Precoated EIA 96-Well Plate (solid or strip)
Item No. 400004, 400005, 400006, 400007, 400008, or 400009

COMMENTS:
Each plate is coated with antibody. This Safety Data Sheet (SDS) is for the antibody only. An SDS on this material is not required as this substance is a naturally occurring animal product. However, we do recommend the following minimum precautions when using this substance:

- Do NOT get in eyes, on skin, or on clothing.
- Do NOT take internally.
- Wear protective gloves and safety glasses.
- Keep container closed.
- Store at correct temperature.
- Do NOT reuse this container.
- Do NOT release this material to the environment; dispose of by incineration in accordance with federal, state, and local regulations.
- Wash thoroughly after handling.

WARNING:
Not for human or animal disease diagnostics or therapeutic drug use.

The above information is believed to be correct but should only be used as a guide. Cayman Chemical disclaims any express or implied warranty as to the accuracy of the above information and shall not be held liable for any direct, incidental, or consequential damages resulting from reliance on the above information.
Section 1. Identification of the Substance/Mixture and of the

1.1 Product Code: 400035
Product Name: Polysorbate 20
Synonyms: Tween 20™;

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses: For research use only, not for human or veterinary use.

1.3 Details of the Supplier of the Safety Data Sheet
Company Name: Cayman Chemical Company
Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300
Alternate Emergency Contact: CHEMTREC Outside USA and Canada: +1 (703)527-3887
Information: Cayman Chemical Company +1 (734)971-3335
Web site address: www.caymanchem.com

Section 2. Hazards Identification

<table>
<thead>
<tr>
<th>GHS Classification</th>
<th>Placard</th>
<th>Key word</th>
<th>GHS hazard phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious Eye Damage/Eye Irritation, Category 2A</td>
<td>Exclamation point</td>
<td>Warning</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>Skin Sensitization, Category 1</td>
<td>Exclamation point</td>
<td>Warning</td>
<td>May cause an allergic skin reaction</td>
</tr>
</tbody>
</table>

GHS Hazard Phrases:
H319: Causes serious eye irritation.
H317: May cause an allergic skin reaction.

GHS Precaution Phrases:
P264: Wash hands thoroughly after handling.
P280: Wear protective gloves/clothing and eye/face protection as specified by the manufacturer/supplier or the competent authority.
P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P272: Contaminated work clothing should not be allowed out of the workplace.
P362+364: Take off contaminated clothing and wash it before reuse.

GHS Response Phrases:
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+313: If eye irritation persists, get medical advice/attention.
P302+352: IF ON SKIN: Wash with plenty of soap and water.
P333+313: If skin irritation or rash occurs, seek medical advice/attention.

GHS Storage and Disposal Phrases:
Please refer to Section 7 for Storage and Section 13 for Disposal information.

2.3 Adverse Human Health Effects and Symptoms:
Causes serious eye irritation.
Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
May cause an allergic skin reaction.
May cause respiratory system irritation.
To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Target Organs: No data available.

LD 50 / LC 50: Please refer to Section 11.

Medical Conditions Generally Aggravated By Exposure: No data available.
Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Concentration</th>
<th>EC#</th>
<th>Risk Phrases</th>
<th>RTECS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyoxyethylene (20) sorbitan monolaurate (Tween 20™)</td>
<td>9005-64-5</td>
<td>100.0 %</td>
<td>500-018-3</td>
<td>R36-43</td>
<td>TR7400000</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

4.1 Description of First Aid Measures:

4.1.1 In Case of Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

4.1.2 In Case of Skin Contact: Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

4.1.3 In Case of Eye Contact: Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.

4.1.4 In Case of Ingestion: No data available.

4.2 Important Symptoms and Effects, Both Acute and Delayed: No data available.

4.3 Indication of any immediate medical attention and special treatment needed: No data available.

Section 5. Fire Fighting Measures

5.1 Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing Media: A solid water stream may be inefficient.

5.2 Flammable Properties and Hazards: No data available.

Flash Pt: No data.

Autoignition Pt: No data available.

Explosive Limits: LEL: No data. UEL: No data.

Hazardous Combustion Products: No data available.

5.3 Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

Section 6. Accidental Release Measures

6.1 Protective Precautions, Protective Equipment and Emergency Procedures: Avoid raising and breathing dust, and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

6.2 Environmental Precautions: Take steps to avoid release into the environment, if safe to do so.

6.3 Methods and Material For Containment and Cleaning Up: Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

Section 7. Handling and Storage

7.1 Precautions To Be Taken in Handling: Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.

7.2 Precautions To Be Taken in Storing: Keep container tightly closed. Store in accordance with information listed on the product insert.

Hazard Label Information: Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.
Polysorbate 20
SAFETY DATA SHEET

Section 8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)  | CAS #  | OSHA PEL | ACGIH TLV  | Other Limits |
--- | --- | --- | --- | --- |
1. Polyoxyethylene (20) sorbitan monolaurate (Tween 20™) | 9005-64-5 | No data. | No data. | No data. |

Hazardous Components (Chemical Name)  | CAS #  | Britain EH40 | France VL | Europe |
--- | --- | --- | --- | --- |
1. Polyoxyethylene (20) sorbitan monolaurate (Tween 20™) | 9005-64-5 | No data. | No data. | No data. |

Protective Equipment Summary - Hazard Label Information:
- Compatible chemical-resistant gloves
- Eye wash station in work area
- Lab coat
- Safety glasses
- Safety shower in work area
- Vent Hood

8.2.1 Engineering Controls (Ventilation etc.):
- Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

8.2.2.1 Eye Protection:
- Safety glasses

8.2.2.2 Protective Gloves:
- Compatible chemical-resistant gloves
- Lab coat

8.2.2.3 Respiratory Equipment (Specify Type):
- NIOSH approved respirator, as conditions warrant.

Work/Hygienic/Maintenance Practices:
- Do not take internally.
- Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
- Wash thoroughly after handling.

8.2.3 Environmental Exposure Controls:
- No data available.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Physical States: [ ] Gas [ X ] Liquid [ ] Solid

Appearance and Odor: A clear, yellow viscous liquid

Melting Point: No data.

Boiling Point: No data.

Flash Pt: No data.

Evaporation Rate: No data.

Vapor Pressure (vs. Air or mm Hg): No data.

Vapor Density (vs. Air = 1): No data.

Specific Gravity (Water = 1): No data.

Solubility in Water: No data.

Autoignition Pt: No data.

Explosive Properties: No data available.

Oxidizing Properties: No data available.

9.2 Other Information

Percent Volatile: N.A.

Section 10. Stability and Reactivity

10.1 Reactivity:
- No data available.

10.2 Stability:
- Unstable [ ] Stable [ X ]

10.3 Stability Note(s):
- Stable if stored in accordance with information listed on the product insert.

10.4 Conditions To Avoid:
- No data available.
Section 11. Toxicological Information

11.1 Information on Toxicological Effects:
The toxicological effects of this product have not been thoroughly studied.

Polysorbate 20 - Toxicity Data: Oral LD50 (rat): 36.7 ml/kg; Oral LD50 (hamster): 18 ml/kg; Oral LD50 (mouse): >33 g/kg; Irritation Data: Skin (human): 15 mg/3D mild;

Chronic Toxicological Effects:
Polysorbate 20 - Investigated as a tumorigen and reproductive effector. Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information.

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyoxylene (20) sorbitan monolaurate (Tween 20™)</td>
<td>9005-64-5</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Carcinogenicity:
NTP? No IARC Monographs? No OSHA Regulated? No

Section 12. Ecological Information

12.1 Toxicity:
Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.

Section 13. Disposal Considerations

13.1 Waste Disposal Method:
Dispose in accordance with local, state, and federal regulations.

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT)
DOT Proper Shipping Name
Not dangerous goods.

14.1 LAND TRANSPORT (European ADR/RID)
ADR/RID Shipping Name
Not dangerous goods.

14.3 AIR TRANSPORT (ICAO/IATA)
ICAO/IATA Shipping Name
Not dangerous goods.

Additional Transport Information:
Transport in accordance with local, state, and federal regulations.

Section 15. Regulatory Information

European Community Hazard Symbol codes
Xi: Irritant

European Community Risk and Safety Phrases
- R36  - Irritating to eyes.
- R43  - May cause sensitization by skin contact.
- S24/25 - Avoid contact with skin and eyes.
- S26  - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

US EPA SARA Title III

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Sec.302 (EHS)</th>
<th>Sec.304 RQ</th>
<th>Sec.313 (TRI)</th>
<th>Sec.110</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyoxylene (20) sorbitan monolaurate (Tween 20™)</td>
<td>9005-64-5</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Other US EPA or State Lists

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>CAA HAP,ODC</th>
<th>CWA NPDES</th>
<th>TSCA</th>
<th>CA PROP.65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyoxylene (20) sorbitan monolaurate (Tween 20™)</td>
<td>9005-64-5</td>
<td>No</td>
<td>No</td>
<td>Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

Section 16. Other Information

Revision Date: 05/02/2013

Company Policy or Disclaimer

For research use only, not for human or veterinary use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required
Section 1. Identification of the Substance/Mixture and of the

1.1 Product Code: EIA Tracer Dye
1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses: For research use only, not for human or veterinary use.
1.3 Details of the Supplier of the Safety Data Sheet
Company Name: Cayman Chemical Company
Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300
Alternate Emergency Contact: CHEMTREC Outside USA and Canada: +1 (703)527-3887
Information: Cayman Chemical Company +1 (734)971-3335
Web site address: www.caymanchem.com

Section 2. Hazards Identification

<table>
<thead>
<tr>
<th>GHS Classification</th>
<th>Placard</th>
<th>Key word</th>
<th>GHS hazard phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious Eye Damage/Eye Irritation, Category 2A</td>
<td>Exclamation point</td>
<td>Warning</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>Skin Corrosion/Irritation, Category 2</td>
<td>Exclamation point</td>
<td>Warning</td>
<td>Causes skin irritation</td>
</tr>
</tbody>
</table>

GHS Hazard Phrases:
H319: Causes serious eye irritation
H315: Causes skin irritation.

GHS Precaution Phrases:
P264: Wash hands thoroughly after handling.
P280: Wear protective gloves/clothing and eye/face protection as specified by the manufacturer/supplier or the competent authority.

GHS Response Phrases:
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+313: If eye irritation persists, get medical advice/attention.
P302+352: IF ON SKIN: Wash with plenty of soap and water.
P332+313: If skin irritation occurs, get medical advice/attention.
P362: Take off contaminated clothing and wash before re-use.

GHS Storage and Disposal Phrases:
Please refer to Section 7 for Storage and Section 13 for Disposal information.

