SAFETY DATA SHEET
Seahorse XF Palmitate-BSA FAO Substrate, Part Number 102720-100

Section 1. Identification

1.1 Product identifier
Product name: Seahorse XF Palmitate-BSA FAO Substrate, Part Number 102720-100
Part No. (Chemical Kit): 102720-100
Part No. Palmitate-BSA Conjugate: Not available.
BSA Control: Not available.
Validation date: 5/31/2017

1.2 Relevant identified uses of the substance or mixture and uses advised against
Material uses: For research use only. Not for use in diagnostic procedures (RUO).
Palmitate-BSA Conjugate: 3 x 2 mL
BSA Control: 3 x 2 mL

1.3 Details of the supplier of the safety data sheet
Supplier/Manufacturer: Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

1.4 Emergency telephone number
In case of emergency: CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture
OSHA/HCS status: Palmitate-BSA Conjugate
While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
BSA Control
While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture
Not classified.

Ingredients of unknown toxicity
Palmitate-BSA Conjugate
Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10%
Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10%
Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%
BSA Control
Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10%
Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10%
Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%

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Section 2. Hazards identification

2.2 GHS label elements

Signal word:
- Palmitate-BSA Conjugate: No signal word.
- BSA Control: No signal word.

Hazard statements:
- Palmitate-BSA Conjugate: No known significant effects or critical hazards.
- BSA Control: No known significant effects or critical hazards.

Precautionary statements

Prevention:
- Palmitate-BSA Conjugate: Not applicable.
- BSA Control: Not applicable.

Response:
- Palmitate-BSA Conjugate: Not applicable.
- BSA Control: Not applicable.

Storage:
- Palmitate-BSA Conjugate: Not applicable.
- BSA Control: Not applicable.

Disposal:
- Palmitate-BSA Conjugate: Not applicable.
- BSA Control: Not applicable.

Supplemental label elements:
- Palmitate-BSA Conjugate: None known.
- BSA Control: None known.

2.3 Other hazards

Hazards not otherwise classified:
- Palmitate-BSA Conjugate: None known.
- BSA Control: None known.

Section 3. Composition/information on ingredients

Substance/mixture:
- Palmitate-BSA Conjugate: Mixture
- BSA Control: Mixture

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact:
- Palmitate-BSA Conjugate: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- BSA Control: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation:
- Palmitate-BSA Conjugate: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- BSA Control: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
# Section 4. First aid measures

<table>
<thead>
<tr>
<th>Mode</th>
<th>Substance</th>
<th>Action Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Skin contact</strong></td>
<td>Palmitate-BSA Conjugate</td>
<td><strong>BSA Control</strong>&lt;br&gt;Flush contaminated skin with plenty of water.&lt;br&gt;Remove contaminated clothing and shoes.&lt;br&gt;Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>Palmitate-BSA Conjugate</td>
<td>Wash out mouth with water.&lt;br&gt;Remove victim to fresh air and keep at rest in a position comfortable for breathing.&lt;br&gt;If material has been swallowed and the exposed person is conscious, give small quantities of water to drink.&lt;br&gt;Do not induce vomiting unless directed to do so by medical personnel.&lt;br&gt;Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>BSA Control</td>
<td>Wash out mouth with water.&lt;br&gt;Remove victim to fresh air and keep at rest in a position comfortable for breathing.&lt;br&gt;If material has been swallowed and the exposed person is conscious, give small quantities of water to drink.&lt;br&gt;Do not induce vomiting unless directed to do so by medical personnel.&lt;br&gt;Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>BSA Control</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>BSA Control</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

## 4.2 Most important symptoms/effects, acute and delayed

### Potential acute health effects

<table>
<thead>
<tr>
<th>Mode</th>
<th>Substance</th>
<th>Action Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
<td>Palmitate-BSA Conjugate</td>
<td><strong>BSA Control</strong>&lt;br&gt;No known significant effects or critical hazards.</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>Palmitate-BSA Conjugate</td>
<td><strong>BSA Control</strong>&lt;br&gt;No known significant effects or critical hazards.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>Palmitate-BSA Conjugate</td>
<td><strong>BSA Control</strong>&lt;br&gt;No known significant effects or critical hazards.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>Palmitate-BSA Conjugate</td>
<td><strong>BSA Control</strong>&lt;br&gt;No known significant effects or critical hazards.</td>
</tr>
<tr>
<td><strong>Eye contact</strong></td>
<td>BSA Control</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>BSA Control</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>BSA Control</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>BSA Control</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

