SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Trade name : 2X and 3X IP Dilution Buffer
Product code : 190591, 190592
Product group : Trade product

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

1.2.1. Relevant identified uses
No additional information available

1.2.2. Uses advised against
Restrictions on use : None known

1.3. Details of the supplier of the safety data sheet

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

1.4. Emergency telephone number

Emergency number : Chemtrec (800) 424-9300

<table>
<thead>
<tr>
<th>Country</th>
<th>Organisation/Company</th>
<th>Address</th>
<th>Emergency number</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>NSW Poisons Information Centre</td>
<td>Locked Bag 4001</td>
<td>13 11 26</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Children's Hospital at Westmead</td>
<td>NSW 2145 Westmead</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>National Poisons Information Centre</td>
<td>PO Box 1297</td>
<td>+353 1 809 2566</td>
<td>(Healthcare professionals-</td>
</tr>
<tr>
<td></td>
<td>Beaumont Hospital</td>
<td>Beaumont Road</td>
<td>(24/7)</td>
<td>public, 8am - 10pm, 7/7)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9 Dublin</td>
<td>+353 1 809 2166</td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td>National Poisons Centre</td>
<td>PO Box 56</td>
<td>0800 764 766</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>9054 Dunedin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>National Poisons Information Service</td>
<td>Dudley Road</td>
<td>0344 892 0111</td>
<td>Only for healthcare</td>
</tr>
<tr>
<td></td>
<td>(Birmingham Centre)</td>
<td>B18 7QH Birmingham</td>
<td></td>
<td>professionals</td>
</tr>
<tr>
<td></td>
<td>City Hospital</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

- Serious eye damage/eye irritation, Category 2  H319
- Hazardous to the aquatic environment – Chronic Hazard, Category 3  H412

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Toxic to aquatic life. Harmful to aquatic life with long lasting effects. Causes serious eye irritation.
2X and 3X IP Dilution Buffer
Safety Data Sheet
SDS EU format according to COMMISSION REGULATION (EU) 2020/878

2.2. Label elements
Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP):

![GHS07]

Signal word (CLP):
Warning

Hazard statements (CLP):
H319 - Causes serious eye irritation.

H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP):
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 and container to an approved waste disposal plant.

2.3. Other hazards
Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Component

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCTOXYNOL-10 (9002-93-1)</td>
<td>This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII</td>
</tr>
</tbody>
</table>

The mixture contains substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

Component

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification according to Regulation (EU) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCTOXYNOL-10(9002-93-1)</td>
<td>The substance is included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605</td>
</tr>
</tbody>
</table>

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>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCTOXYNOL-10 substance listed as REACH Candidate (4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated) substance listed in REACH Annex XIV (4-(1,1,3,3-Tetramethylbutyl) phenol, ethoxylated (covering well-defined substances and UVCl substances, polymers and homologues)) substance identified as having endocrine disrupting properties</td>
<td>CAS-No.: 9002-93-1</td>
<td>1.5 – 2</td>
<td>Acute Tox. 4 (Oral), H302 (ATE=1800 mg/kg bodyweight) Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410</td>
</tr>
</tbody>
</table>

Full text of H- and EUH-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 ingestion: Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects:
Inhalation: May cause minor irritation to the respiratory tract and to other mucous membranes.
Skin: May cause slight irritation to the skin.
Ingestion: May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

4.3. Indication of any immediate medical attention and special treatment needed

Not required.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media: None.

5.2. Special hazards arising from the substance or mixture

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. Advice for firefighters

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

No additional information available

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.

### 7.3. Specific end use(s)

No additional information available

**SECTION 8: Exposure controls/personal protection**

### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

No additional information available

#### 8.1.2. Recommended monitoring procedures

No additional information available

#### 8.1.3. Air contaminants formed

No additional information available

#### 8.1.4. DNEL and PNEC

No additional information available

#### 8.1.5. Control banding

No additional information available

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

**Appropriate engineering controls:** No particular/specific measures required. Ensure good ventilation of the work station.

#### 8.2.2. Personal protection equipment

**Personal protective equipment symbol(s):**

#### 8.2.2.1. Eye and face protection

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

#### 8.2.2.2. Skin protection

**Hand protection:** Wear suitable gloves
8.2.2.3. Respiratory protection

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.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.