2.3 Adverse Human Health Effects and Symptoms:
Causes skin and serious eye irritation.
Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
May cause burns.
May cause respiratory system irritation.
May temporarily stain skin.
To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Target Organs: No data available.
Medical Conditions Generally Aggravated By Exposure: No data available.
Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Concentration</th>
<th>EC#</th>
<th>Risk Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>EIA Tracer Dye</td>
<td>NA</td>
<td>100.0 %</td>
<td>NA</td>
<td>R36/38</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

4.1 Description of First Aid Measures:
4.1.1 In Case of Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
4.1.2 In Case of Skin Contact: Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.
4.1.3 In Case of Eye Contact: Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.
4.1.4 In Case of Ingestion: No data available.

4.2 Important Symptoms and Effects, Both Acute and Delayed: No data available.

4.3 Indication of any immediate medical attention and special treatment needed: No data available.

Section 5. Fire Fighting Measures

5.1 Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.
Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing Media: A solid water stream may be inefficient.

5.2 Flammable Properties and Hazards: No data available.

Flash Pt: No data.
Autoignition Pt: No data available.
Explosive Limits: LEL: No data. UEL: No data.

5.3 Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

Section 6. Accidental Release Measures

6.1 Protective Precautions, Protective Equipment and Emergency Procedures: Avoid breathing vapors and provide adequate ventilation.
As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

6.2 Environmental Precautions: Take steps to avoid release into the environment, if safe to do so.

6.3 Methods and Material For Containment and Cleaning Up: Contain spill and collect, as appropriate.
Transfer to a chemical waste container for disposal in accordance with local regulations.

Section 7. Handling and Storage

7.1 Precautions To Be Taken in Handling: Avoid breathing dust/fume/gas/mist/vapours/spray.
Avoid prolonged or repeated exposure.

7.2 Precautions To Be Taken in Storing: Keep container tightly closed.
Store in accordance with information listed on the product insert.

Hazard Label Information: Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation.
Wash thoroughly after handling.
Section 8. Exposure Controls / Personal Protection

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EIA Tracer Dye</td>
<td>NA</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
</tbody>
</table>

Hazardous Components (Chemical Name) | CAS # | Other Limits |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EIA Tracer Dye</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

Protective Equipment Summary - Hazard Label Information:
Compatible chemical-resistant gloves  Eye wash station in work area  Lab coat  Safety glasses  Safety shower in work area  Vent Hood

8.2.1 Engineering Controls (Ventilation etc.):
Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

8.2.2 Eye Protection:
Safety glasses

8.2.2.2 Protective Gloves:
Compatible chemical-resistant gloves

8.2.2.3 Respiratory Equipment (Specify Type):
NIOSH approved respirator, as conditions warrant.

Work/Hygienic/Maintenance Practices:
Do not take internally.
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Wash thoroughly after handling.

8.2.3 Environmental Exposure Controls:
No data available.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical States:</th>
<th>[ ] Gas  [X] Liquid  [ ] Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance and Odor:</td>
<td>A red solution</td>
</tr>
<tr>
<td>Melting Point:</td>
<td>No data.</td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>No data.</td>
</tr>
<tr>
<td>Flash Pt:</td>
<td>No data.</td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>No data.</td>
</tr>
<tr>
<td>Vapor Pressure (vs. Air or mm Hg):</td>
<td>No data.</td>
</tr>
<tr>
<td>Vapor Density (vs. Air = 1):</td>
<td>No data.</td>
</tr>
<tr>
<td>Specific Gravity (Water = 1):</td>
<td>No data.</td>
</tr>
<tr>
<td>Solubility in Water:</td>
<td>No data.</td>
</tr>
<tr>
<td>Autoignition Pt:</td>
<td>No data.</td>
</tr>
</tbody>
</table>

Explosive Properties:
No data available.

Oxidizing Properties:
No data available.

9.2 Other Information

Percent Volatile:
No data.

Section 10. Stability and Reactivity

10.1 Reactivity:
No data available.

10.2 Stability:
Unstable [ ] Stable [ X ]

10.3 Stability Note(s):
Stable if stored in accordance with information listed on the product insert.

10.4 Conditions To Avoid:
No data available.

10.3 Polymerization:
Will occur [ ] Will not occur [ X ]
Section 11. Toxicological Information

11.1 Information on Toxicological Effects: The toxicological effects of this product have not been thoroughly studied.

Chronic Toxicological Effects: No data available.

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>EIA Tracer Dye</td>
<td>NA</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

Section 12. Ecological Information

12.1 Toxicity: Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.

Section 13. Disposal Considerations

13.1 Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT)

DOT Proper Shipping Name: Not dangerous goods.

14.1 LAND TRANSPORT (European ADR/RID)

ADR/RID Shipping Name: Not dangerous goods.

14.3 AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name: Not dangerous goods.

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

Section 15. Regulatory Information

European Community Hazard Symbol codes: Xi: Irritant

European Community Risk and Safety Phrases:
- R36/38 - Irritating to eyes and skin.
- S24/25 - Avoid contact with skin and eyes.
- S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

US EPA SARA Title III

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Sec.302 (EHS)</th>
<th>Sec.304 RQ</th>
<th>Sec.313 (TRI)</th>
<th>Sec.110</th>
</tr>
</thead>
<tbody>
<tr>
<td>EIA Tracer Dye</td>
<td>NA</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Other US EPA or State Lists

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>CAA HAP,ODC</th>
<th>CWA NPDES</th>
<th>TSCA</th>
<th>CA PROP.65</th>
</tr>
</thead>
<tbody>
<tr>
<td>EIA Tracer Dye</td>
<td>NA</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>


Section 16. Other Information

Revision Date: 05/02/2013

Company Policy or Disclaimer

For research use only, not for human or veterinary use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required
Section 1. Identification of the Substance/Mixture and of the

1.1 Product Code: 400042
Product Name: EIA Antiserum Dye

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses: For research use only, not for human or veterinary use.

1.3 Details of the Supplier of the Safety Data Sheet
Company Name: Cayman Chemical Company
Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300
Alternate Emergency Contact: CHEMTREC Outside USA and Canada: +1 (703)527-3887
Information: Cayman Chemical Company +1 (734)971-3335
Web site address: www.caymanchem.com

Section 2. Hazards Identification

GHS Classification

<table>
<thead>
<tr>
<th>Carcinogenicity, Category 2</th>
<th>Placard</th>
<th>Key word</th>
<th>GHS hazard phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxic To Reproduction, Category 2</td>
<td>Health hazard</td>
<td>Warning</td>
<td>Suspected of causing cancer</td>
</tr>
</tbody>
</table>

GHS Hazard Phrases:
H351: Suspected of causing cancer.
H361: Suspected of damaging fertility or the unborn child.

GHS Precaution Phrases:
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P281: Use personal protective equipment as required.

GHS Response Phrases:
P308+313: IF exposed or concerned: Get medical attention/advice.

2.3 Adverse Human Health Effects and Symptoms:
Material may be irritating to mucous membranes and upper respiratory tract. May be harmful by inhalation, ingestion, or skin absorption. May cause cancer. May cause eye, skin, or respiratory system irritation. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Target Organs: No data available.
LD 50 / LC 50: Please refer to Section 11.
Medical Conditions Generally Aggravated By Exposure: No data available.

Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Concentration</th>
<th>EC#</th>
<th>Risk Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. EIA Antiserum Dye</td>
<td>NA</td>
<td>100.0 %</td>
<td>NA</td>
<td>R45-62-63</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

4.1 Description of First Aid Measures:

4.1.1 In Case of Inhalation:
Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
4.1.2 In Case of Skin Contact: Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

4.1.3 In Case of Eye Contact: Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.

4.1.4 In Case of Ingestion: Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

4.2 Important Symptoms and Effects, Both Acute and Delayed: No data available.

4.3 Indication of any immediate medical attention and special treatment needed: No data available.

Section 5. Fire Fighting Measures

5.1 Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing Media: A solid water stream may be inefficient.

5.2 Flammable Properties and Hazards: No data available.

Flash Pt: No data.

Autoignition Pt: No data available.

Explosive Limits: LEL: No data. UEL: No data.

Hazardous Combustion Products: No data available.

5.3 Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

Section 6. Accidental Release Measures

6.1 Protective Precautions, Protective Equipment and Emergency Procedures: Avoid breathing vapors and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

6.2 Environmental Precautions: Take steps to avoid release into the environment, if safe to do so.

6.3 Methods and Material For Containment and Cleaning Up: Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

Section 7. Handling and Storage

7.1 Precautions To Be Taken in Handling: Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.

7.2 Precautions To Be Taken in Storing: Keep container tightly closed. Store in accordance with information listed on the product insert.

Hazard Label Information: Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.

Section 8. Exposure Controls/Personal Protection

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EIA Antiserum Dye</td>
<td>NA</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Britain EH40</th>
<th>France VL</th>
<th>Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td>EIA Antiserum Dye</td>
<td>NA</td>
<td></td>
<td>No data</td>
<td>No data</td>
</tr>
</tbody>
</table>

Protective Equipment Summary - Hazard Label Information:

- Compatible chemical-resistant gloves
- Eye wash station in work area
- Lab coat
- Safety glasses
- Safety shower in work area
- Vent Hood

8.2.1 Engineering Controls (Ventilation etc.):

- Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
8.2.2.1 Eye Protection: Safety glasses
8.2.2.2 Protective Gloves: Compatible chemical-resistant gloves
     8.2.2.3 Respiratory Equipment (Specify Type): NIOSH approved respirator, as conditions warrant.

Work/Hygienic/Maintenance Practices:
Do not take internally.
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Wash thoroughly after handling.

8.2.3 Environmental Exposure Controls:
No data available.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

- Physical States: [ ] Gas [ X ] Liquid [ ] Solid
- Appearance and Odor: A blue solution
- Melting Point: No data.
- Boiling Point: No data.
- Flash Pt: No data.
- Evaporation Rate: No data.
- Vapor Pressure (vs. Air or mm Hg): No data.
- Vapor Density (vs. Air = 1): No data.
- Specific Gravity (Water = 1): No data.
- Solubility in Water: No data.
- Autoignition Pt: No data.

Section 10. Stability and Reactivity

10.1 Reactivity: No data available.
10.2 Stability: Unstable [ ] Stable [ X ]
10.3 Stability Note(s): Stable if stored in accordance with information listed on the product insert.
10.4 Conditions To Avoid: No data available.
10.5 Incompatibility - Materials To Avoid: strong oxidizing agents
10.6 Hazardous Decomposition Or Byproducts: No data available.

Section 11. Toxicological Information

11.1 Information on Toxicological Effects: The toxicological effects of this product have not been thoroughly studied.
11.2 Chronic Toxicological Effects: Contains a component that has been investigated as a carcinogen.
11.3 Carcinogenicity/Other Information: Contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.
SAFETY DATA SHEET
EIA Antiserum Dye

Hazardous Components (Chemical Name) | CAS # | NTP | IARC | ACGIH | OSHA
--- | --- | --- | --- | --- | ---
1. EIA Antiserum Dye | NA | n.a. | n.a. | n.a. | n.a.