### Over-exposure signs/symptoms

<table>
<thead>
<tr>
<th>Mode</th>
<th>Substance</th>
<th>Action Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
<td>Palmitate-BSA Conjugate</td>
<td><strong>BSA Control</strong>&lt;br&gt;No specific data.</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>Palmitate-BSA Conjugate</td>
<td><strong>BSA Control</strong>&lt;br&gt;No specific data.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>Palmitate-BSA Conjugate</td>
<td><strong>BSA Control</strong>&lt;br&gt;No specific data.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>Palmitate-BSA Conjugate</td>
<td><strong>BSA Control</strong>&lt;br&gt;No specific data.</td>
</tr>
</tbody>
</table>

## 4.3 Indication of immediate medical attention and special treatment needed, if necessary

### Notes to physician

<table>
<thead>
<tr>
<th>Substance</th>
<th>Action Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palmitate-BSA Conjugate</td>
<td>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</td>
</tr>
<tr>
<td>BSA Control</td>
<td>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</td>
</tr>
</tbody>
</table>

### Specific treatments

<table>
<thead>
<tr>
<th>Substance</th>
<th>Action Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palmitate-BSA Conjugate</td>
<td>No specific treatment.</td>
</tr>
<tr>
<td>BSA Control</td>
<td>No specific treatment.</td>
</tr>
</tbody>
</table>

### Protection of first-aiders

<table>
<thead>
<tr>
<th>Substance</th>
<th>Action Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palmitate-BSA Conjugate</td>
<td>No action shall be taken involving any personal risk or without suitable training.</td>
</tr>
<tr>
<td>BSA Control</td>
<td>No action shall be taken involving any personal risk or without suitable training.</td>
</tr>
</tbody>
</table>

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Section 4. First aid measures

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

| Suitable extinguishing media | Palmitate-BSA Conjugate | Use an extinguishing agent suitable for the surrounding fire. |
| BSA Control                   |                         | Use an extinguishing agent suitable for the surrounding fire. |
| Unsuitable extinguishing media| Palmitate-BSA Conjugate | None known.                                                   |
| BSA Control                   |                         | None known.                                                   |

5.2 Special hazards arising from the substance or mixture

| Specific hazards arising from the chemical | Palmitate-BSA Conjugate | In a fire or if heated, a pressure increase will occur and the container may burst. |
| BSA Control                                |                         | In a fire or if heated, a pressure increase will occur and the container may burst. |
| Hazardous thermal decomposition products   | Palmitate-BSA Conjugate | Decomposition products may include the following materials: carbon dioxide, carbon monoxide, hydrogen cyanide. |
| BSA Control                                |                         | Decomposition products may include the following materials: carbon dioxide, carbon monoxide. |

5.3 Advice for firefighters

| Special protective actions for fire-fighters | Palmitate-BSA Conjugate | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| BSA Control                                 |                         | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| Special protective equipment for fire-fighters| Palmitate-BSA Conjugate | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| BSA Control                                 |                         | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

| For non-emergency personnel | Palmitate-BSA Conjugate | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. |
| BSA Control                 |                         | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. |

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## Section 6. Accidental release measures

### 6.2 Environmental precautions

<table>
<thead>
<tr>
<th>For emergency responders</th>
<th>Palmitate-BSA Conjugate</th>
<th>BSA Control</th>
</tr>
</thead>
</table>

Surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.3 Methods and materials for containment and cleaning up

<table>
<thead>
<tr>
<th>Methods for cleaning up</th>
<th>Palmitate-BSA Conjugate</th>
<th>BSA Control</th>
</tr>
</thead>
</table>

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

## Section 7. Handling and storage

### 7.1 Precautions for safe handling

<table>
<thead>
<tr>
<th>Protective measures</th>
<th>Palmitate-BSA Conjugate</th>
<th>BSA Control</th>
</tr>
</thead>
</table>

Put on appropriate personal protective equipment (see Section 8).

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Section 7. Handling and storage

7.2 Conditions for safe storage, including any incompatibilities

- **Palmitate-BSA Conjugate**: Store between the following temperatures: 2 to 8°C (35.6 to 46.4°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

- **BSA Control**: Store between the following temperatures: 2 to 8°C (35.6 to 46.4°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

- **Recommendations**
  - **Industrial sector specific solutions**
    - **Palmitate-BSA Conjugate**: Industrial applications, Professional applications.
    - **BSA Control**: Industrial applications, Professional applications.