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>Colour</td>
<td>Colourless</td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear, colorless liquid.</td>
</tr>
<tr>
<td>Odour</td>
<td>None</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling point</td>
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<tr>
<td>Flammability</td>
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</tr>
<tr>
<td>Explosive limits</td>
<td>Not available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>8</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water.</td>
</tr>
<tr>
<td>Water</td>
<td>92.5 %</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water (Log Kow)</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour pressure at 50°C</td>
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<td>Density</td>
<td>Not available</td>
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<tr>
<td>Relative density</td>
<td>0.992</td>
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<tr>
<td>Relative vapour density at 20°C</td>
<td>Not available</td>
</tr>
<tr>
<td>Particle characteristics</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

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 hazard classes as defined in Regulation (EC) No 1272/2008
- Acute toxicity (oral): Not classified
- Acute toxicity (dermal): Not classified
- Acute toxicity (inhalation): Not classified

<table>
<thead>
<tr>
<th>Component</th>
<th>Hazard Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCTOXYNOL-10(9002-93-1)</td>
<td>LD50 oral rat 1800 mg/kg Source: Corporate Solution From Thomson Micromedex</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>pH: 8</td>
<td></td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>pH: 8</td>
<td></td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</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>
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</tr>
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</table>

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties
Component

<table>
<thead>
<tr>
<th>Component</th>
<th>Endocrine disrupting properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCTOXYNOL-10(9002-93-1)</td>
<td>The substance is identified for having endocrine disrupting properties but there is no additional data available</td>
</tr>
</tbody>
</table>

11.2.2. Other information
No additional information available

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general: Toxic to aquatic life. Harmful to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short–term (acute): Not classified
Hazardous to the aquatic environment, long–term (chronic): Harmful to aquatic life with long lasting effects.
2X and 3X IP Dilution Buffer
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SDS EU format according to COMMISSION REGULATION (EU) 2020/878

<table>
<thead>
<tr>
<th>OCTOXYNOL-10 (9002-93-1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 - Fish [1]</td>
</tr>
<tr>
<td>LC50 - Fish [2]</td>
</tr>
<tr>
<td>EC50 - Crustacea [1]</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>OCTOXYNOL-10 (9002-93-1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partition coefficient n-octanol/water (Log Pow)</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil
No additional information available

12.5. Results of PBT and vPvB assessment
No additional information available

12.6. Endocrine disrupting properties

<table>
<thead>
<tr>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCTOXYNOL-10(9002-93-1)</td>
</tr>
</tbody>
</table>

12.7. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment 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 ADR / IMDG / IATA / ADN / RID

<table>
<thead>
<tr>
<th>ADR</th>
<th>IMDG</th>
<th>IATA</th>
<th>ADN</th>
<th>RID</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1. UN number or ID number</td>
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<tr>
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<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
</tr>
<tr>
<td>14.2. UN proper shipping name</td>
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<td></td>
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<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
</tr>
<tr>
<td>14.4. Packing group</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
</tr>
</tbody>
</table>
2X and 3X IP Dilution Buffer
Safety Data Sheet
SDS EU format according to COMMISSION REGULATION (EU) 2020/878

<table>
<thead>
<tr>
<th>ADR</th>
<th>IMDG</th>
<th>IATA</th>
<th>ADN</th>
<th>RID</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.5. Environmental hazards</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
</tr>
<tr>
<td>No supplementary information available</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14.6. Special precautions for user

Overland transport
Not regulated

Transport by sea
Not regulated

Air transport
Not regulated

Inland waterway transport
Not regulated

Rail transport
Not regulated

14.7. Maritime transport in bulk according to IMO instruments
Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations
REACH Annex XVII (Restriction List)
Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)
Contains substance(s) listed on REACH Annex XIV: 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated (CAS 9002-93-1)

REACH Candidate List (SVHC)
Contains substance(s) listed on the REACH Candidate List in concentrations ≥ 0.1 % or SCL: 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated (CAS 9002-93-1)

PIC Regulation (Prior Informed Consent)
Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)
Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)
Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)
Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations
All chemical substances in this product are listed in the EPA (Environment Protection Agency) TSCA (Toxic Substances Control Act) Inventory
2X and 3X IP Dilution Buffer
Safety Data Sheet
SDS EU format according to COMMISSION REGULATION (EU) 2020/878

Germany

Water hazard class (WGK): WGK 2, Significantly hazardous to water (Classification according to AwSV, Annex 1).

Netherlands
SZW-lijst van kankerverwekkende stoffen: None of the components are listed
SZW-lijst van mutagene stoffen: None of the components are listed
SZW-lijst van reprotoxische stoffen – Borstvoeding: None of the components are listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid: None of the components are listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling: None of the components are listed

Switzerland
Storage class (LK): LK 10/12 - Liquids

15.2. Chemical safety assessment
No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:

<table>
<thead>
<tr>
<th>Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Irrit. 2</td>
</tr>
<tr>
<td>Aquatic Chronic 3</td>
</tr>
</tbody>
</table>

Safety Data Sheet (SDS), EU

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.