Safety Data Sheet

Cat. # 786-870

Protease-PhosphataseArrest [100X]

Size: For 100ml
**EDTA (0.5M)**

**Safety Data Sheet**

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

Date of issue: 04/21/2016  Revision date: 05/11/2017  Version: 7.1

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**SECTION 1: Identification**

1. **Identification**

   **Product form**: Mixture
   **Product name**: EDTA (0.5M)
   **Product code**: 015E

2. **Recommended use and restrictions on use**

   No additional information available

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

4. **Emergency telephone number**

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

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**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

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**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

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**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.

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**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

**EDTA (0.5M)**

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:**

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

Physical state: Liquid

Color: No data 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
- **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
### EDTA (0.5M)

#### Safety Data Sheet

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

<table>
<thead>
<tr>
<th>Specific target organ toxicity – repeated exposure</th>
<th>Not classified</th>
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</thead>
<tbody>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
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</tbody>
</table>

#### SECTION 12: Ecological information

<table>
<thead>
<tr>
<th>12.1. Toxicity</th>
<th>The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.2. Persistence and degradability</td>
<td>No additional information available</td>
</tr>
<tr>
<td>12.3. Bioaccumulative potential</td>
<td>No additional information available</td>
</tr>
<tr>
<td>12.4. Mobility in soil</td>
<td>No additional information available</td>
</tr>
<tr>
<td>12.5. Other adverse effects</td>
<td>No additional information available</td>
</tr>
</tbody>
</table>

#### SECTION 13: Disposal considerations

<table>
<thead>
<tr>
<th>13.1. Disposal methods</th>
<th>Waste treatment methods</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Waste treatment methods.</td>
</tr>
</tbody>
</table>

#### SECTION 14: Transport information

**Department of Transportation (DOT)**

In accordance with DOT

<table>
<thead>
<tr>
<th>Other information</th>
<th>No supplementary information available.</th>
</tr>
</thead>
</table>

**Transportation of Dangerous Goods**

- **Transport by sea**
  - Not regulated
- **Air transport**
  - Not regulated

#### SECTION 15: Regulatory information

<table>
<thead>
<tr>
<th>15.1. US Federal regulations</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>15.2. International regulations</th>
<th>CANADA</th>
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<tbody>
<tr>
<td></td>
<td>EU-Regulations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>National regulations</th>
<th>No additional information available</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.3. US State regulations</td>
<td></td>
</tr>
</tbody>
</table>
SECTION 16: Other information

Revision date: 05/11/2017

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:** PhosphataseArrest™ I [100X]
- **Product code:** 113P

### 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

#### GHS US labeling
No labeling applicable

### 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>
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<tbody>
<tr>
<td>Sodium Pyrophosphate dibasic</td>
<td>acid sodiumpyrophosphate / ASPP (=acid sodiumpyrophosphate) / diphosphoric acid, disodium salt / disodium acid pyrophosphate / disodium dihydrogenorthophosphate / disodium dihydrogenpyrophosphate / disodium dihydrogenpyrophosphate / disodium pyrophosphate / E450(a) food grade / pyrophosphoric acid disodium salt / SAPP (=sodium acid pyrophosphate) / sodium acid pyrophosphate / sodium dihydrogen pyrophosphate / sodium pyrophosphate (=disodium pyrophosphate) / sodium pyrophosphate, acid</td>
<td>(CAS-No.) 7758-16-9</td>
<td>2 - 5</td>
<td>Eye Irrit. 2, H319</td>
</tr>
<tr>
<td>sodium molybdate, dihydrate</td>
<td>disodium molybdate, dihydrate / molybdic acid, disodium salt, dihydrate / molybit 100 / sodium molybdate(VI) dihydrate / sodium molybdate-2-hydrate</td>
<td>(CAS-No.) 10102-40-6</td>
<td>2 - 5</td>
<td>Not classified</td>
</tr>
</tbody>
</table>
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: Rinse with water. Do not apply (chemical) neutralizing agents without medical advice. Soap may be used. 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 (chemical) neutralizing agents without medical advice. Take victim to an ophthalmologist if irritation persists.

First-aid measures after ingestion: Rinse mouth with water. Do not apply (chemical) neutralizing agents without medical advice. Immediately after ingestion: give lots of water to drink. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital.

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

Symptoms/effects after inhalation: AFTER INHALATION OF DUST/MIST: Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes.

Symptoms/effects after skin contact: Slight irritation.

Symptoms/effects after eye contact: Irritation of the eye tissue.