Section 8. Exposure controls/personal protection

8.1 Control parameters

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

8.2 Exposure controls

- **Appropriate engineering controls**: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

- **Environmental exposure controls**: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures**
Section 8. Exposure controls/personal protection

**Hygiene measures**
- Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**
- Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

**Skin protection**

**Hand protection**
- Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Body protection**
- Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection**
- Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection**
- Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

**Appearance**

**Physical state**
- Palmitate-BSA Conjugate: Liquid.
- BSA Control: Liquid.

**Color**
- Palmitate-BSA Conjugate: Not available.
- BSA Control: Not available.

**Odor**
- Palmitate-BSA Conjugate: Not available.
- BSA Control: Not available.

**Odor threshold**
- Palmitate-BSA Conjugate: Not available.
- BSA Control: Not available.

**pH**
- Palmitate-BSA Conjugate: Not available.
- BSA Control: Not available.

**Melting point**
- Palmitate-BSA Conjugate: 0°C (32°F)
- BSA Control: 0°C (32°F)

**Boiling point**
- Palmitate-BSA Conjugate: 100°C (212°F)
- BSA Control: 100°C (212°F)

**Flash point**
- Palmitate-BSA Conjugate: Not available.
- BSA Control: Not available.

**Evaporation rate**
- Palmitate-BSA Conjugate: Not available.
- BSA Control: Not available.

**Flammability (solid, gas)**
- Palmitate-BSA Conjugate: Not applicable.
- BSA Control: Not applicable.

**Lower and upper explosive (flammable) limits**
- Palmitate-BSA Conjugate: Not available.
- BSA Control: Not available.

**Vapor pressure**
- Palmitate-BSA Conjugate: Not available.
- BSA Control: Not available.

**Vapor density**
- : Not available.

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Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Palmitate-BSA Conjugate</th>
<th>BSA Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative density</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility</td>
<td>Palmitate-BSA Conjugate</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>BSA Control</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>Palmitate-BSA Conjugate</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
</tr>
<tr>
<td></td>
<td>BSA Control</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Palmitate-BSA Conjugate</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>BSA Control</td>
<td>Not available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Palmitate-BSA Conjugate</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>BSA Control</td>
<td>Not available.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Palmitate-BSA Conjugate</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>BSA Control</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Palmitate-BSA Conjugate</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>BSA Control</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Section 10. Stability and reactivity

10.1 Reactivity

<table>
<thead>
<tr>
<th></th>
<th>Palmitate-BSA Conjugate</th>
<th>BSA Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No specific test data related to reactivity available for this product or its ingredients.</td>
<td>No specific test data related to reactivity available for this product or its ingredients.</td>
</tr>
</tbody>
</table>

10.2 Chemical stability

<table>
<thead>
<tr>
<th></th>
<th>Palmitate-BSA Conjugate</th>
<th>BSA Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The product is stable.</td>
<td>The product is stable.</td>
</tr>
</tbody>
</table>

10.3 Possibility of hazardous reactions

<table>
<thead>
<tr>
<th></th>
<th>Palmitate-BSA Conjugate</th>
<th>BSA Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Under normal conditions of storage and use, hazardous reactions will not occur.</td>
<td>Under normal conditions of storage and use, hazardous reactions will not occur.</td>
</tr>
</tbody>
</table>

10.4 Conditions to avoid

<table>
<thead>
<tr>
<th></th>
<th>Palmitate-BSA Conjugate</th>
<th>BSA Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

10.5 Incompatible materials

<table>
<thead>
<tr>
<th></th>
<th>Palmitate-BSA Conjugate</th>
<th>BSA Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>May react or be incompatible with oxidizing materials.</td>
<td>May react or be incompatible with oxidizing materials.</td>
</tr>
</tbody>
</table>

10.6 Hazardous decomposition products

<table>
<thead>
<tr>
<th></th>
<th>Palmitate-BSA Conjugate</th>
<th>BSA Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</td>
<td>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</td>
</tr>
</tbody>
</table>

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

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Sensitization
Not available.

Mutagenicity
Not available.

Carcinogenicity
Not available.

Reproductive toxicity
Not available.

Teratogenicity
Not available.

Specific target organ toxicity (single exposure)
Not available.

Specific target organ toxicity (repeated exposure)
Not available.

Aspiration hazard
Not available.

