1. IDENTIFICATION

Product Name
2X IP Dilution Buffer
3X IP Dilution Buffer

Recommended use of the chemical and restrictions on use

Identified uses
For research and development

Restrictions on use
For laboratory use

Product Numbers
190591
190592

Company Identification
Covaris, Inc.
14 Gill Street, Unit H
Woburn, MA 01801

Customer Information Number
(781) 932-3959

Emergency Telephone Number
Chemtrec Number
(800) 424-9300

Issue Date
December 3, 2018

Supersedes Date
This is the first issue.

Safety Data Sheet prepared in accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200, the Canadian Hazardous Products Regulations (HPR) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

2. HAZARD IDENTIFICATION

Hazard Classification
Eye Damage/Irritation - Category 2A

Label Elements
Hazard Symbols

Signal Word: Warning

Hazard Statements
Causes serious eye irritation.

Precautionary Statements
Prevention
Wash hands thoroughly after handling.
Wear eye protection and face protection.

Response
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Storage
None

Disposal
None

Other Hazards
None
2. HAZARD IDENTIFICATION

Specific Concentration Limits
The values listed below represent the percentages of ingredients of unknown toxicity.
Acute oral toxicity 0 %
Acute dermal toxicity 0 %
Acute inhalation toxicity <5 %
Acute aquatic toxicity <5 %

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>Concentration*</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-tertiary-Octylphenoxy polyethyl alcohol</td>
<td>9002-93-1</td>
<td>1 - 5%</td>
</tr>
</tbody>
</table>

*Exact concentration withheld as trade secret.

4. FIRST-AID MEASURES

Description of necessary first-aid measures

Eyes
Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

Skin
Wash affected area with plenty of water. Seek medical attention if symptoms persist.

Ingestion
Dilute by drinking large quantities of water and obtain medical attention.

Inhalation
Remove from exposure. If there is difficulty in breathing, give oxygen. Obtain medical attention if symptoms persist.

Most important symptoms/effects, acute and delayed
Aside from the information found under description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed

Notes to Physicians
Treat symptomatically.

5. FIRE - FIGHTING MEASURES

Suitable (and unsuitable) Extinguishing Media
Use foam, dry chemical or carbon dioxide. Use water spray for surroundings and containers.

Specific hazards arising from the chemical
This product may give rise to toxic gases in a fire.

Special Protective Actions for Fire-Fighters
Wear full protective clothing and self-contained breathing apparatus.
6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Wear appropriate protective clothing. Prevent skin and eye contact.

Environmental Precautions
Prevent the material from entering drains or watercourses. Notify authorities if spill has entered watercourse or sewer or has contaminated soil or vegetation.

Methods and materials for containment and cleaning up
Contain and absorb using earth, sand or other inert material. Transfer into suitable containers for recovery or disposal.

7. HANDLING AND STORAGE

Precautions for safe handling
Wear appropriate protective equipment when handling. Prevent skin and eye contact.

Conditions for safe storage
Store between 15° and 25°C to maintain product integrity. Storage area should be: cool - dry - well ventilated - out of direct sunlight - away from sources of ignition (heat, sparks, flames, pilot lights) - away from incompatible materials (see Section 10).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Exposure limits are listed below, if they exist.

*p-tertiary-Octylphenoxypolyethanol* alcohol
None established.

Appropriate engineering controls
Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.

Individual protection measures
Respiratory Protection
Wear respiratory protection if there is a risk of exposure to high vapor concentrations or aerosols. A NIOSH approved full face respirator may be worn. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.

Skin Protection
Chemical resistant gloves

Eye/Face Protection
Chemical goggles or safety glasses with side shields.

Body Protection
Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid</td>
<td>Clear</td>
</tr>
</tbody>
</table>
9. PHYSICAL AND CHEMICAL PROPERTIES

Odor: None
Odor Threshold: No data available
pH: 8.1
Specific Gravity: No data available
Boiling Range/Point (°C/F): No data available
Melting Point (°C/F): No data available
Flash Point (PMCC) (°C/F): No data available
Vapor Pressure: No data available
Evaporation Rate (BuAc=1): No data available
Solubility in Water: Soluble
Vapor Density (Air = 1): No data available
VOC (g/l): No data available
Partition coefficient (n-octanol/water): No data available
Viscosity: No data available
Auto-ignition Temperature: No data available
Decomposition Temperature: No data available
Upper explosive limit: Not applicable
Lower explosive limit: Not applicable
Flammability (solid, gas): Not applicable

10. STABILITY AND REACTIVITY

Reactivity
No known reactivity.

Chemical Stability
Stable under normal conditions.

Possibility of hazardous reactions
Hazardous polymerization will not occur.

Conditions to Avoid
Heat – high temperatures

Incompatible Materials
Strong oxidizing agents

Hazardous Decomposition Products
Oxides of carbon

11. TOXICOLOGICAL INFORMATION

Acute Toxicity
No data available

Specific Target Organ Toxicity (STOT) – single exposure
No data available
11. TOXICOLOGICAL INFORMATION

Specific Target Organ Toxicity (STOT) – repeat exposure
No data available

Serious Eye damage/Irritation
p-tertiary-Octylphenoxypolyethanol: Causes serious eye damage.

Skin Corrosion/Irritation
No data available

Respiratory or Skin Sensitization
No data available

Carcinogenicity
Not considered carcinogenic by NTP, IARC, and OSHA.

Germ Cell Mutagenicity
No data available

Reproductive Toxicity
No data available

Aspiration Hazard
Not an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity
No relevant studies identified.

Mobility in soil
No relevant studies identified.

Persistence/Degradability
No relevant studies identified.

Bioaccumulative Potential
No relevant studies identified.

Other adverse effects
No relevant studies identified.

13. DISPOSAL CONSIDERATIONS

Disposal Methods
Dispose of in accordance with all applicable local and national regulations.

14. TRANSPORT INFORMATION

Contact supplier for transport information.
15. REGULATORY INFORMATION

United States TSCA Inventory
All components of this product are in compliance with the inventory listing requirements of the US Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

Canada DSL Inventory
All ingredients in this product have been verified for listing on the Domestic Substance List (DSL) or the Non-Domestic Substance List (NDSL).

SARA Title III Sect. 311/312 Categorization
Serious eye irritation

16. OTHER INFORMATION

Legend
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service
ECHA: European Chemicals Agency
IARC: International Agency for Research on Cancer
NA: Denotes no information found or available
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
TLV: Threshold Limit Value

Revision Date: December 3, 2018
Replaces: This is first issue.
Changes made: Not applicable

Information Source and References
This SDS is prepared by Hazard Communication Specialists based on information provided by internal company references.

Prepared By: EnviroNet LLC.
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