SECTION 1: Identification

1.1. Identification
Product form : Mixture
Trade name : 2X and 3X IP Dilution Buffer
Product code : 190591, 190592

1.2. Recommended use and restrictions on use
Recommended use : Scientific research and development
Restrictions on use : None known

1.3. Supplier
Covaris, LLC.
14 Gill St., Unit H
Woburn, MA 01801
USA
T +1 (781) 932-3959

1.4. Emergency telephone number
Emergency number : Chemtrec (800) 424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture
GHS US classification
Eye irritation Category 2 : H319
Causes serious eye irritation
Hazardous to the aquatic environment – Acute Hazard Category 2 : H401
Toxic to aquatic life
Hazardous to the aquatic environment – Chronic Hazard Category 3 : H412
Harmful to aquatic life with long lasting effects
Full text of H statements : see section 16

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

Signal word (GHS US) : Warning
Hazard statements (GHS US) : H319 - Causes serious eye irritation
H401 - Toxic to aquatic life
H412 - Harmful to aquatic life with long lasting effects
Precautionary statements (GHS US) : P264 - Wash hands thoroughly after handling.
P273 - Avoid release to the environment.
P280 - Wear eye protection.
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P501 - Dispose of contents/container to an approved waste disposal plant.
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### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCTOXYNOL-10</td>
<td>CAS-No.: 9002-93-1</td>
<td>1.5 – 2</td>
</tr>
</tbody>
</table>

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

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

**First-aid measures after inhalation**: Remove person to fresh air and keep comfortable for breathing. Get medical attention if symptoms occur.

**First-aid measures after skin contact**: Gently wash with plenty of soap and water. Get medical advice if skin irritation persists.

**First-aid measures after eye contact**: Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.

**First-aid measures after ingestion**: Call a poison center or a doctor if you feel unwell.

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

**Symptoms/effects**: Causes eye irritation. May cause slight irritation to the skin.

**Inhalation**: May cause minor irritation to the respiratory tract and to other mucous membranes.

**Skin**: May cause slight irritation to the skin.

**Eyes**: Causes eye irritation.

**Ingestion**: May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

#### 4.3. Immediate medical attention and special treatment, if necessary

Not required.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

**Suitable extinguishing media**: Use extinguishing media appropriate for surrounding fire.

**Unsuitable extinguishing media**: None.

#### 5.2. Specific hazards arising from the chemical

**Fire hazard**: This product is not classified as flammable or combustible.

**Hazardous decomposition products in case of fire**: Toxic fumes may be released.
5.3. Special protective equipment and precautions for fire-fighters
Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
General measures: Wear suitable protective clothing. Avoid contact with eyes, skin and clothing.

6.1.1. For non-emergency personnel
Emergency procedures: Ventilate spillage area. Avoid contact with skin and eyes.

6.1.2. For emergency responders
Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
For containment: Collect spillage.
Methods for cleaning up: Take up liquid spill into absorbent material.
Other information: Place in a suitable container for disposal in accordance with the waste regulations (see Section 13). Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections
For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with eyes, skin and clothing. Wash hands with water and soap.
Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: No special storage required.
Incompatible materials: None known.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Compound</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X and 3X IP Dilution Buffer</td>
<td>No additional information available</td>
</tr>
<tr>
<td>OCTOXYNOL-10 (9002-93-1)</td>
<td>No additional information available</td>
</tr>
</tbody>
</table>
8.2. Appropriate engineering controls

Appropriate engineering controls: No particular/specific measures required. Ensure good ventilation of the work station.
Environmental exposure controls: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
Wear suitable gloves

Eye protection:
Chemical goggles. Use suitable eye protection. Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment. In operations where exposure limits are exceeded or exposure levels are excessive, an approved respirator should be used. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.

Personal protective equipment symbol(s):

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear, colorless liquid.</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>8</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>100 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20°C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.992</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water. Water: 92.5 %</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water (Log Pow)</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>
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Explosive properties : No data available
Oxidizing properties : No data available

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

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

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
None known.

10.5. Incompatible materials
None known.

10.6. Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

**OCTOXYNOL-10 (9002-93-1)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>1800 mg/kg Source: Corporate Solution From Thomson Micromedex</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>1800 mg/kg body weight</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Causes serious eye irritation. pH: 8</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Symptoms/effects</td>
<td>Causes eye irritation. May cause slight irritation to the skin.</td>
</tr>
</tbody>
</table>
Inhalation: May cause minor irritation to the respiratory tract and to other mucous membranes.
Skin: May cause slight irritation to the skin.
Eyes: Causes eye irritation.
Ingestion: May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general: Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

**OCTOXYNOL-10 (9002-93-1)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 - Fish [1]</td>
<td>4.5 mg/l</td>
<td>Source: The ECOTOXicology database</td>
</tr>
<tr>
<td>EC50 - Crustacea [1]</td>
<td>0.011 mg/l</td>
<td>ECOTOX Database</td>
</tr>
<tr>
<td>LC50 - Fish [2]</td>
<td>0.26 mg/l</td>
<td>OECD Test Guideline 203</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential

**OCTOXYNOL-10 (9002-93-1)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partition coefficient n-octanol/water (Log Pow)</td>
<td>4.86</td>
<td>National Institute of Technology and Evaluation</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods
Regional legislation (waste): Dispose of in accordance with applicable federal, state, and local regulations.
Waste treatment methods: Dispose of contents/container in accordance with licensed collector’s sorting instructions.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

<table>
<thead>
<tr>
<th>DOT</th>
<th>TDG</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1. UN number</td>
<td>Not regulated for transport</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.2. Proper Shipping Name</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
2X and 3X IP Dilution Buffer
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<table>
<thead>
<tr>
<th>DOT</th>
<th>TDG</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.4. Packing group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

|14.5. Environmental hazards | | | |
|Not applicable | Not applicable | Not applicable | Not applicable |

No supplementary information available

14.6. Special precautions for user

DOT
No data available

TDG
No data available

IMDG
No data available

IATA
No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

|OCTOXYNOL-10 | CAS-No. 9002-93-1 | 1.5 – 2% |

15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm
SECTION 16: Other information


Full text of H-phrases

<table>
<thead>
<tr>
<th>H319</th>
<th>Causes serious eye irritation</th>
</tr>
</thead>
<tbody>
<tr>
<td>H401</td>
<td>Toxic to aquatic life</td>
</tr>
<tr>
<td>H412</td>
<td>Harmful to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.