313 - If eye irritation persists: Get medical advice/attention.  
  - P342+P311 - If experiencing respiratory symptoms: Call a poison center or doctor
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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>
<tbody>
<tr>
<td>Fluorescein Isothiocyanate</td>
<td>2-(6-hydroxy-3-oxo-3H-xanthen-9-yl)-5-isothiocyanatobenzoesuur /</td>
<td>(CAS-No.) 3326-32-7</td>
<td>&lt; 30</td>
<td>Eye Irrit. 2, H319</td>
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<tr>
<td></td>
<td>3',6'-dihydroxy-5-isothiocyanatospiro(isobenzofuran-1(3H),9'-(9H)xanthen)-3-one /</td>
<td></td>
<td></td>
<td>Resp. Sens. 1, H334</td>
</tr>
<tr>
<td></td>
<td>5-fluorescein isothiocyanate / FITC / FITC I / fluorescein 5-isothiocyanate /</td>
<td></td>
<td></td>
<td>Skin Sens. 1, H317</td>
</tr>
<tr>
<td></td>
<td>fluorescein isothiocyanate isomer I / fluorescein 5-isothiocyanate isomer I /</td>
<td></td>
<td></td>
<td>STOT SE 3, H335</td>
</tr>
<tr>
<td></td>
<td>fluoresceina iso-tiocianato / fluoresceina-5-isotiocianato / fluoresceïne iso-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>thiocyanate / fluorescéine isothiocyanate / fluorescéine iso-thiocyanate-5 /</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fluoresceinisothiocyanat / Fluorescein-isothiocyanat / spiro(isobenzofuran-1(3H),9'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-(9H)xanthen)-3-one, 3,6'-dihydroxy-5-isothiocyanato-/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>spiro(isobenzofuran-1(3H),9'-(9H)xanthen)-3-one, 3,6'-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>dihydroxy-5-isothiocyanate</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 general : Call a poison center/doctor/physician if you feel unwell.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.
First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
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)

Symptoms/effects after inhalation : May cause respiratory irritation. May cause an allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact : May cause an allergic skin reaction.
Symptoms/effects after eye contact : Eye irritation.

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

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. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

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: Mechanically recover the product.
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: Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures: Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. 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 locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Storage temperature: -20 °C

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Fluorescein Isothiocyanate (3326-32-7): Not applicable

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:
Wear respiratory protection.

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>Solid</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>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non flammable.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
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<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not applicable</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>Not applicable</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>Not applicable</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>Description</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>
<tr>
<td>Serious eye damage/irritation</td>
<td>Causes serious eye irritation.</td>
</tr>
</tbody>
</table>
FITC-casein protease substrate
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according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Respiratory or skin sensitization: May cause an allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
Specific target organ toxicity – single exposure: May cause respiratory irritation.

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
Symptoms/effects after inhalation: May cause respiratory irritation. May cause an allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact: May cause an allergic skin reaction.
Symptoms/effects after eye contact: Eye irritation.

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
Fluorescein Isothiocyanate (3326-32-7)
Persistence and degradability: Biodegradability in water: no data available.

12.3. Bioaccumulative potential
Fluorescein Isothiocyanate (3326-32-7)
Bioaccumulative potential: No bioaccumulation data 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

**Fluorescein Isothiocyanate (3326-32-7)**
Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

**CANADA**
No additional information available

**EU-Regulations**
No additional information available

**National regulations**
No additional information available

15.3. US State regulations

### Component

<table>
<thead>
<tr>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluorescein Isothiocyanate(3326-32-7)</td>
</tr>
</tbody>
</table>

### State or local regulations

SECTION 16: Other information

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

Revision date : 05/11/2017

Full text of H-phrases:

<table>
<thead>
<tr>
<th>H317</th>
<th>May cause an allergic skin reaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H334</td>
<td>May cause allergy or asthma symptoms or breathing difficulties if inhaled</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

Product form: Mixture
Product name: Fluoro Assay Buffer [10X]
Product code: 165F

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 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>
<tbody>
<tr>
<td>Deionized water</td>
<td></td>
<td>(CAS-No.) 7732-18-5</td>
<td>&gt; 93</td>
<td>Not classified</td>
</tr>
<tr>
<td>Resazurin, sodium salt</td>
<td>3H-phenoxazin-3-one, 7-hydroxy-, 10-oxide, sodium salt / 7-hydroxy-3H-phenoxazin-3-one-10-oxide, sodium salt / 7-sodiooxy-3H-phenoxazin-3-one 10-oxide</td>
<td>(CAS-No.) 62758-13-8</td>
<td>2 - 5</td>
<td>Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335</td>
</tr>
</tbody>
</table>

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.
**Fluoro Assay Buffer [10X] Safety Data Sheet**

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

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**SECTION 5: Fire-fighting measures**

5.1. Suitable (and unsuitable) extinguishing media


5.2. Specific hazards arising from the chemical

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

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.