Chronic symptoms: Skin rash/inflammation.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

06/28/2019
EN (English US)
PhosphataseArrest™ I [100X]  
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according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media  

5.2. Specific hazards arising from the chemical  
Fire hazard: DIRECT FIRE HAZARD: Non combustible.  
Explosion hazard: DIRECT EXPLOSION HAZARD: No direct explosion 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: have neighbourhood close doors and windows.  
Firefighting instructions: Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water.  

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.

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.  
Methods for cleaning up: Stop dust cloud by humidifying. Scoop solid spill into closing containers. Wash down leftovers with plenty 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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling  
Precautions for safe handling: Avoid raising dust. Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Clean contaminated clothing. Keep container tightly closed.  
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: 4 °C

SECTION 8: Exposure controls/personal protection

8.1. Control parameters  
| PhosphataseArrest™ I [100X] |  
| sodium molybdate, dihydrate (10102-40-6) |  
| USA - ACGIH - Occupational Exposure Limits |  
| ACGIH TWA (mg/m³) | 0.5 mg/m³ (Respirable fraction) |
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 against chemicals (EN374)

Eye protection:
Safety glasses. In case of dust production: protective goggles

Skin and body protection:
Protective clothing

Respiratory protection:
Dust production: dust mask with filter type P1

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>Clear</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>
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</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>
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<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
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<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
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<tr>
<td>Explosion limits</td>
<td>No data available</td>
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<td>Explosive properties</td>
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<tr>
<td>Oxidizing properties</td>
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</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**

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

**sodium molybdate, dihydrate (10102-40-6)**
LD50 oral rat  4233 mg/kg (Rat, Oral)  
LD50 dermal rat  > 2000 mg/kg (Rat, Dermal)

**sodium fluoride (7681-49-4)**
LD50 oral rat  52 mg/kg (Rat, Oral)  
ATE US (oral)  100 mg/kg body weight

**Sodium Orthovanadate (13721-39-6)**
LD50 oral rat  330 mg/kg (Rat, Oral)  
ATE US (oral)  500 mg/kg body weight  
ATE US (dermal)  1100 mg/kg body weight  
ATE US (gases)  4500 ppmV/4h  
ATE US (vapors)  11 mg/l/4h  
ATE US (dust, mist)  1.5 mg/l/4h

**Sodium Pyrophosphate dibasic (7758-16-9)**
LD50 oral rat  2440 mg/kg body weight (24 h, Rat, Male / female, Read-across, Oral, 14 day(s))  
LD50 dermal rat  > 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal)  
LC50 inhalation rat (mg/l)  > 0.58 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (dust))

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
PhosphataseArrest™ I [100X]
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Viscosity, kinematic: No data available
Symptoms/effects after inhalation: AFTER INHALATION OF DUST/MIST: Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes.
Symptoms/effects after skin contact: Slight irritation.
Symptoms/effects after eye contact: Irritation of the eye tissue.
Chronic symptoms: Skin rash/inflammation.

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.

<table>
<thead>
<tr>
<th>Sodium Molybdate, Dihydrate (10102-40-6)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>644.2 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Semi-static system, Fresh water, Experimental value)</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>130.9 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)</td>
</tr>
<tr>
<td>ErC50 (algae)</td>
<td>289.2 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Weight of evidence)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Sodium Fluoride (7681-49-4)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>&gt; 530 mg/l (96 h, Lepomis macrochirus)</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>98 mg/l (48 h, Daphnia magna)</td>
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</tbody>
</table>

<table>
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<tbody>
<tr>
<td>LC50 fish 1</td>
<td>&gt; 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, GLP)</td>
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<tr>
<td>EC50 Daphnia 1</td>
<td>&gt; 100 mg/l (EPA OTS 797:1300, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)</td>
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<tr>
<td>ErC50 (algae)</td>
<td>&gt; 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, GLP)</td>
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12.2. Persistence and degradability

<table>
<thead>
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<th>Sodium Molybdate, Dihydrate (10102-40-6)</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
<td>Biodegradability: not applicable.</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>ThOD</td>
<td>Not applicable</td>
</tr>
<tr>
<td>BOD (% of ThOD)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sodium Fluoride (7681-49-4)</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
<td>Biodegradability: not applicable.</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>ThOD</td>
<td>Not applicable</td>
</tr>
<tr>
<td>BOD (% of ThOD)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sodium Orthovanadate (13721-39-6)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
<td>Biodegradability: not applicable.</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
<td>Not applicable (inorganic)</td>
</tr>
<tr>
<td>ThOD</td>
<td>Not applicable (inorganic)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sodium Pyrophosphate Dibasic (7758-16-9)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
<td>Biodegradability in water: no data available.</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>ThOD</td>
<td>Not applicable</td>
</tr>
<tr>
<td>BOD (% of ThOD)</td>
<td>Not applicable</td>
</tr>
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</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Sodium Molybdate, Dihydrate (10102-40-6)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BCF fish 1</td>
<td>4.9 (28 day(s), Oncorhynchus tshawytscha, Fresh water, Weight of evidence, Anhydrous form)</td>
</tr>
</tbody>
</table>
sodium molybdate, dihydrate (10102-40-6)
Bioaccumulative potential Low potential for bioaccumulation (BCF < 500).