Carcinogenicity:
- NTP: No
- IARC Monographs: Yes
- OSHA Regulated: No

Section 12. Ecological Information

12.1 Toxicity:
Avoid release into the environment.
Runoff from fire control or dilution water may cause pollution.

Section 13. Disposal Considerations

13.1 Waste Disposal Method:
Dispose in accordance with local, state, and federal regulations.

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT)
- DOT Proper Shipping Name: Not dangerous goods.

14.1 LAND TRANSPORT (European ADR/RID)
- ADR/RID Shipping Name: Not dangerous goods.

14.3 AIR TRANSPORT (ICAO/IATA)
- ICAO/IATA Shipping Name: Not dangerous goods.

Additional Transport Information:
Transport in accordance with local, state, and federal regulations.

Section 15. Regulatory Information

European Community Hazard Symbol codes
- T: Toxic
- Carcinogenic Hazard: 2
- Reproductive Hazard: 3

European Community Risk and Safety Phrases
- R45: May cause cancer.
- R62: Risk of impaired fertility.
- R63: Possible risk of harm to the unborn child.
- S24/25: Avoid contact with skin and eyes.
- S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
- S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible.)
- S53: Avoid exposure - obtain special instructions before use.

US EPA SARA Title III

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Sec.302 (EHS)</th>
<th>Sec.304 RQ</th>
<th>Sec.313 (TRI)</th>
<th>Sec.110</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. EIA Antiserum Dye</td>
<td>NA</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Other US EPA or State Lists

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>CAA HAP,ODC</th>
<th>CWA NPDES</th>
<th>TSCA</th>
<th>CA PROP.65</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. EIA Antiserum Dye</td>
<td>NA</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Regulatory Information Statement:

Section 16. Other Information

Revision Date: 05/02/2013

Company Policy or Disclaimer
For research use only, not for human or veterinary use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required
SAFETY DATA SHEET
Ellman's Reagent

Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Section 1. Identification of the Substance/Mixture and of the

1.1 Product Code: 400050

Product Name: Ellman's Reagent

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: For research use only, not for human or veterinary use.

1.3 Details of the Supplier of the Safety Data Sheet

Company Name: Cayman Chemical Company

Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300

Alternate Emergency Contact: CHEMTREC Outside USA and Canada: +1 (703)527-3887

Information: Cayman Chemical Company +1 (734)971-3335

Web site address: www.caymanchem.com

Section 2. Hazards Identification

<table>
<thead>
<tr>
<th>GHS Classification</th>
<th>Placard</th>
<th>Key word</th>
<th>GHS hazard phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity: Oral, Category 3</td>
<td>Skull and crossbones</td>
<td>Danger</td>
<td>Toxic if swallowed</td>
</tr>
<tr>
<td>Acute Toxicity: Skin, Category 3</td>
<td>Skull and crossbones</td>
<td>Danger</td>
<td>Toxic in contact with skin</td>
</tr>
<tr>
<td>Skin Corrosion/Irritation, Category 2</td>
<td>Exclamation point</td>
<td>Warning</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>Serious Eye Damage/Eye Irritation, Category 1</td>
<td>Corrosive</td>
<td>Danger</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>Target Organ Systemic Toxicity (single exposure), Category 3</td>
<td>Exclamation point</td>
<td>Warning</td>
<td>May cause respiratory irritation, or may cause drowsiness and dizziness</td>
</tr>
</tbody>
</table>

GHS Hazard Phrases:

- H301: Toxic if swallowed.
- H311: Toxic in contact with skin.
- H315: Causes skin irritation.
- H318: Causes serious eye damage.
- H335: May cause respiratory irritation.

GHS Precaution Phrases:

- P264: Wash hands thoroughly after handling.
- P280: Wear protective gloves/clothing and eye/face protection as specified by the manufacturer/supplier or the competent authority.
- P361+364: Take off immediately all contaminated clothing and wash it before reuse.
- P362+364: Take off contaminated clothing and wash it before reuse.
- P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

GHS Response Phrases:

- P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P330: Rinse mouth.
- P302+352: IF ON SKIN: Wash with plenty of soap and water.
- P312: Call a POISON CENTER or doctor/physician if you feel unwell.
- P321: Specific treatment (see ... on this label) ... reference to supplemental first aid instruction - if immediate administration of antidote is required.
- P332+313: If skin irritation occurs, get medical advice/attention.
- P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310: Immediately call a POISON CENTER or doctor/physician.
- P309+311: Call a POISON CENTER or doctor/physician if exposed or you feel unwell.
- P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
SAFETY DATA SHEET
Ellman's Reagent

GHS Storage and Disposal Phrases:
Please refer to Section 7 for Storage and Section 13 for Disposal information.

2.3 Adverse Human Health Effects and Symptoms:
Causes serious eye damage.
Causes skin and respiratory system irritation.
Material is irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation.
Toxic if swallowed or in contact with skin.
To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Target Organs:
No data available.

LD 50 / LC 50:
Please refer to Section 11.

Medical Conditions Generally Aggravated By Exposure:
No data available.

Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Concentration</th>
<th>EC#</th>
<th>Risk Phrases</th>
<th>RTECS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTNB</td>
<td>69-78-3</td>
<td>1.0 -5.0 %</td>
<td>200-714-4</td>
<td>R36/37/38</td>
<td>DG9650000</td>
</tr>
<tr>
<td>Acetylthiocholine iodide</td>
<td>1866-15-5</td>
<td>1.0 -5.0 %</td>
<td>217-474-1</td>
<td>R24/25-36/37/38</td>
<td>FZ9865000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>7647-14-5</td>
<td>5.0 -10.0 %</td>
<td>231-598-3</td>
<td>R36</td>
<td>VZ4725000</td>
</tr>
<tr>
<td>Potassium phosphate, dibasic</td>
<td>7758-11-4</td>
<td>45.0 -55.0 %</td>
<td>231-834-5</td>
<td>R41</td>
<td>TC5580000</td>
</tr>
<tr>
<td>Potassium phosphate, Monobasic</td>
<td>7778-77-0</td>
<td>35.0 -45.0 %</td>
<td>231-913-4</td>
<td>No phrases apply.</td>
<td>TC6615500</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

4.1 Description of First Aid Measures:

4.1.1 In Case of Inhalation:
Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

4.1.2 In Case of Skin Contact:
Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

4.1.3 In Case of Eye Contact:
Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.

4.1.4 In Case of Ingestion:
Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

4.2 Important Symptoms and Effects, Both Acute and Delayed:
Ingestion of large amounts can cause abdominal pain, lowered blood pressure, nausea, and vomiting.

4.3 Indication of any immediate medical attention and special treatment needed:
No data available.

Section 5. Fire Fighting Measures

5.1 Suitable Extinguishing Media:
Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.
Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing Media:
A solid water stream may be inefficient.

5.2 Flammable Properties and Hazards:
No data available.

Flash Pt:
No data.

Autoignition Pt:
No data available.

Explosive Limits:
LEL: No data.  
UEL: No data.

Hazardous Combustion Products:
No data available.

5.3 Fire Fighting Instructions:
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.
### Section 6. Accidental Release Measures

**6.1 Protective Precautions, Protective Equipment and Emergency Procedures:**
Avoid raising and breathing dust, and provide adequate ventilation.
As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

**6.2 Environmental Precautions:**
Take steps to avoid release into the environment, if safe to do so.

**6.3 Methods and Material For Containment and Cleaning Up:**
Contain spill and collect, as appropriate.
Transfer to a chemical waste container for disposal in accordance with local regulations.

### Section 7. Handling and Storage

**7.1 Precautions To Be Taken in Handling:**
Avoid breathing dust/fume/gas/mist/vapours/spray.
Avoid prolonged or repeated exposure.

**7.2 Precautions To Be Taken in Storing:**
Keep container tightly closed.
Store in accordance with information listed on the product insert.

**Other Precautions:**
Protect from light.

**Hazard Label Information:**
Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.

### Section 8. Exposure Controls/Personal Protection

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. DTNB</td>
<td>69-78-3</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>3. Sodium chloride</td>
<td>7647-14-5</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>4. Potassium phosphate, dibasic</td>
<td>7758-11-4</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>5. Potassium phosphate, Monobasic</td>
<td>7778-77-0</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
</tbody>
</table>

**Hazardous Components (Chemical Name)**

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Britain EH40</th>
<th>France VL</th>
<th>Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td>69-78-3</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>1866-15-5</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>7647-14-5</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>7758-11-4</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>7778-77-0</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
</tbody>
</table>

**Protective Equipment Summary - Hazard Label Information:**
Compatible chemical-resistant gloves  Eye wash station in work area  Lab coat  Safety glasses  Safety shower in work area  Vent Hood

**8.2.1 Engineering Controls (Ventilation etc.):**
Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

**8.2.2.1 Eye Protection:**
Safety glasses

**8.2.2.2 Protective Gloves:**
Compatible chemical-resistant gloves

**8.2.2.3 Respiratory Equipment (Specify Type):**
NIOSH approved respirator, as conditions warrant.

**Other Protective Clothing:**
Lab coat

**Work/Hygienic/Maintenance Practices:**
Do not take internally.
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Wash thoroughly after handling.

**8.2.3 Environmental Exposure Controls:**
No data available.

### Section 9. Physical and Chemical Properties

**9.1 Information on Basic Physical and Chemical Properties**

**Physical States:**
- [ ] Gas
- [ ] Liquid
- [X] Solid

Multi-region format
Appearance and Odor: A lyophilized powder
Melting Point: No data.
Boiling Point: No data.
Flash Pt: No data.
Evaporation Rate: No data.
Vapor Pressure (vs. Air or mm Hg): No data.
Vapor Density (vs. Air = 1): No data.
Specific Gravity (Water = 1): No data.
Solubility in Water: No data.
Autoignition Pt: No data.
Explosive Properties: No data available.
Oxidizing Properties: No data available.

9.2 Other Information
Percent Volatile: No data.

Section 10. Stability and Reactivity

10.1 Reactivity: No data available.
10.2 Stability: Unstable [ ] Stable [ X ]
10.3 Stability Note(s): Stable if stored in accordance with information listed on the product insert.
10.4 Conditions To Avoid: No data available.
10.5 Polymerization: Will occur [ ] Will not occur [ X ]
10.6 Incompatibility - Materials To Avoid: strong bases
strong oxidizing agents
carbon dioxide
carbon monoxide
hydrogen chloride gas
hydrogen iodide
nitrogen oxides
phosphorus oxides
potassium oxides
sodium oxides
sulfur oxides

Section 11. Toxicological Information

11.1 Information on Toxicological Effects: The toxicological effects of this product have not been thoroughly studied.

Acetylthiocholine iodide - Toxicity Data: Oral LD50 (rat): 100 mg/kg; Skin LD50 (guinea pig): 500 mg/kg;

Potassium phosphate, monobasic - Toxicity Data: Oral LDLO (rat): 4,640 mg/kg; Skin LD50 (rabbit): >4,640 mg/kg;

Chronic Toxicological Effects: Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information.
Acetylthiocholine iodide RTECS Number: FZ9865000
Potassium phosphate, monobasic RTECS Number: TC6615500

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. DTNB</td>
<td>69-78-3</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>
## Section 12. Ecological Information

### 12.1 Toxicity:
Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.

## Section 13. Disposal Considerations

### 13.1 Waste Disposal Method:
Dispose in accordance with local, state, and federal regulations.

## Section 14. Transport Information

### 14.1 LAND TRANSPORT (US DOT)
DOT Proper Shipping Name
Not dangerous goods.

### 14.1 LAND TRANSPORT (European ADR/RID)
ADR/RID Shipping Name
Not dangerous goods.

### 14.3 AIR TRANSPORT (ICAO/IATA)
ICAO/IATA Shipping Name
Not dangerous goods.

Additional Transport Information:
Transport in accordance with local, state, and federal regulations.