Storage temperature: RT

---

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

8.1. Control parameters

<table>
<thead>
<tr>
<th>Deionized water (7732-18-5)</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resazurin, sodium salt (62758-13-8)</td>
<td>Not applicable</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:
Fluoro Assay Buffer [10X]  
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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>
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<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>
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<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>Toxicity</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>
</tbody>
</table>
### Resazurin, sodium salt (62758-13-8)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 500 mg/kg (Rat, Oral)</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>500 mg/kg body weight</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<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>
<tr>
<td>Specific target organ toxicity – single exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity – repeated exposure</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
</tbody>
</table>

### 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**

**Resazurin, sodium salt (62758-13-8)**

Persistence and degradability: Biodegradability in water: no data available.

**12.3. Bioaccumulative potential**

**Resazurin, sodium salt (62758-13-8)**

Bioaccumulative potential: No bioaccumulation data 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

Other information: No supplementary information available.
Transportation of Dangerous Goods

Transport by sea

Air transport

SECTION 15: Regulatory information

15.1. US Federal regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>State or local regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deionized water (7732-18-5)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Resazurin, sodium salt (62758-13-8)</td>
<td>Not listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
</tbody>
</table>

15.2. International regulations

CANADA

<table>
<thead>
<tr>
<th>Component</th>
<th>State or local regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deionized water (7732-18-5)</td>
<td>Listed on the Canadian DSL (Domestic Substances List)</td>
</tr>
</tbody>
</table>

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>State or local regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deionized water (7732-18-5)</td>
<td></td>
</tr>
<tr>
<td>Resazurin, sodium salt (62758-13-8)</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 16: Other information

Revision date: 05/11/2017

Full text of H-phrases:

- H302 Harmful if swallowed
- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H335 May cause respiratory irritation

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: Substance
Substance name: Trypsin, Mass Spectrometry Grade (Porcine)
CAS-No. : 9002-07-7
Product code: 215M, 231T
Synonyms: cocoonase / EC 3.4.21.4 / EC 3.4.4.4 / parenzyme / parenzymol / pseudotrypsin / trypsin / trypsin.biosystems / tryptar / trypase / trypure / U-4858
BIG no: 32398

1.2. Recommended use and restrictions on use
Use of the substance/mixture: Chemical substance for research

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
Skin corrosion/irritation Category 2 H315 Causes skin irritation
Serious eye damage/eye irritation Category 2 H319 Causes serious eye irritation
Respiratory sensitization, Category 1 H334 May cause an allergy or asthma symptoms or breathing difficulties if inhaled
Specific target organ toxicity (single exposure) Category 3 H335 May cause respiratory irritation
Hazardous to the aquatic environment - Acute Hazard Category 2 H401 Toxic to aquatic life

Full text of H statements: see section 16

2.2. GHS Label elements, including precautionary statements
GHS-US labeling
Hazard pictograms (GHS-US):

Signal word (GHS-US): Danger
Hazard statements (GHS-US):
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H334 - May cause an allergy or asthma symptoms or breathing difficulties if inhaled
H335 - May cause respiratory irritation
H401 - Toxic to aquatic life

Precautionary statements (GHS-US):
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P284 - In case of inadequate ventilation: Wear respiratory protection.
P302+P352 - If on skin: Wash with plenty of water.
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
P304+P314 - If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P312 - Call a poison center or doctor if you feel unwell
P313 - Specific treatment (see supplemental first aid instruction on this label)
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P311 - If experiencing respiratory symptoms: Call a poison center or doctor
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
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

<table>
<thead>
<tr>
<th>Substance type</th>
<th>Common Name (Synonyms)</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
</table>
| Mono-constituent | cocoonase / EC 3.4.21.4 / EC 3.4.4.4 / parenzyme / parenzymol / pseudotrypsin / trypsin / trypsin, biosystems / tryptar / trypase / trypure / U-4858 | (CAS-No.) 9002-07-7 | 100 | Skin Irrit. 2, H315
| | | | | Eye Irrit. 2, H319
| | | | | Resp. Sens. 1, H334
| | | | | STOT SE 3, H335
| | | | | Aquatic Acute 2, H401

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

3.2. Mixtures
Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures
First-aid measures after inhalation: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact: Wash immediately with lots of water. Soap may be used. Remove clothing while washing. Take victim to a doctor if irritation persists.
First-aid measures after eye contact: Rinse immediately with plenty of 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.

