**Sekisui Diagnostics, LLC**
500 West Avenue, Stamford, CT 06902
Tel. (203) 602-7777 Fax (203) 602-2221

# MATERIAL SAFETY DATA SHEET

## 1. PRODUCT IDENTIFICATION

**1.1 Product Name:** Bovine Plasminogen

**1.2 Product REF:** 416

**1.3 Configuration:** One (1) vial, 1.0 mg, lyophilized

**1.4 Use of Product:** For Research Use Only.

**1.5 Company**

Manufacturer:
Sekisui Diagnostics, LLC
500 West Avenue
Stamford, CT 06902 USA
Tel: (203) 602 7777
Fax: (203) 602 2221
Email: linus@amdiag.com

Distributor EU:
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Pfungstadt 64319 Germany
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Email: info@amdiag.de

## 2. HAZARDS IDENTIFICATION

**2.1 Classification:** Harmful

**2.2 Potential Health and Environmental Effects**

Skin Exposure: May be harmful by skin exposure.

Eye Exposure: May be harmful by eye exposure.

Inhalation Exposure: May be harmful if inhaled.

Ingestion: May be harmful if swallowed.

Environmental Exposure: May cause adverse effects to the environment.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Reagent/Component | Chemical Name | CAS Number | EINECS No. | Concentration, w/v, % |
|---|---|---|---|---|
| Bovine Plasminogen | Bovine Plasminogen | 9001-91-6 | 232-641-9 | 0.1% |
| | Disodium Phosphate | 7558-79-4 | 231-448-7 | 0.14% |
| | Sodium Chloride | 7647-14-5 | 231-598-3 | 0.82% |
| | Mannitol | 69-65-8 | 200-711-8 | 1.8% |

NA – Not Available

## 4. FIRST AID MEASURES

Skin Exposure: In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing. Seek medical attention if adverse symptoms appear.

Eye Exposure: In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Seek medical attention if adverse symptoms appear.

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| | |
|---|---|
| Inhalation Exposure: | If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, administer oxygen and seek medical attention. |
| Ingestion: | If swallowed, wash out mouth with water provided person is conscious. Seek immediate medical attention. |

## 5. FIRE FIGHTING MEASURES

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| Flammability: | Solutions are non-flammable. Boxing, instruction papers and powdered reagents are flammable. |
| Suitable Extinguishing Media: | Use extinguishing media appropriate to the surrounding fire conditions, such as carbon dioxide, dry chemical powder, foam or water spray. |
| Equipment for fire fighting: | Wear self-contained breathing apparatus and protective clothing appropriate for fighting a fire involving chemical materials to prevent contact with skin and eyes. |

## 6. ACCIDENTAL RELEASE MEASURES

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|---|---|
| Personal Precautions: | Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves. In case of skin contact, flush with copious amounts of water and remove contaminated clothing. |
| Environmental Precautions: | Do not let the product enter the drainage system. |
| Methods For Cleaning Up: | Sweep up dry product, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete. |

## 7. HANDLING AND STORAGE

### 7.1 Handling

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|---|---|
| Handling Procedure: | Avoid inhalation. Avoid contact with eyes, skin and clothing. Avoid prolonged exposure. Provide adequate ventilation in all work areas. |
| Safety: | The source material for this product is of animal origin. As no known test method can provide complete assurance that products derived from animal specimens will not transmit blood-borne pathogens, this reagent should be handled as recommended for any potentially infectious human specimen. |
| Hygienic Practice: | Wash hands with soap and water following use. |

### 7.2 Storage

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|---|---|
| Container: | Keep container tightly closed and labeled with the name of the product. |
| Recommended Temperature: | 2°-8°C. |

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Exposure Limit Values

No known occupational exposure limit values.

### 8.2 Personal Protection

| | |
|---|---|
| Respiratory Protection: | Respirator protection is not required. Where protection is desired, use type N95 (US) or type P1 (EN 143) dust masks or. For higher level protection, use NIOSH (USA) or CEN (EU) approved respirators and filters. |

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| | |
|---|---|
| Eye Protection: | Chemical safety goggles. |
| Hand Protection: | Compatible chemical resistant gloves. Use proper glove removal technique to avoid skin contact. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. |
| Skin Protection: | Compatible chemical resistant gloves and other protective clothing as required to prevent skin contact. |
| General Hygiene Practices: | Wash promptly if skin comes into contact with product. Wash thoroughly after handling. Remove any clothing that comes into contact with the product. Do not smoke or eat in the work environment. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| Property | Bovine Plasminogen |
|---|---|
| Appearance | white powder |
| Odor | NA |
| pH | 7.4 |
| Freezing Point | NA |
| Vapor Pressure | NA |
| Specific Gravity | NA |
| Solubility | water soluble |
| Evaporation Rate | NA |
| Viscosity | NA |
| Surface Tension | NA |
| Boiling Point | NA |
| Melting Point | NA |
| Flash Point | NA |
| Lower Explosive Limit | NA |
| Upper Explosive Limit | NA |
| Flammability | NA |
| Autoignition Temp. | NA |