Information on the likely routes of exposure

Inhalation
- Palmitate-BSA Conjugate: No known significant effects or critical hazards.
- BSA Control: No known significant effects or critical hazards.

Ingestion
- Palmitate-BSA Conjugate: No known significant effects or critical hazards.
- BSA Control: No known significant effects or critical hazards.

Skin contact
- Palmitate-BSA Conjugate: No known significant effects or critical hazards.
- BSA Control: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation
- Palmitate-BSA Conjugate: No specific data.
- BSA Control: No specific data.

Skin contact
- Palmitate-BSA Conjugate: No specific data.
- BSA Control: No specific data.

Ingestion
- Palmitate-BSA Conjugate: No specific data.
- BSA Control: No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects
- Not available.

Potential delayed effects
- Not available.

Long term exposure

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**Potential immediate effects**
- Palmitate-BSA Conjugate: No known significant effects or critical hazards.
- BSA Control: No known significant effects or critical hazards.

**Potential delayed effects**
- Palmitate-BSA Conjugate: No known significant effects or critical hazards.
- BSA Control: No known significant effects or critical hazards.

**Potential chronic health effects**

<table>
<thead>
<tr>
<th>Category</th>
<th>Palmitate-BSA Conjugate</th>
<th>BSA Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Teratogenicity</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Developmental</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Fertility effects</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

**Numerical measures of toxicity**

**Acute toxicity estimates**
- Not available.

**Other information**
- Palmitate-BSA Conjugate: Not available.
- BSA Control: Not available.

Section 12. Ecological information

**12.1 Toxicity**
- Not available.

**12.2 Persistence and degradability**
- Not available.

**12.3 Bioaccumulative potential**
- Not available.

**12.4 Mobility in soil**
- Soil/water partition coefficient ($K_{OC}$): Not available.

**12.5 Other adverse effects**
- No known significant effects or critical hazards.

Section 13. Disposal considerations

**13.1 Waste treatment methods**
Section 13. Disposal considerations

Disposal methods: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

RCRA classification: Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

DOT / TDG / Mexico / IMDG / IATA: Not regulated.

Special precautions for user: Transport within user’s premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code: Not available.

Section 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations: TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs): Not listed
Clean Air Act Section 602 Class I Substances: Not listed
Clean Air Act Section 602 Class II Substances: Not listed
DEA List I Chemicals (Precursor Chemicals): Not listed
DEA List II Chemicals (Essential Chemicals): Not listed
SARA 302/304 Composition/information on ingredients

Date of issue: 05/31/2017
Section 15. Regulatory information

No products were found.

**SARA 304 RQ**
- None of the components are listed.

**SARA 311/312**
- None of the components are listed.

**Classification**
- Palmitate-BSA Conjugate: Not applicable.
- BSA Control: Not applicable.

**Composition/information on ingredients**
No products were found.

**State regulations**

<table>
<thead>
<tr>
<th>State</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Massachusetts</td>
<td>None of the components are listed.</td>
</tr>
<tr>
<td>New York</td>
<td>None of the components are listed.</td>
</tr>
<tr>
<td>New Jersey</td>
<td>None of the components are listed.</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>None of the components are listed.</td>
</tr>
<tr>
<td>California Prop. 65</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**International regulations**

**Chemical Weapon Convention List Schedules I, II & III Chemicals**
- Not listed.

**Montreal Protocol (Annexes A, B, C, E)**
- Not listed.

**Stockholm Convention on Persistent Organic Pollutants**
- Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**
- Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**
- Not listed.

**Inventory list**

<table>
<thead>
<tr>
<th>Country</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Canada</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>China</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Europe</td>
<td>All components are listed or exempted.</td>
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<tr>
<td>Japan</td>
<td>Japan inventory (ENCS): All components are listed or exempted.</td>
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<tr>
<td>Malaysia</td>
<td>Not determined.</td>
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<tr>
<td>New Zealand</td>
<td>All components are listed or exempted.</td>
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<tr>
<td>Philippines</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Taiwan</td>
<td>All components are listed or exempted.</td>
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<tr>
<td>Thailand</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Turkey</td>
<td>Not determined.</td>
</tr>
<tr>
<td>United States</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>Not determined.</td>
</tr>
</tbody>
</table>

**Date of issue:** 05/31/2017
Section 16. Other information

History

Date of issue : 05/31/2017
Date of previous issue : 04/25/2016.
Version : 2

Indicates information that has changed from previously issued version.

Notice to reader

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