4.2. Most important symptoms and effects (acute and delayed)
Potential Adverse human health effects and symptoms: Non-toxic if swallowed (LD50 oral, rat > 5000 mg/kg). Causes skin irritation. May cause respiratory irritation. Causes serious eye irritation.
Symptoms/effects after inhalation: Irritation of the respiratory tract. Irritation of the nasal mucus membranes.
Symptoms/effects after skin contact: Tingling/irritation of the skin.
Symptoms/effects after eye contact: Irritation of the eye tissue.
Chronic symptoms: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Respiratory difficulties.

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**: Quick-acting BC powder extinguisher. Quick-acting CO2 extinguisher.

### 5.2. Specific hazards arising from the chemical

**Fire hazard**: DIRECT FIRE HAZARD: Not easily combustible. In finely divided state: increased fire hazard. INDIRECT FIRE HAZARD: Heating increases the fire hazard.

**Explosion hazard**: DIRECT EXPLOSION HAZARD: Fine dust is explosive with air. INDIRECT EXPLOSION HAZARD: Dust cloud can be ignited by a spark.

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

### 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: have neighbourhood close doors and windows.

**Firefighting instructions**: Cool tanks/drumms with water spray/remove them into safety. Dilute toxic gases with water spray.

**Protection during firefighting**: Heat/fire exposure: compressed air/oxygen apparatus.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel


**Emergency procedures**: Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes.

**Measures in case of dust release**: In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows. In case of dust production: stop engines and no smoking. In case of dust production: no naked flames or sparks. Dust: spark/explosionproof appliances/lighting equipment.

#### 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. Knock down/dilute dust cloud with water spray. Powdered form: no compressed air for pumping over spills.

**Methods for cleaning up**: Prevent dust cloud formation. Scoop solid spill into closing containers. Powdered: do not use compressed air for pumping over spills. 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.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling


**Hygiene measures**: Wash contaminated clothing before reuse. 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 locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

**Storage temperature**: < 15 °C

**Heat-ignition**: KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
Trypsin, Mass Spectrometry Grade (Porcine)
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents.
Storage area : Store in a cool area. Keep out of direct sunlight. Store in a dry area. Keep container in a well-ventilated place. Meet the legal requirements.
Special rules on packaging : SPECIAL REQUIREMENTS: closing. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
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

Hand protection:
Gloves

Eye protection:
Face shield. In case of dust production: protective goggles

Skin and body protection:
Protective clothing. In case of dust production: head/neck protection. In case of dust production: dustproof clothing

Respiratory protection:
Dust production: dust mask with filter type P2

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Appearance : Crystalline solid. Powder.
Color : White to yellow-grey
Odor : Odourless
Odor threshold : No data available
pH : 4 - 5 (1 %)
Melting point : No data available
Freezing point : Not applicable
Boiling point : No data available
Flash point : Not applicable
Relative evaporation rate (butyl acetate=1) : No data available
Flammability (solid, gas) : Non flammable.
Vapor pressure : No data available
Relative vapor density at 20 °C : Not applicable
Relative density : Not applicable
Molecular mass : 24
Solubility : Soluble in water. Water: soluble, Literature
Log Pow : No data available
Auto-ignition temperature : Not applicable
Decomposition temperature : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosion limits : Not applicable
**Trypsin, Mass Spectrometry Grade (Porcine)**
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**Explosive properties**: Explosive when dry.