## Section 15. Regulatory Information

### European Community Hazard Symbol codes
- **T**: Toxic

### European Community Risk and Safety Phrases
- R24/25 - Toxic in contact with skin and if swallowed.
- R37/38 - Irritating to respiratory system and skin.
- R41 - Risk of serious damage to the eyes.
- S24/25 - Avoid contact with skin and eyes.
- S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

### US EPA SARA Title III

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Sec.302 (EHS)</th>
<th>Sec.304 RQ</th>
<th>Sec.313 (TRI)</th>
<th>Sec.110</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. DTNB</td>
<td>69-78-3</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2. Acetylthiocholine iodide</td>
<td>1866-15-5</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>3. Sodium chloride</td>
<td>7647-14-5</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>4. Potassium phosphate, dibasic</td>
<td>7758-11-4</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>5. Potassium phosphate, Monobasic</td>
<td>7778-77-0</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

### Other US EPA or State Lists

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>CAA HAP, ODC</th>
<th>CWA NPDES</th>
<th>TSCA</th>
<th>CA PROP.65</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. DTNB</td>
<td>69-78-3</td>
<td>No</td>
<td>No</td>
<td>Inventory</td>
<td>No</td>
</tr>
<tr>
<td>2. Acetylthiocholine iodide</td>
<td>1866-15-5</td>
<td>No</td>
<td>No</td>
<td>Inventory</td>
<td>No</td>
</tr>
<tr>
<td>3. Sodium chloride</td>
<td>7647-14-5</td>
<td>No</td>
<td>No</td>
<td>Inventory</td>
<td>No</td>
</tr>
<tr>
<td>4. Potassium phosphate, dibasic</td>
<td>7758-11-4</td>
<td>No</td>
<td>No</td>
<td>Inventory</td>
<td>No</td>
</tr>
<tr>
<td>5. Potassium phosphate, Monobasic</td>
<td>7778-77-0</td>
<td>No</td>
<td>No</td>
<td>Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

### Regulatory Information Statement:
Company Policy or Disclaimer

For research use only, not for human or veterinary use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required
### Section 1. Identification of the Substance/Mixture and of the Supplier of the Safety Data Sheet

**1.1 Product Code:** EIA Buffer Concentrate (10X)

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses: For research use only, not for human or veterinary use.

**1.3 Details of the Supplier of the Safety Data Sheet**

- **Company Name:** Cayman Chemical Company
- **Emergency Contact:** CHEMTREC Within USA and Canada: +1 (800)424-9300
- **Alternate Emergency Contact:** CHEMTREC Outside USA and Canada: +1 (703)527-3887
- **Information:** Cayman Chemical Company +1 (734)971-3335
- **Web site address:** www.caymanchem.com

### Section 2. Hazards Identification

<table>
<thead>
<tr>
<th>GHS Classification</th>
<th>Placard</th>
<th>Key word</th>
<th>GHS hazard phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity: Oral, Category 4</td>
<td>Exclamation point</td>
<td>Warning</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>Acute Toxicity: Skin, Category 5</td>
<td>none</td>
<td>Warning</td>
<td>May be harmful in contact with skin</td>
</tr>
<tr>
<td>Skin Corrosion/Irritation, Category 3</td>
<td>none</td>
<td>Warning</td>
<td>Causes mild skin irritation</td>
</tr>
<tr>
<td>Serious Eye Damage/Eye Irritation, Category 1</td>
<td>Corrosive</td>
<td>Danger</td>
<td>Causes serious eye damage</td>
</tr>
</tbody>
</table>

**GHS Hazard Phrases:**
- H302: Harmful if swallowed.
- H313: May be harmful in contact with skin.
- H316: Causes mild skin irritation.
- H318: Causes serious eye damage.

**GHS Precaution Phrases:**
- P264: Wash hands thoroughly after handling.
- P280: Wear protective gloves/clothing and eye/face protection as specified by the manufacturer/supplier or the competent authority.

**GHS Response Phrases:**
- P301+312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310: Immediately call a POISON CENTER or doctor/physician.

**GHS Storage and Disposal Phrases:**
- Please refer to Section 7 for Storage and Section 13 for Disposal information.

### 2.3 Adverse Human Health Effects and Symptoms:

- Causes mild skin irritation.
- Causes serious eye damage.
- Harmful if swallowed.
- Material may be irritating to the mucous membranes and upper respiratory tract.
- May be harmful by inhalation or skin absorption.
- May cause respiratory system irritation.
- To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

**Target Organs:**

No data available.
SAFETY DATA SHEET
EIA Buffer Concentrate (10X)

LD 50 / LC 50: Please refer to Section 11.

Medical Conditions Generally Aggravated By Exposure: No data available.

Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Concentration</th>
<th>EC#</th>
<th>Risk Phrases</th>
<th>RTECS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Potassium phosphate, dibasic</td>
<td>7758-11-4</td>
<td>13.3 %</td>
<td>231-834-5</td>
<td>R41</td>
<td>TC5580000</td>
</tr>
<tr>
<td>2. Potassium phosphate, Monobasic</td>
<td>7778-77-0</td>
<td>3.21 %</td>
<td>231-913-4</td>
<td>No phrases apply.</td>
<td>TC615500</td>
</tr>
<tr>
<td>3. Sodium azide</td>
<td>26628-22-8</td>
<td>0.1 %</td>
<td>247-852-1</td>
<td>R28-32-50/53</td>
<td>VY8050000</td>
</tr>
<tr>
<td>4. Sodium chloride</td>
<td>7647-14-5</td>
<td>23.4 %</td>
<td>231-598-3</td>
<td>R36</td>
<td>VZ4725000</td>
</tr>
<tr>
<td>5. EDTA, tetrasodium salt, hydrate</td>
<td>194491-31-1</td>
<td>0.38 %</td>
<td>NA</td>
<td>R22-41</td>
<td>NA</td>
</tr>
<tr>
<td>6. Bovine Serum Albumin (BSA)</td>
<td>9048-46-8</td>
<td>1.0 %</td>
<td>232-936-2</td>
<td>R22</td>
<td>MT6446000</td>
</tr>
<tr>
<td>7. Water</td>
<td>7732-18-5</td>
<td>58.61 %</td>
<td>231-791-2</td>
<td>No phrases apply.</td>
<td>ZC0110000</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

4.1 Description of First Aid Measures:

4.1.1 In Case of Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

4.1.2 In Case of Skin Contact: Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

4.1.3 In Case of Eye Contact: Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.

4.1.4 In Case of Ingestion: Exposure may cause: abdominal pain, congestion in internal organs, dehydration, diarrhea, gastrointestinal disturbances, lowered blood pressure, nausea, and vomiting.

4.2 Important Symptoms and Effects, Both Acute and Delayed: No data available.

4.3 Indication of any immediate medical attention and special treatment needed: No data available.

Section 5. Fire Fighting Measures

5.1 Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.

Unsuitable Extinguishing Media: A solid water stream may be inefficient.

5.2 Flammable Properties and Hazards: No data available.

Flash Pt: No data.

Autoignition Pt: No data available.

Explosive Limits: LEL: No data. UEL: No data.

Hazardous Combustion Products: No data available.

5.3 Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

Section 6. Accidental Release Measures

6.1 Protective Precautions, Protective Equipment and Emergency Procedures: Avoid breathing vapors and provide adequate ventilation.

As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

6.2 Environmental Precautions: Take steps to avoid release into the environment, if safe to do so.

6.3 Methods and Material For Containment and Cleaning Up: Contain spill and collect, as appropriate.

Transfer to a chemical waste container for disposal in accordance with local regulations.
Section 7. Handling and Storage

7.1 Precautions To Be Taken in Handling: Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.

7.2 Precautions To Be Taken in Storing: Keep container tightly closed. Store in accordance with information listed on the product insert.

Hazard Label Information: Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.

Section 8. Exposure Controls/Personal Protection

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>OSHA PEL</th>
<th>ACGIH TWA</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Potassium phosphate, dibasic</td>
<td>7758-11-4</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
</tr>
<tr>
<td>2. Potassium phosphate, Monobasic</td>
<td>7778-77-0</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
</tr>
<tr>
<td>3. Sodium azide</td>
<td>26628-22-8</td>
<td>No data</td>
<td>No data</td>
<td>CEIL: 0.29 mg/m3</td>
</tr>
<tr>
<td>4. Sodium chloride</td>
<td>7647-14-5</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
</tr>
<tr>
<td>5. EDTA, tetrasodium salt, hydrate</td>
<td>194491-31-1</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
</tr>
<tr>
<td>6. Bovine Serum Albumin (BSA)</td>
<td>9048-46-8</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
</tr>
<tr>
<td>7. Water</td>
<td>7732-18-5</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
</tr>
</tbody>
</table>

Hazardous Components (Chemical Name) France VL | Britain EH40 | France VL Europe

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>France VL</th>
<th>Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Potassium phosphate, dibasic</td>
<td>7758-11-4</td>
<td>No data</td>
<td>No data</td>
</tr>
<tr>
<td>2. Potassium phosphate, Monobasic</td>
<td>7778-77-0</td>
<td>No data</td>
<td>No data</td>
</tr>
<tr>
<td>3. Sodium azide</td>
<td>26628-22-8</td>
<td>TWA: 0.1 mg/m3</td>
<td>STEL: 0.3 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 0.1 mg/m3</td>
<td>STEL: 0.3 mg/m3</td>
</tr>
<tr>
<td>4. Sodium chloride</td>
<td>7647-14-5</td>
<td>No data</td>
<td>No data</td>
</tr>
<tr>
<td>5. EDTA, tetrasodium salt, hydrate</td>
<td>194491-31-1</td>
<td>No data</td>
<td>No data</td>
</tr>
<tr>
<td>6. Bovine Serum Albumin (BSA)</td>
<td>9048-46-8</td>
<td>No data</td>
<td>No data</td>
</tr>
<tr>
<td>7. Water</td>
<td>7732-18-5</td>
<td>No data</td>
<td>No data</td>
</tr>
</tbody>
</table>

Protective Equipment Summary - Hazard Label Information:

- Compatible chemical-resistant gloves
- Eye wash station in work area
- Lab coat
- Safety glasses
- Safety shower in work area
- Vent Hood

8.2.1 Engineering Controls (Ventilation etc.):

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

8.2.2.1 Eye Protection:

- Safety glasses

8.2.2.2 Protective Gloves:

- Compatible chemical-resistant gloves

8.2.2.3 Respiratory Equipment (Specify Type):

- NIOSH approved respirator, as conditions warrant.