sodium fluoride (7681-49-4)
BCF fish 1 2.3 (Salmo gairdneri)
Bioaccumulative potential Not bioaccumulative.

Sodium Orthovanadate (13721-39-6)
Bioaccumulative potential No bioaccumulation data available.

Sodium Pyrophosphate dibasic (7758-16-9)
Log Pow -2
Bioaccumulative potential Not bioaccumulative.

12.4. Mobility in soil

sodium molybdate, dihydrate (10102-40-6)
Ecology - soil No (test)data on mobility of the substance available.

sodium fluoride (7681-49-4)
Ecology - soil Toxic to flora.

Sodium Orthovanadate (13721-39-6)
Ecology - soil No (test)data on mobility of the substance available.

Sodium Pyrophosphate dibasic (7758-16-9)
Ecology - soil No (test)data on mobility of the substance available.

12.5. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods
Product/Packaging disposal recommendations : Treat using the best available techniques before discharge into drains or the aquatic environment. Contains no organic halogen which may add to the AOX value. 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 dump (Class I). Small quantities can be landfilled with the household waste. Precipitate/make insoluble. May be discharged to wastewater treatment installation.


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

- **sodium molybdate, dihydrate (10102-40-6)**
  - Not listed on the United States TSCA (Toxic Substances Control Act) inventory

- **sodium fluoride (7681-49-4)**
  - Not 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: 1000 lb

- **Sodium Orthovanadate (13721-39-6)**
  - Not listed on the United States TSCA (Toxic Substances Control Act) inventory

- **Sodium Pyrophosphate dibasic (7758-16-9)**
  - 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

Full text of H-phrases:

- **H301**  Toxic if swallowed
- **H302**  Harmful if swallowed
- **H312**  Harmful in contact with skin
- **H315**  Causes skin irritation
- **H319**  Causes serious eye irritation
- **H332**  Harmful if inhaled

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: ProteaseArrest™
Product code: 362P

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
Skin corrosion/irritation Category 2 — H315 Causes skin irritation
Serious eye damage/eye irritation Category 2 — H319 Causes serious eye irritation
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
H315 - Causes skin irritation
H319 - Causes serious eye irritation

Precautionary statements (GHS US): P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P264 - Wash hands, forearms and face thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 - If on skin: Wash with plenty of water
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P321 - 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+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use media other than water to extinguish.
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

<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>alpha-toluenesulfonyl fluoride</td>
<td>alpha-toluenesulphonyl fluoride / benzenemethanesulfonyl fluoride / benzylsulfonyl fluoride / benzylsulphonyl fluoride / phenylmethanesulfonyl fluoride / phenylmethylsulfonyl fluoride / PMSF (= phenylmethanesulfonyl fluoride)</td>
<td>(CAS-No.) 329-98-6</td>
<td>0.5 - 2</td>
<td>Skin Corr. 1B, H314</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. Take off contaminated clothing. If skin irritation 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 skin contact: Irritation.
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

Fire hazard: Combustible liquid.

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 contact with skin and eyes. No open flames, no sparks, and no smoking.

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. Notify authorities if product enters sewers or public waters.
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. Avoid contact with skin and eyes. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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 in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>ProteaseArrest™</th>
<th>No additional information available</th>
</tr>
</thead>
<tbody>
<tr>
<td>alpha-toluensulfonyl fluoride (329-98-6)</td>
<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>
</tbody>
</table>
**ProteaseArrest™**

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>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**

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>Value</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>Causes skin irritation.</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Causes serious eye irritation.</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>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>Symptoms/effects after skin contact</td>
<td>Irritation.</td>
</tr>
<tr>
<td>Symptoms/effects after eye contact</td>
<td>Eye irritation.</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**

No additional information available
12.3. Bioaccumulative potential

| alpha-toluenesulfonyl fluoride (329-98-6) | 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

Waste treatment 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

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

alpha-toluenesulfonyl fluoride (329-98-6)

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

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>H227</th>
<th>Combustible liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
</tbody>
</table>

SDS US (GHS HazCom 2012)

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