**Oxidizing properties**: No data available

**9.2. Other Information**

**Other properties**: Acid reaction.

---

### 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**
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**

<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>
</tbody>
</table>

**Trypsin, Mass Spectrometry Grade (Porcine)** (9002-07-7)

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 5000 mg/kg (Rat, Oral)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>pH: 4 - 5 (1 %)</td>
<td></td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>pH: 4 - 5 (1 %)</td>
<td></td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>May cause an allergy or asthma symptoms or breathing difficulties if inhaled.</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>
<tr>
<td>Specific target organ toxicity – single exposure</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td>Specific target organ toxicity – repeated exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Potential Adverse human health effects and symptoms</td>
<td>Non-toxic if swallowed (LD50 oral, rat &gt; 5000 mg/kg). Causes skin irritation. May cause respiratory irritation. Causes serious eye irritation.</td>
</tr>
<tr>
<td>Symptoms/effects after inhalation</td>
<td>Irritation of the respiratory tract. Irritation of the nasal mucous membranes.</td>
</tr>
<tr>
<td>Symptoms/effects after skin contact</td>
<td>Tingling/irritation of the skin.</td>
</tr>
<tr>
<td>Symptoms/effects after eye contact</td>
<td>Irritation of the eye tissue.</td>
</tr>
<tr>
<td>Chronic symptoms</td>
<td>ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Respiratory difficulties.</td>
</tr>
</tbody>
</table>

---

### SECTION 12: Ecological information

**12.1. Toxicity**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecology - general</td>
<td>Toxic to aquatic life.</td>
</tr>
<tr>
<td>Ecology - air</td>
<td>Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).</td>
</tr>
</tbody>
</table>
Trypsin, Mass Spectrometry Grade (Porcine)
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Ecology - water

<table>
<thead>
<tr>
<th>Trypsin, Mass Spectrometry Grade (Porcine) (9002-07-7)</th>
<th>LC50 fish 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
<td>5 mg/l (24 h, Salmo gairdneri)</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Trypsin, Mass Spectrometry Grade (Porcine) (9002-07-7)</th>
<th>Persistence and degradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biodegradability in water: no data available.</td>
<td></td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Trypsin, Mass Spectrometry Grade (Porcine) (9002-07-7)</th>
<th>Bioaccumulative potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>No bioaccumulation data available.</td>
<td></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

Product/Packaging disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery.


SECTION 14: Transport information

Department of Transportation (DOT)
In accordance with DOT

Other information : No supplementary information available.

Transportation of Dangerous Goods

Transport by sea

Air transport

SECTION 15: Regulatory information

15.1. US Federal regulations

| Trypsin, Mass Spectrometry Grade (Porcine) (9002-07-7) | Not listed on the United States TSCA (Toxic Substances Control Act) inventory |

15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

National regulations
No additional information available
Trypsin, Mass Spectrometry Grade (Porcine)
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

15.3. US State regulations
No additional information available

SECTION 16: Other information
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision date : 05/11/2017

Full text of H-phrases:

<table>
<thead>
<tr>
<th>H-Phrase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H334</td>
<td>May cause an allergy or asthma symptoms or breathing difficulties if inhaled</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
<tr>
<td>H401</td>
<td>Toxic to aquatic life</td>
</tr>
</tbody>
</table>

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.
NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.

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 : Trypsin Suspension Buffer
Product code : 224T

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 - 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>
<tbody>
<tr>
<td>acetic acid</td>
<td>acetic acid / Aci-Gel / Aci-Jel / alcohol of vinegar / carboxylic acid C2 / E260 / ethanoic acid / ethyl acid / FEMA No 2006 / fema number 2006 / glacial acetic acid / methanecarboxylic acid / pyroligneous acid / vinegar / vinegar acid / vosol</td>
<td>(CAS-No.) 64-19-7</td>
<td>0.05 - 0.5</td>
<td>Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation: vapour), H332 Skin Corr. 1A, H314</td>
</tr>
</tbody>
</table>

Note B : Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: ‘nitric acid … %’. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.

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

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>acetic acid (64-19-7)</th>
<th>ACGIH TWA (ppm)</th>
<th>10 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>ACGIH STEL (ppm)</td>
<td>15 ppm</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>100 °C</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
**Trypsin Suspension Buffer**

**Safety Data Sheet**

根据联邦注册 / 卷 77, 号 58 / 星期一, 3 月 26, 2012 / 规则和法规

<table>
<thead>
<tr>
<th>急性毒性 (口服)</th>
<th>不分类</th>
</tr>
</thead>
<tbody>
<tr>
<td>急性毒性 (皮肤)</td>
<td>不分类</td>
</tr>
<tr>
<td>急性毒性 (吸入)</td>
<td>不分类</td>
</tr>
</tbody>
</table>