Work/Hygienic/Maintenance Practices:

- Do not take internally.
- Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
- Wash thoroughly after handling.

8.2.3 Environmental Exposure Controls:

- No data available.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Physical States: [ ] Gas [X] Liquid [ ] Solid

Appearance and Odor: A clear, colorless solution

pH: 7.0
Section 10. Stability and Reactivity

10.1 Reactivity: No data available.

10.2 Stability: Unstable [ ] Stable [ X ]

10.3 Stability Note(s): Stable if stored in accordance with information listed on the product insert.

10.4 Conditions To Avoid: No data available.

10.5 Polymerization: Will occur [ ] Will not occur [ X ]

10.6 Incompatibility - Materials To Avoid: strong oxidizing agents

10.7 Hazardous Decomposition Or Byproducts: hydrogen chloride gas

potassium oxides

sodium oxides

Section 11. Toxicological Information

11.1 Information on Toxicological Effects: The toxicological effects of this compound have not been thoroughly studied.

Potassium phosphate, Monobasic - Toxicity Data: Skin LD50 (rabbit): >4,640 mg/kg;
Sodium chloride - Toxicity Data: Oral LD50 (rat): 3,000 mg/kg; Oral LD50 (mouse): 4,000 mg/kg;
Sodium chloride - Irritation Data: Eyes (rabbit): 100 mg (24h) moderate; Skin (rabbit): 500 mg (24h) mild;

Chronic Toxicological Effects: Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information.

Potassium phosphate, Monobasic RTECS Number: TC6615500
Sodium chloride RTECS Number: VZ4725000

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Potassium phosphate, dibasic</td>
<td>7758-11-4</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>2. Potassium phosphate, Monobasic</td>
<td>7778-77-0</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>4. Sodium chloride</td>
<td>7647-14-5</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>5. EDTA, tetrasodium salt, hydrate</td>
<td>194491-31-1</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Carcinogenicity: NTP? No  IARC Monographs? No  OSHA Regulated? No
Section 12. Ecological Information

12.1 Toxicity: Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.

Section 13. Disposal Considerations

13.1 Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT)
DOT Proper Shipping Name: Not dangerous goods.

14.1 LAND TRANSPORT (European ADR/RID)
ADR/RID Shipping Name: Not dangerous goods.

14.3 AIR TRANSPORT (ICAO/IATA)
ICAO/IATA Shipping Name: Not dangerous goods.

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

Section 15. Regulatory Information

European Community Hazard Symbol codes: Xn: Harmful

European Community Risk and Safety Phrases:
- R22 - Harmful if swallowed.
- R36 - Irritating to eyes.
- S24/25 - Avoid contact with skin and eyes.
- S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

US EPA SARA Title III

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Sec.302 (EHS)</th>
<th>Sec.304 RQ</th>
<th>Sec.313 (TRI)</th>
<th>Sec.110</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Potassium phosphate, dibasic</td>
<td>7758-11-4</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2. Potassium phosphate, Monobasic</td>
<td>7778-77-0</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>3. Sodium azide</td>
<td>26628-22-8</td>
<td>Yes 500 LB</td>
<td>Yes 1000 LB</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>4. Sodium chloride</td>
<td>7647-14-5</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>5. EDTA, tetrasodium salt, hydrate</td>
<td>194491-31-1</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>6. Bovine Serum Albumin (BSA)</td>
<td>9048-46-8</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>7. Water</td>
<td>7732-18-5</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Other US EPA or State Lists

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>CAA HAP,ODC</th>
<th>CWA NPDES</th>
<th>TSCA</th>
<th>CA PROP.65</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Potassium phosphate, dibasic</td>
<td>7758-11-4</td>
<td>No</td>
<td>No</td>
<td>Inventory</td>
<td>No</td>
</tr>
<tr>
<td>2. Potassium phosphate, Monobasic</td>
<td>7778-77-0</td>
<td>No</td>
<td>No</td>
<td>Inventory</td>
<td>No</td>
</tr>
<tr>
<td>3. Sodium azide</td>
<td>26628-22-8</td>
<td>No</td>
<td>No</td>
<td>Inventory</td>
<td>No</td>
</tr>
<tr>
<td>4. Sodium chloride</td>
<td>7647-14-5</td>
<td>No</td>
<td>No</td>
<td>Inventory</td>
<td>No</td>
</tr>
<tr>
<td>5. EDTA, tetrasodium salt, hydrate</td>
<td>194491-31-1</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>6. Bovine Serum Albumin (BSA)</td>
<td>9048-46-8</td>
<td>No</td>
<td>No</td>
<td>Inventory</td>
<td>No</td>
</tr>
<tr>
<td>7. Water</td>
<td>7732-18-5</td>
<td>No</td>
<td>No</td>
<td>Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>


Section 16. Other Information

Revision Date: 05/02/2013

Company Policy or Disclaimer

For research use only, not for human or veterinary use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.
Section 1. Identification of the Substance/Mixture and of the

1.1 Product Code: 400062

Product Name: Wash Buffer Concentrate (400X)

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: For research use only, not for human or veterinary use.

1.3 Details of the Supplier of the Safety Data Sheet

Company Name: Cayman Chemical Company

Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300

Alternate Emergency Contact: CHEMTREC Outside USA and Canada: +1 (703)527-3887

Information: Cayman Chemical Company +1 (734)971-3335

Web site address: www.caymanchem.com

Section 2. Hazards Identification

GHS Classification

<table>
<thead>
<tr>
<th>Acute Toxicity: Skin, Category 5</th>
<th>Placard</th>
<th>Key word</th>
<th>GHS hazard phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Warning</td>
<td>May be harmful in contact with skin</td>
<td></td>
</tr>
<tr>
<td>Serious Eye Damage/Eye Irritation, Category 1</td>
<td>Corrosive</td>
<td>Danger</td>
<td>Causes serious eye damage</td>
</tr>
</tbody>
</table>

GHS Hazard Phrases: H313: May be harmful in contact with skin.

H318: Causes serious eye damage.

GHS Precaution Phrases: P280: Wear protective gloves/clothing and eye/face protection as specified by the manufacturer/supplier or the competent authority.

GHS Response Phrases: P312: Call a POISON CENTER or doctor/physician if you feel unwell.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a POISON CENTER or doctor/physician.

GHS Storage and Disposal Phrases: Please refer to Section 7 for Storage and Section 13 for Disposal information.

2.3 Adverse Human Health Effects and Symptoms:

Causes serious eye damage.

Material may be irritating to the mucous membranes and upper respiratory tract.

May be harmful by inhalation, ingestion, or skin absorption.

May cause skin or respiratory system irritation.

To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Target Organs: No data available.

Medical Conditions Generally Aggravated By Exposure: No data available.

Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Concentration</th>
<th>EC#</th>
<th>Risk Phrases</th>
<th>RTECS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Potassium phosphate, dibasic</td>
<td>7758-11-4</td>
<td>53.0 %</td>
<td>231-834-5</td>
<td>R41</td>
<td>TC5580000</td>
</tr>
<tr>
<td>2. Potassium phosphate, Monobasic</td>
<td>7778-77-0</td>
<td>12.9 %</td>
<td>231-913-4</td>
<td>No phrases apply.</td>
<td>TC6615500</td>
</tr>
<tr>
<td>3. Water</td>
<td>7732-18-5</td>
<td>34.1 %</td>
<td>231-791-2</td>
<td>No phrases apply.</td>
<td>ZC0110000</td>
</tr>
</tbody>
</table>

Multi-region format
Section 4. First Aid Measures

4.1 Description of First Aid Measures:

4.1.1 In Case of Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

4.1.2 In Case of Skin Contact: Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

4.1.3 In Case of Eye Contact: Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.

4.1.4 In Case of Ingestion: Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

4.2 Important Symptoms and Effects, Both Acute and Delayed: Ingestion of large amounts can cause abdominal pain, lowered blood pressure, nausea, and vomiting.

4.3 Indication of any immediate medical attention and special treatment needed: No data available.

Section 5. Fire Fighting Measures

5.1 Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.

Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing Media: A solid water stream may be inefficient.

5.2 Flammable Properties and Hazards: No data available.

Flash Pt: No data.

Autoignition Pt: No data available.

Explosive Limits: LEL: No data. UEL: No data.

Hazardous Combustion Products: No data available.

5.3 Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

Section 6. Accidental Release Measures

6.1 Protective Precautions, Protective Equipment and Emergency Procedures: Avoid breathing vapors and provide adequate ventilation.

As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

6.2 Environmental Precautions: Take steps to avoid release into the environment, if safe to do so.

6.3 Methods and Material For Containment and Cleaning Up: Contain spill and collect, as appropriate.

Transfer to a chemical waste container for disposal in accordance with local regulations.

Section 7. Handling and Storage

7.1 Precautions To Be Taken in Handling: Avoid breathing dust/fume/gas/mist/vapours/spray.

Avoid prolonged or repeated exposure.

7.2 Precautions To Be Taken in Storing: Keep container tightly closed.

Store in accordance with information listed on the product insert.

Hazard Label Information: Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.

Section 8. Exposure Controls/Personal Protection

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Potassium phosphate, dibasic</td>
<td>7758-11-4</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
</tbody>
</table>
### Section 9. Physical and Chemical Properties

#### 9.1 Information on Basic Physical and Chemical Properties

**Physical States:**

- [ ] Gas 
- [ X ] Liquid 
- [ ] Solid

**Appearance and Odor:**

- A clear, colorless solution

**pH:**

- 7.4

**Melting Point:**

- No data.

**Boiling Point:**

- No data.

**Flash Pt:**

- No data.

**Evaporation Rate:**

- No data.

**Vapor Pressure (vs. Air or mm Hg):**

- No data.

**Vapor Density (vs. Air = 1):**

- No data.

**Specific Gravity (Water = 1):**

- No data.

**Solubility in Water:**

- No data.

**Autoignition Pt:**

- No data.

**Explosive Properties:**

- No data available.

**Oxidizing Properties:**

- No data available.

#### 9.2 Other Information

**Percent Volatile:**

- No data.

### Section 10. Stability and Reactivity

#### 10.1 Reactivity:

- No data available.

#### 10.2 Stability:

- Unstable [ ]
- Stable [ X ]

#### 10.3 Stability Note(s):

- Stable if stored in accordance with information listed on the product insert.
10.4 Conditions To Avoid:  No data available.