NA = Not Available

## 10. STABILITY AND REACTIVITY

| | |
|---|---|
| **10.1 Stability:** | The product is stable until the expiration date stated on its label when properly stored at 2°-8°C. |
| **10.2 Conditions To Avoid:** | Keep away from heat. |
| **10.3 Materials To Avoid:** | Strong acids, strong reducing agents, strong oxidizing reagents. |
| **10.4 Hazardous Decomposition Products:** | Hazardous decomposition products due to combustion may include carbon monoxide, carbon dioxide, and nitrogen oxides. |

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Acute Toxicity

| Reagent/ Component | Chemical Name | Oral $LD_{50}$ | Inhalation $LC_{50}$ | Dermal $LD_{50}$ |
|---|---|---|---|---|
| Human Glu-Plasminogen | Human Glu-Plasminogen | No Data Available | No Data Available | No Data Available |
| | Disodium Phosphate | No Data Available | No Data Available | No Data Available |
| | Sodium Chloride | No Data Available | rat,1 hr >42,000 mg/$m^3$ | rabbit, >10,000 mg/kg |
| | D-Mannitol | rat, oral – 40,554 mg/kg | No Data Available | No Data Available |

### 11.2 Irritation

Skin: Mild skin irritation in rabbit in 24 hours (due to Disodium Phosphate).

Eye: Mild eye irritation in rabbit in 24 hours (due to Disodium Phosphate).

Inhalation: No Data Available

### 11.3 Sensitization

Skin: No Data Available

Inhalation: No Data Available

### 11.4 Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.

### 11.5 Mutagenicity

No Data Available

### 11.6 Teratogenicity

No data available

For the other components of this product, the health effects noted above are based on the extrapolation of data on the pure product ingredients. To the best of our knowledge, no health effects have been identified for the product mixture under normal conditions of use, although the health effects of the product have not been thoroughly investigated.

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity:

Use in accordance with good laboratory practices. Do not waste into the environment. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxicity to daphnia (Sodium Chloride) NOEC, Daphnia – 1,500 mg/L, 7 days
Toxicity to daphnia (Sodium Chloride) EC50, Daphnia magna (water flea) – 1,661 mg/L, 48 hours

**12.2 Mobility:** No Data Available

**12.3 Persistence and degradability:** No Data Available

**12.4 Bioaccumulative potential:** No Data Available

**12.5 PBT assessment:** No Data Available

**12.6 Other adverse effects:** No Data Available

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## 13. DISPOSAL CONSIDERATIONS

Contact a licensed professional waste disposal service to dispose of this material. Disposal should be made in accordance with existing disposal practices employed for infectious waste at your institution. Observe all federal, state and local environmental regulations and laws.

## 14. TRANSPORT INFORMATION

| | | | | | | |
|---|---|---|---|---|---|---|
| DOT (US): | Proper Name For Shipping: | Environmentally hazardous substances, solid, n.o.s (Disodium Phosphate) | | | | |
| | UN Number: | 3077 | | | | |
| | Hazard Class: | 9 | | | | |
| | Reportable Quantity: | 5000 lbs | | | | |
| | Packing Group: | III | Marine Pollutant: | No | Poison Inhalation Hazard: | No |
| IATA: | Not classified as dangerous goods | | | | | |
| IMDG: | Not classified as dangerous goods | | | | | |

## 15. REGULATORY INFORMATION

This product is classified and labeled in accordance with Directive 1999/45/EC and the following modifications. The health hazard classification has been determined based upon the composition and hazard data of each ingredient. Physical and health hazard information on the reagent mixture has not been determined. Any physical and health hazard information noted is based on a) evaluation of data of the pure ingredient and b) the concentration of each ingredient.

Hazard Classification

| | |
|---|---|
| EC Symbol: |  |
| Indication of Danger: | Harmful |
| Risk Code: | R20/22, R36/37/38 |
| Safety Code: | S24/25, S26, S36/37/39, S46 |
| Hazard Code: | H303, H313, H316, H320, H335, H411 |

| | |
|---|---|
| OSHA Hazards: | No OSHA Hazards. |
| SARA 302 Components: | No chemicals in this product are subject to the reporting requirements of SARA Title III, Section 302. |
| SARA 313 Components: | This product does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels by SARA Title III, Section 313. |
| SARA 311/312 Hazards: | None |
| California Prop 65 Components: | This product does not contain any chemicals known to the State of California to cause cancer, birth defects or any other reproductive harm. |

## 16. OTHER INFORMATION

The information supplied in this Material Safety Data Sheet represents the data and best information available on the date of preparation. It is provided to allow for the proper and safe use, storage, transport and disposal of the product. It is not to be considered as a warranty, guarantee or specification of the product quality. It is related to the materials specifically indicated and does not apply if these are used in combination with other materials or during processes not indicated in the text of this safety data sheet.

Sekisui Diagnostics, LLC and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.