**acetic acid (64-19-7)**

<table>
<thead>
<tr>
<th>项目</th>
<th>值</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 口服大鼠</td>
<td>3310 mg/kg 体重 (大鼠, 雌雄, 实验值, 口服)</td>
</tr>
<tr>
<td>LC50 吸入大鼠 (mg/l)</td>
<td>11.4 mg/l (类似 OECD 403, 4 h, 大鼠, 雌性, 实验值, 吸入 (蒸气), 14 天)</td>
</tr>
<tr>
<td>ATE US (口服)</td>
<td>3310 mg/kg 体重</td>
</tr>
<tr>
<td>ATE US (蒸汽)</td>
<td>11.4 mg/l/4h</td>
</tr>
<tr>
<td>ATE US (雾化)</td>
<td>11.4 mg/l/4h</td>
</tr>
<tr>
<td>皮肤腐蚀/刺激</td>
<td>不分类</td>
</tr>
<tr>
<td>严重眼损伤/刺激</td>
<td>不分类</td>
</tr>
<tr>
<td>呼吸或皮肤敏化</td>
<td>不分类</td>
</tr>
<tr>
<td>胚胎细胞致突变性</td>
<td>不分类</td>
</tr>
<tr>
<td>肿瘤性</td>
<td>不分类</td>
</tr>
<tr>
<td>生育毒性</td>
<td>不分类</td>
</tr>
<tr>
<td>特殊靶器官毒性 – 单次暴露</td>
<td>不分类</td>
</tr>
<tr>
<td>特殊靶器官毒性 – 重复暴露</td>
<td>不分类</td>
</tr>
<tr>
<td>吸入危害</td>
<td>不分类</td>
</tr>
<tr>
<td>粘度, 动力粘度</td>
<td>无数据可用</td>
</tr>
</tbody>
</table>

**SECTION 12: Ecological information**

### 12.1. Toxicity

**生态 - 一般**

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

**acetic acid (64-19-7)**

<table>
<thead>
<tr>
<th>项目</th>
<th>值</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 鱼 1</td>
<td>&gt; 1000 mg/l (类似 OECD 203, 96 h, Oncorhynchus mykiss, 半静态系统, 海水, 实验值)</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>&gt; 1000 mg/l (OECD 202: Daphnia sp. 急性免疫下沉测试, 48 h, Daphnia magna, 静态系统, 海水, 实验值)</td>
</tr>
</tbody>
</table>

### 12.2. Persistence and degradability

**acetic acid (64-19-7)**

<table>
<thead>
<tr>
<th>项目</th>
<th>值</th>
</tr>
</thead>
<tbody>
<tr>
<td>坚固性和生物降解性</td>
<td>在土壤中容易生物降解。在水中容易生物降解。</td>
</tr>
<tr>
<td>生物化学需氧量 (BOD)</td>
<td>0.6 - 0.74 g O₂/g 物质</td>
</tr>
<tr>
<td>化学需氧量 (COD)</td>
<td>1.03 g O₂/g 物质</td>
</tr>
<tr>
<td>ThOD</td>
<td>1.07 g O₂/g 物质</td>
</tr>
</tbody>
</table>

### 12.3. Bioaccumulative potential

**acetic acid (64-19-7)**

<table>
<thead>
<tr>
<th>项目</th>
<th>值</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCF 鱼 1</td>
<td>3.16 (鱼类, 海水, QSAR)</td>
</tr>
<tr>
<td>Log Pow</td>
<td>-0.17 (实验值, 25 °C)</td>
</tr>
<tr>
<td>生物富集性</td>
<td>不生物积累</td>
</tr>
</tbody>
</table>

### 12.4. Mobility in soil

**acetic acid (64-19-7)**

<table>
<thead>
<tr>
<th>项目</th>
<th>值</th>
</tr>
</thead>
<tbody>
<tr>
<td>表面张力</td>
<td>26.3 mN/m (30 °C)</td>
</tr>
<tr>
<td>生态 - 土壤</td>
<td>高度移动在土壤中。可能对植物生长、开花和结果有影响。</td>
</tr>
</tbody>
</table>

### 12.5. Other adverse effects

无额外信息可用

08/03/2018 EN (English US) 4/6
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

Transport by sea

Class (IMDG): 8 - Corrosive substances

Air transport

Class (IATA): 8 - Corrosives

SECTION 15: Regulatory information

15.1. US Federal regulations

acetic acid (64-19-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Not subject to reporting requirements of the United States SARA Section 313
CERCLA RQ: 5000 lb

15.2. International regulations

CANADA
acetic acid (64-19-7)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations
No additional information available

National regulations
No additional information available

15.3. US State regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>State or local regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>acetic acid (64-19-7)</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 16: Other information

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

Revision date: 08/10/2017

Full text of H-phrases:

H226 Flammable liquid and vapour
H314 Causes severe skin burns and eye damage
H332 Harmful if inhaled
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.