10.3 Polymerization:  Will occur [ ]  Will not occur [ X ]

10.5 Incompatibility - Materials To Avoid:  strong oxidizing agents

10.6 Hazardous Decomposition Or Byproducts:  phosphorus oxides  potassium oxides

Section 11. Toxicological Information

11.1 Information on Toxicological Effects:  The toxicological effects of this product have not been thoroughly studied.

Chronic Toxicological Effects:  No data available.

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Potassium phosphate, dibasic</td>
<td>7758-11-4</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>2. Potassium phosphate, Monobasic</td>
<td>7778-77-0</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Carcinogenicity:  NTP? No  IARC Monographs? No  OSHA Regulated? No

Section 12. Ecological Information

12.1 Toxicity:  Avoid release into the environment.

Runoff from fire control or dilution water may cause pollution.

Section 13. Disposal Considerations

13.1 Waste Disposal Method:  Dispose in accordance with local, state, and federal regulations.

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT)

DOT Proper Shipping Name  Not dangerous goods.

14.1 LAND TRANSPORT (European ADR/RID)

ADR/RID Shipping Name  Not dangerous goods.

14.3 AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name  Not dangerous goods.

Additional Transport Information:  Transport in accordance with local, state, and federal regulations.

Section 15. Regulatory Information

European Community Hazard Symbol codes  Xi: Irritant

European Community Risk and Safety Phrases

- R41 - Risk of serious damage to the eyes.
- S24/25 - Avoid contact with skin and eyes.
- S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

US EPA SARA Title III

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Sec.302 (EHS)</th>
<th>Sec.304 RQ</th>
<th>Sec.313 (TRI)</th>
<th>Sec.110</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Potassium phosphate, dibasic</td>
<td>7758-11-4</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2. Potassium phosphate, Monobasic</td>
<td>7778-77-0</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>3. Water</td>
<td>7732-18-5</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Other US EPA or State Lists

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>CAA HAP,ODC</th>
<th>CWA NPDES</th>
<th>TSCA</th>
<th>CA PROP.65</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Potassium phosphate, dibasic</td>
<td>7758-11-4</td>
<td>No</td>
<td>No</td>
<td>Inventory</td>
<td>No</td>
</tr>
<tr>
<td>2. Potassium phosphate, Monobasic</td>
<td>7778-77-0</td>
<td>No</td>
<td>No</td>
<td>Inventory</td>
<td>No</td>
</tr>
<tr>
<td>3. Water</td>
<td>7732-18-5</td>
<td>No</td>
<td>No</td>
<td>Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>
Wash Buffer Concentrate (400X)  
SAFETY DATA SHEET


Section 16. Other Information

Revision Date: 05/02/2013

Company Policy or Disclaimer

For research use only, not for human or veterinary use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required
SAFETY DATA SHEET
6-keto Prostaglandin F1.alpha. AChE Tracer
Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Section 1. Identification of the Substance/Mixture and of the

1.1 Product Code: 415210
Product Name: 6-keto Prostaglandin F1.alpha. AChE Tracer

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses: For research use only, not for human or veterinary use.

1.3 Details of the Supplier of the Safety Data Sheet
Company Name: Cayman Chemical Company
Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300
Alternate Emergency Contact: CHEMTREC Outside USA and Canada: +1 (703)527-3887
Information: Cayman Chemical Company +1 (734)971-3335
Web site address: www.caymanchem.com

Section 2. Hazards Identification

GHS Classification
Acute Toxicity: Oral, Category 4

Placard
Exclamation point

Key word
Warning

GHS hazard phrase
Harmful if swallowed.

GHS Hazard Phrases:
H302: Harmful if swallowed.

GHS Precaution Phrases:
P264: Wash hands thoroughly after handling.

GHS Response Phrases:
P301+312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P330: Rinse mouth.

GHS Storage and Disposal Phrases:
Please refer to Section 7 for Storage and Section 13 for Disposal information.

2.3 Adverse Human Health Effects and Symptoms:
Harmful if swallowed.
Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation or skin absorption.
May cause eye, skin, or respiratory system irritation.
To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Target Organs: No data available.
Medical Conditions Generally Aggravated By Exposure: No data available.

Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Concentration</th>
<th>EC#</th>
<th>Risk Phrases</th>
<th>RTECS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-keto Prostaglandin F1.alpha. AChE Tracer</td>
<td>26628-22-8</td>
<td>99.99 %</td>
<td>NA</td>
<td>R22</td>
<td>NA</td>
</tr>
<tr>
<td>Sodium azide</td>
<td>26628-22-8</td>
<td>0.01 %</td>
<td>247-852-1</td>
<td>R28-32-50/53</td>
<td>VY8050000</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

4.1 Description of First Aid Measures:
4.1.1 In Case of Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

4.1.2 In Case of Skin Contact: Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

4.1.3 In Case of Eye Contact: Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.
4.1.4 In Case of Ingestion: Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

4.2 Important Symptoms and Effects, Both Acute and Delayed: No data available.

4.3 Indication of any immediate medical attention and special treatment needed: No data available.

Section 5. Fire Fighting Measures

5.1 Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.

Unsuitable Extinguishing Media: A solid water stream may be inefficient.

5.2 Flammable Properties and Hazards: No data available.

Flash Pt: No data.

Autoignition Pt: No data available.

Explosive Limits: LEL: No data. UEL: No data.

Hazardous Combustion Products: No data available.

5.3 Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

Section 6. Accidental Release Measures

6.1 Protective Precautions, Protective Equipment and Emergency Procedures: Avoid raising and breathing dust, and provide adequate ventilation.

As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

6.2 Environmental Precautions: Take steps to avoid release into the environment, if safe to do so.

6.3 Methods and Material For Containment and Cleaning Up: Contain spill and collect, as appropriate.

Transfer to a chemical waste container for disposal in accordance with local regulations.

Section 7. Handling and Storage

7.1 Precautions To Be Taken in Handling: Avoid breathing dust/fume/gas/mist/vapours/spray.

Avoid prolonged or repeated exposure.

7.2 Precautions To Be Taken in Storing: Keep container tightly closed.

Store in accordance with information listed on the product insert.

Hazard Label Information: Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.

Section 8. Exposure Controls/Personal Protection

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>OSHA PEL</th>
<th>ACGIH TWA</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-keto Prostaglandin F1,alpha. AChE Tracer</td>
<td>NA</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>Sodium azide</td>
<td>26628-22-8</td>
<td>No data.</td>
<td>CEIL: 0.29 mg/m3</td>
<td>No data.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Britain EH40</th>
<th>France VL</th>
<th>Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-keto Prostaglandin F1,alpha. AChE Tracer</td>
<td>NA</td>
<td>TWA: 0.1 mg/m3 ( )</td>
<td>TWA: 0.1 mg/m3 ( )</td>
<td>TWA: 0.1 mg/m3</td>
</tr>
<tr>
<td>Sodium azide</td>
<td>26628-22-8</td>
<td>STEL: 0.3 mg/m3 ( )</td>
<td>STEL: 0.3 mg/m3 ( )</td>
<td>STEL: 0.3 mg/m3</td>
</tr>
</tbody>
</table>

Protective Equipment Summary - Hazard Label Information:

Compatible chemical-resistant gloves
Eye wash station in work area
Lab coat
Sodium azide
Safety glasses
Safety shower in work area
Vent Hood

8.2.1 Engineering Controls (Ventilation etc.): Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
6-keto Prostaglandin F1.alpha. AChE Tracer

SAFETY DATA SHEET

8.2.1 Eye Protection:
Safety glasses

8.2.2 Protective Gloves:
Compatible chemical-resistant gloves

Other Protective Clothing:
Lab coat

8.2.3 Respiratory Equipment (Specify Type):
NIOSH approved respirator, as conditions warrant.

Work/Hygienic/Maintenance Practices:
Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower. Wash thoroughly after handling.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

| Physical States: | [ ] Gas | [ ] Liquid | [X] Solid |
| Appearance and Odor: | A lyophilized powder |
| Melting Point: | No data. |
| Boiling Point: | No data. |
| Flash Pt: | No data. |
| Evaporation Rate: | No data. |
| Vapor Pressure (vs. Air or mm Hg): | No data. |
| Vapor Density (vs. Air = 1): | No data. |
| Specific Gravity (Water = 1): | No data. |
| Solubility in Water: | No data. |
| Autoignition Pt: | No data. |

Explosive Properties:
No data available.

Oxidizing Properties:
No data available.

9.2 Other Information

Percent Volatile:
No data.

Section 10. Stability and Reactivity

10.1 Reactivity:
No data available.

10.2 Stability:
Unstable [ ] Stable [X]

10.3 Stability Note(s):
Stable if stored in accordance with information listed on the product insert.

10.4 Conditions To Avoid:
No data available.

10.5 Incompatibility - Materials To Avoid:
heavy metals
strong acids
strong oxidizing agents

10.6 Hazardous Decomposition Or Byproducts:
carbon dioxide
carbon monoxide
explosive heavy metal azides
hydrogen chloride gas
metal oxide fumes
phosphorus oxides
potassium oxides
sodium oxides
SAFETY DATA SHEET  
6-keto Prostaglandin F1.alpha. AChE Tracer

Section 11. Toxicological Information

11.1 Information on Toxicological Effects: The toxicological effects of this product have not been thoroughly studied.

Chronic Toxicological Effects: No data available.

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 6-keto Prostaglandin F1.alpha. AChE Tracer</td>
<td>NA</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>2. Sodium azide</td>
<td>26628-22-8</td>
<td>n.a.</td>
<td>n.a.</td>
<td>A4</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Section 12. Ecological Information

12.1 Toxicity: Avoid release into the environment.
Runoff from fire control or dilution water may cause pollution.

Section 13. Disposal Considerations

13.1 Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT)
DOT Proper Shipping Name: Not dangerous goods.

14.1 LAND TRANSPORT (European ADR/RID)
ADR/RID Shipping Name: Not dangerous goods.

14.3 AIR TRANSPORT (ICAO/IATA)
ICAO/IATA Shipping Name: Not dangerous goods.

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

Section 15. Regulatory Information

European Community Hazard Symbol codes
Xn: Harmful

European Community Risk and Safety Phrases
R22 - Harmful if swallowed.
S22 - Do not breathe dust.
S24/25 - Avoid contact with skin and eyes.
S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

US EPA SARA Title III

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Sec.302 (EHS)</th>
<th>Sec.304 RQ</th>
<th>Sec.313 (TRI)</th>
<th>Sec.110</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 6-keto Prostaglandin F1.alpha. AChE Tracer</td>
<td>NA</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2. Sodium azide</td>
<td>26628-22-8</td>
<td>Yes 500 LB</td>
<td>Yes 1000 LB</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Other US EPA or State Lists

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>CAA HAP, ODC</th>
<th>CWA NPDES</th>
<th>TSCA</th>
<th>CA PROP.65</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 6-keto Prostaglandin F1.alpha. AChE Tracer</td>
<td>NA</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2. Sodium azide</td>
<td>26628-22-8</td>
<td>No</td>
<td>No</td>
<td>Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

Regulatory Information Statement: This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.

Section 16. Other Information

Revision Date: 05/21/2013

Company Policy or Disclaimer

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required
Section 1. Identification of the Substance/Mixture and of the

1.1 Product Code: 415212
Product Name: 6-keto Prostaglandin F1.alpha. EIA Antiserum

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses: For research use only, not for human or veterinary use.

1.3 Details of the Supplier of the Safety Data Sheet
Company Name: Cayman Chemical Company
Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300
Alternate Emergency Contact: CHEMTREC Outside USA and Canada: +1 (703)527-3887
Information: Cayman Chemical Company +1 (734)971-3335
Web site address: www.caymanchem.com

Section 2. Hazards Identification

<table>
<thead>
<tr>
<th>GHS Classification</th>
<th>Placard</th>
<th>Key word</th>
<th>GHS hazard phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity: Oral, Category 4</td>
<td>Exclamation point</td>
<td>Warning</td>
<td>Harmful if swallowed</td>
</tr>
</tbody>
</table>

GHS Hazard Phrases: H302: Harmful if swallowed.
GHS Precaution Phrases: P264: Wash {hands} thoroughly after handling.
GHS Response Phrases: P301+312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P330: Rinse mouth.
GHS Storage and Disposal Phrases: Please refer to Section 7 for Storage and Section 13 for Disposal information.

2.3 Adverse Human Health Effects and Symptoms:
Harmful if swallowed.
Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation or skin absorption.
May cause eye, skin, or respiratory system irritation.
To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Target Organs: No data available.
Medical Conditions Generally Aggravated By Exposure: No data available.

Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Concentration</th>
<th>EC#</th>
<th>Risk Phrases</th>
<th>RTECS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 6-keto Prostaglandin F1.alpha. EIA Antiserum</td>
<td>NA</td>
<td>99.99 %</td>
<td>NA</td>
<td>R22</td>
<td>NA</td>
</tr>
<tr>
<td>2. Sodium azide</td>
<td>26628-22-8</td>
<td>0.01 %</td>
<td>247-852-1</td>
<td>R28-32-50/53</td>
<td>VY8050000</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

4.1 Description of First Aid Measures:

4.1.1 In Case of Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

4.1.2 In Case of Skin Contact: Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

4.1.3 In Case of Eye Contact: Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.
SAFETY DATA SHEET
6-keto Prostaglandin F1.alpha. EIA Antiserum

4.1.4 In Case of Ingestion: Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

4.2 Important Symptoms and Effects, Both Acute and Delayed: No data available.

4.3 Indication of any immediate medical attention and special treatment needed: No data available.

Section 5. Fire Fighting Measures

5.1 Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing Media: A solid water stream may be inefficient.

5.2 Flammable Properties and Hazards: Emits toxic fumes under fire conditions.

Flash Pt: No data.

Autoignition Pt: No data available.

Explosive Limits: LEL: No data. UEL: No data.

Hazardous Combustion Products: No data available.

5.3 Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

Section 6. Accidental Release Measures

6.1 Protective Precautions, Protective Equipment and Emergency Procedures: Avoid raising and breathing dust, and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

6.2 Environmental Precautions: Take steps to avoid release into the environment, if safe to do so.

6.3 Methods and Material For Containment and Cleaning Up: Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

Section 7. Handling and Storage

7.1 Precautions To Be Taken in Handling: Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.

7.2 Precautions To Be Taken in Storing: Keep container tightly closed. Store in accordance with information listed on the product insert. 

Hazard Label Information: Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.

Section 8. Exposure Controls/Personal Protection

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>OSHA PEL</th>
<th>ACGIH TWA</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 6-keto Prostaglandin F1.alpha. EIA Antiserum</td>
<td>NA</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>2. Sodium azide</td>
<td>26628-22-8</td>
<td>No data.</td>
<td>CEIL: 0.29 mg/m3</td>
<td>No data.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Britain EH40</th>
<th>France VL</th>
<th>Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 6-keto Prostaglandin F1.alpha. EIA Antiserum</td>
<td>NA</td>
<td>TWA: 0.1 mg/m3 ()</td>
<td>TWA: 0.1 mg/m3</td>
<td>TWA: 0.1 mg/m3</td>
</tr>
<tr>
<td>2. Sodium azide</td>
<td>26628-22-8</td>
<td>STEL: 0.3 mg/m3 ()</td>
<td>STEL: 0.3 mg/m3</td>
<td>STEL: 0.3 mg/m3</td>
</tr>
</tbody>
</table>


8.2.1 Engineering Controls (Ventilation etc.): Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
8.2.2.1 Eye Protection: Safety glasses

8.2.2.2 Protective Gloves: Compatible chemical-resistant gloves

Other Protective Clothing: Lab coat

8.2.2.3 Respiratory Equipment (Specify Type): NIOSH approved respirator, as conditions warrant.

Work/Hygienic/Maintenance Practices: Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower. Wash thoroughly after handling.

8.2.3 Environmental Exposure Controls: No data available.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Physical States: [ ] Gas [ ] Liquid [X] Solid

Appearance and Odor: A lyophilized powder

Melting Point: No data.

Boiling Point: No data.

Flash Pt: No data.

Evaporation Rate: No data.

Vapor Pressure (vs. Air or mm Hg): No data.

Vapor Density (vs. Air = 1): No data.

Specific Gravity (Water = 1): No data.

Solubility in Water: No data.

Autoignition Pt: No data.

Explosive Properties: No data available.

Oxidizing Properties: No data available.

9.2 Other Information

Percent Volatile: No data.

Section 10. Stability and Reactivity

10.1 Reactivity: No data available.

10.2 Stability: Unstable [ ] Stable [X]

10.3 Stability Note(s): Stable if stored in accordance with information listed on the product insert.

10.4 Conditions To Avoid: No data available.

10.5 Polymerization: Will occur [ ] Will not occur [X]

10.6 Incompatibility - Materials To Avoid: heavy metals strong acids strong oxidizing agents

10.6 Hazardous Decomposition Or Byproducts: carbon dioxide carbon monoxide explosive heavy metal azides hydrogen chloride gas metal oxide fumes phosphorus oxides potassium oxides sodium oxides
Section 11. Toxicological Information

11.1 Information on Toxicological Effects: The toxicological effects of this compound have not been thoroughly studied.

Chronic Toxicological Effects: No data available.

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-keto Prostaglandin F1.alpha. EIA Antiserum</td>
<td>NA</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Sodium azide</td>
<td>26628-22-8</td>
<td>n.a.</td>
<td>n.a.</td>
<td>A4</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Carcinogenicity: NTP? No  IARC Monographs? No  OSHA Regulated? No

Section 12. Ecological Information

12.1 Toxicity: Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.

Section 13. Disposal Considerations

13.1 Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT)

DOT Proper Shipping Name: Not dangerous goods.

14.1 LAND TRANSPORT (European ADR/RID)

ADR/RID Shipping Name: Not dangerous goods.

14.3 AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name: Not dangerous goods.

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

Section 15. Regulatory Information

European Community Hazard Symbol codes: Xn: Harmful

European Community Risk and Safety Phrases:
- R22 - Harmful if swallowed.
- S22 - Do not breathe dust.
- S24/25 - Avoid contact with skin and eyes.
- S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

US EPA SARA Title III:
- Sec.302 (EHS) Sec.304 RQ Sec.313 (TRI) Sec.110
  1. 6-keto Prostaglandin F1.alpha. EIA Antiserum NA No No No
  2. Sodium azide 26628-22-8 Yes 500 LB Yes 1000 LB Yes No

Other US EPA or State Lists:

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>CAA HAP,ODC</th>
<th>CWA NPDES</th>
<th>TSCA</th>
<th>CA PROP.65</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-keto Prostaglandin F1.alpha. EIA Antiserum</td>
<td>NA</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Sodium azide</td>
<td>26628-22-8</td>
<td>No</td>
<td>No</td>
<td>Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

Regulatory Information Statement: This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.

Section 16. Other Information

Revision Date: 05/21/2013

Company Policy or Disclaimer:

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

SAFETY DATA SHEET
6-keto Prostaglandin F1.alpha. EIA Standard

Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Section 1. Identification of the Substance/Mixture and of the

1.1 Product Code: 415214
Product Name: 6-keto Prostaglandin F1.alpha. EIA Standard

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses: For research use only, not for human or veterinary use.

1.3 Details of the Supplier of the Safety Data Sheet
Company Name: Cayman Chemical Company
Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300
Alternate Emergency Contact: CHEMTREC Outside USA and Canada: +1 (703)527-3887
Information: Cayman Chemical Company +1 (734)971-3335
Web site address: www.caymanchem.com

Section 2. Hazards Identification

<table>
<thead>
<tr>
<th>GHS Classification</th>
<th>Placard</th>
<th>Key word</th>
<th>GHS hazard phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable Liquids, Category 2</td>
<td>Flame</td>
<td>Danger</td>
<td>Highly flammable liquid and vapor</td>
</tr>
<tr>
<td>Skin Corrosion/Irritation, Category 2</td>
<td>Exclamation point</td>
<td>Warning</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>Serious Eye Damage/Eye Irritation, Category 2A</td>
<td>Exclamation point</td>
<td>Warning</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>Skin Sensitization, Category 1</td>
<td>Exclamation point</td>
<td>Warning</td>
<td>May cause an allergic skin reaction</td>
</tr>
<tr>
<td>Toxic To Reproduction, Category 2</td>
<td>Health hazard</td>
<td>Warning</td>
<td>Suspected of damaging fertility or the unborn child</td>
</tr>
<tr>
<td>Target Organ Systemic Toxicity (single exposure), Category 3</td>
<td>Exclamation point</td>
<td>Warning</td>
<td>May cause respiratory irritation, or may cause drowsiness and dizziness</td>
</tr>
<tr>
<td>Target Organ Systemic Toxicity (repeated exposure), Category 1</td>
<td>Health hazard</td>
<td>Danger</td>
<td>Causes damage to organs (liver) through prolonged or repeated oral exposure.</td>
</tr>
</tbody>
</table>

GHS Hazard Phrases:
H225: Highly flammable liquid and vapor.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.
H336: May cause drowsiness or dizziness.
H361: Suspected of damaging fertility or the unborn child.
H372: Causes damage to organs (liver) through prolonged or repeated oral exposure.
H317: May cause an allergic skin reaction.

GHS Precaution Phrases:
P210: Keep away from {heat/sparks/open flames/hot surfaces}, - No smoking.
P280: Wear protective gloves/clothing and eye/face protection as specified by the manufacturer/supplier or the competent authority.
P264: Wash hands thoroughly after handling.
P362+364: Take off contaminated clothing and wash it before reuse.
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P281: Use personal protective equipment as required.
P260: Do not breathe dust/fume/gas/mist/vapours/spray.
P272: Contaminated work clothing should not be allowed out of the workplace.
SAFETY DATA SHEET
6-keto Prostaglandin F1.alpha. EIA Standard

GHS Response Phrases:
P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P302+352: IF ON SKIN: Wash with plenty of soap and water.
P332+313: If skin irritation occurs, get medical advice/attention.
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+313: If eye irritation persists, get medical advice/attention.
P308+313: IF exposed or concerned: Get medical attention/advice.
P309+311: Call a POISON CENTER or doctor/physician if exposed or you feel unwell.
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P314: Get medical attention/advice if you feel unwell.
P333+313: If skin irritation or rash occurs, seek medical advice/attention.
P305+353: IF IN EYES: Wash cautiously with large amounts of water for at least 15 minutes. 
P310: Call a POISON CENTER or doctor/physician if you feel unwell.

GHS Storage and Disposal Phrases:
Please refer to Section 7 for Storage and Section 13 for Disposal information.

2.3 Adverse Human Health Effects and Symptoms:
Causes damage to organs {liver} through prolonged or repeated oral exposure.
Causes serious eye irritation.
Causes skin or respiratory system irritation.
Material is irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.
To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Target Organs:
Central nervous system, Blood, Eyes, Reproductive system, Heart, Respiratory system, Liver, Skin.

Medical Conditions Generally Aggravated By Exposure:
No data available.

Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Concentration</th>
<th>EC#</th>
<th>Risk Phrases</th>
<th>RTECS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 6-keto Prostaglandin F1.alpha.</td>
<td>58962-34-8</td>
<td>&lt; 0.01 %</td>
<td>NA</td>
<td>R43</td>
<td>UK8428300</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

4.1 Description of First Aid Measures:

4.1.1 In Case of Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

4.1.2 In Case of Skin Contact: Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

4.1.3 In Case of Eye Contact: Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.

4.1.4 In Case of Ingestion: Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

4.2 Important Symptoms and Effects, Both Acute and Delayed:
Irritating to eyes, skin, nose; may cause anemia, cough, CNS depression, drowsiness, headache, heart damage, lassitude (weakness, exhaustion), liver damage, narcosis, reproductive effects, teratogenic effects.

4.3 Indication of any immediate medical attention and special treatment needed:
No data available.
Section 5. Fire Fighting Measures

5.1 Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.

5.2 Unsuitable Extinguishing Media: A solid water stream may be inefficient.

5.2 Flammable Properties and Hazards: Can release vapors that form explosive mixtures at temperatures at or above the flashpoint. Container explosion may occur under fire conditions. Emits toxic fumes under fire conditions. Sensitive to static discharge. Vapors can travel to a source of ignition and flash back.

Flash Pt: 14.00°C Method Used: Closed Cup
Autoignition Pt: 363.00°C
Explosive Limits: LEL: 3.3% at 25.0°C UEL: 19.0% at 25.0°C
Hazardous Combustion Products: No data available.

5.3 Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes. Note: Flammable as diluted in ethanol.

Section 6. Accidental Release Measures

6.1 Protective Precautions, Protective Equipment and Emergency Procedures: Avoid breathing vapors and provide adequate ventilation. Use water spray to cool fire-exposed containers.

6.2 Environmental Precautions: Take steps to avoid release into the environment, if safe to do so.

6.3 Methods and Material For Containment and Cleaning Up: Transfer to a chemical waste container for disposal in accordance with local regulations.

Section 7. Handling and Storage

7.1 Precautions To Be Taken in Handling: Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure. Keep away from sources of ignition. Take precautionary measures against static discharge.

7.2 Precautions To Be Taken in Storing: Keep away from heat, sparks, and flame. Keep container tightly closed. Store in accordance with information listed on the product insert.

Other Precautions: Hygroscopic.

Hazard Label Information: Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.

Section 8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name) | CAS # | OSHA PEL | ACGIH TLV | Other Limits
--- | --- | --- | --- | ---
1. 6-keto Prostaglandin F1.alpha. | 58962-34-8 | No data. | No data. | No data.
2. Ethyl alcohol | 64-17-5 | 1000 ppm | 1000 ppm | No data.

Hazardous Components (Chemical Name) | CAS # | Britain EH40 | France VL | Europe
--- | --- | --- | --- | ---
1. 6-keto Prostaglandin F1.alpha. | 58962-34-8 | No data. | No data. | No data.
2. Ethyl alcohol | 64-17-5 | TWA: 1920 mg/m3 (1000 ppm) STEL: () | TWA: 1900 mg/m3 (1000 ppm) STEL: 9500 mg/m3 (5000 ppm) | No data.

Protective Equipment Summary - Hazard Label Information: Compatible chemical-resistant gloves Eye wash station in work area Lab coat Safety glasses Safety shower in work area Vent Hood
8.2.1 Engineering Controls (Ventilation etc.): Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

8.2.2 Eye Protection: Safety glasses

8.2.2.1 Protective Gloves: Compatible chemical-resistant gloves

Other Protective Clothing: Lab coat

8.2.2.3 Respiratory Equipment (Specify Type): NIOSH approved respirator, as conditions warrant.

Work/Hygienic/Maintenance Practices: Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower. Wash thoroughly after handling.

8.2.3 Environmental Exposure Controls: No data available.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical States:</th>
<th>[ ] Gas</th>
<th>[ X ] Liquid</th>
<th>[ ] Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance and Odor:</td>
<td>Solution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting Point:</td>
<td>No data.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>No data.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash Pt:</td>
<td>14.00 C Method Used: Closed Cup</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive Limits:</td>
<td>LEL: 3.3% at 25.0 C UEL: 19.0% at 25.0 C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure (vs. Air or mm Hg):</td>
<td>43 MM_HG at 20.0 C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor Density (vs. Air = 1):</td>
<td>No data.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific Gravity (Water = 1):</td>
<td>No data.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility in Water:</td>
<td>No data.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autoignition Pt:</td>
<td>363.00 C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive Properties:</td>
<td>No data available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidizing Properties:</td>
<td>No data available.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9.2 Other Information

Percent Volatile: No data.

Section 10. Stability and Reactivity

10.1 Reactivity: No data available.

10.2 Stability: Unstable [ ] Stable [ X ]

10.3 Stability Note(s): Stable if stored in accordance with information listed on the product insert.

10.4 Conditions To Avoid: heat, flames and sparks

10.3 Polymerization: Will occur [ ] Will not occur [ X ]

10.5 Incompatibility - Materials To Avoid: alkali metals ammonia peroxides strong oxidizing agents

10.6 Hazardous Decomposition Or Byproducts:

- carbon dioxide
- carbon monoxide
### Section 11. Toxicological Information

#### 11.1 Information on Toxicological Effects:

The toxicological effects of this product have not been thoroughly studied.

**Ethanol - Toxicity Data:**
- Oral TDLO (man): 1.14 ml/kg; Oral TDLO (man): 650 mg/kg; Oral LD50 (rat): 7,060 mg/kg; Oral LD50 (mouse): 3,450 mg/kg; Oral LD50 (mouse): 10.5 ml/kg; Oral LD50 (rabbit): 6,300 mg/kg; Inhalation LC50 (rat): 20,000 ppm (10h); Inhalation TCLO (human): 1,800 ppm (30m); Inhalation TCLO (human): 2,500 mg/m3 (20m); Inhalation LC50 (rat): 5,900 mg/m3 (6h); Inhalation LCLO (mouse): 29,300 ppm (7h);
- Ethanol - Irritation Data: Eyes (rabbit): 500 mg (24h) mild; Skin (rabbit): 20 mg (24h) moderate;

**Chronic Toxicological Effects:**
- Ethanol - Investigated as a mutagen, reproductive effector, and tumorigen.

Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information.

Ethanol RTECS Number: KQ6300000

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-keto Prostaglandin F1.alpha.</td>
<td>58962-34-8</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Ethyl alcohol</td>
<td>64-17-5</td>
<td>n.a.</td>
<td>1</td>
<td>A4</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

**Carcinogenicity:**
- NTP? No
- IARC Monographs? No
- OSHA Regulated? No

### Section 12. Ecological Information

#### 12.1 Toxicity:

Avoid release into the environment.
Runoff from fire control or dilution water may cause pollution.

### Section 13. Disposal Considerations

#### 13.1 Waste Disposal Method:
Dispose in accordance with local, state, and federal regulations.

### Section 14. Transport Information

#### 14.1 LAND TRANSPORT (US DOT)

- **DOT Proper Shipping Name:** Ethyl Alcohol Solution
- **DOT Hazard Class:** 3
- **DOT Hazard Label:** FLAMMABLE LIQUID
- **UN/NA Number:** 1170
- **Packing Group:** II

#### 14.1 LAND TRANSPORT (European ADR/RID)

- **ADR/RID Shipping Name:** Ethyl Alcohol Solution
- **UN Number:** 1170
- **Hazard Class:** 3 - FLAMMABLE LIQUID
- **Packing Group:** II

#### 14.3 AIR TRANSPORT (ICAO/IATA)

- **ICAO/IATA Shipping Name:** Ethyl Alcohol Solution
- **UN Number:** 1170
- **Hazard Class:** 3 - FLAMMABLE LIQUID
- **Packing Group:** II
- **IATA Classification:** 3

**Additional Transport Information:** Transport in accordance with local, state, and federal regulations.
Section 15. Regulatory Information

European Community Hazard Symbol codes
F: Highly Flammable; Xn: Harmful; Reproductive Hazard: 3

European Community Risk and Safety Phrases

- R11 - Highly flammable.
- R36/37/38 - Irritating to eyes, respiratory system and skin.
- R43 - May cause sensitization by skin contact.
- R48 - Danger of serious damage to health by prolonged exposure.
- R62 - Risk of impaired fertility.
- R63 - Possible risk of harm to the unborn child.
- S7 - Keep container tightly closed.
- S16 - Keep away from sources of ignition.
- S24/25 - Avoid contact with skin and eyes.
- S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S33 - Take precautionary measures against static discharges.
- S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.
- S53 - Avoid exposure - obtain special instructions before use.

US EPA SARA Title III

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Sec.302 (EHS)</th>
<th>Sec.304 RQ</th>
<th>Sec.313 (TRI)</th>
<th>Sec.110</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 6-keto Prostaglandin F1.alpha.</td>
<td>58962-34-8</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2. Ethyl alcohol</td>
<td>64-17-5</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Other US EPA or State Lists

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>CAA HAP,ODC</th>
<th>CWA NPDES</th>
<th>TSCA</th>
<th>CA PROP.65</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 6-keto Prostaglandin F1.alpha.</td>
<td>58962-34-8</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2. Ethyl alcohol</td>
<td>64-17-5</td>
<td>No</td>
<td>No</td>
<td>Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

Regulatory Information Statement:
This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.

Section 16. Other Information

Revision Date: 05/21/2013

Company Policy or Disclaimer

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required