SECTION 1: Identification

1.1. Identification

Product form : Mixture
Trade name : WB3 Buffer
Product code : 190540, 190561, 190615, 190656, 190839

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
Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labeling
No labeling applicable

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>
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</thead>
<tbody>
<tr>
<td>Poly(ethylene) Oxide</td>
<td>CAS-No.: 25322-68-3</td>
<td>10 – 30</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: Move the affected person to fresh air. 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: Rinse with water. Get medical attention if irritation develops and persists.
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:
- Inhalation: May cause slight temporary irritation.
- Skin: May cause slight irritation.
- Eyes: May cause slight 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.

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.

- For non-emergency personnel
  - Emergency procedures: Avoid contact with skin and eyes.

- 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. None known.

6.3. Methods and material for containment and cleaning up

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).
SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Avoid contact with skin and eyes. Wear personal protective equipment. Avoid contact with eyes, skin and clothing. Wash hands with water and soap. Ensure adequate ventilation.

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

WB3 Buffer

No additional information available

Poly(ethylene) Oxide (25322-68-3)

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls: No particular/specific measures required.

Environmental exposure controls: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Wear suitable gloves

Eye protection:

Use suitable eye protection

Skin and body protection:

None under normal conditions

Respiratory protection:

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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid
WB3 Buffer
Safety Data Sheet

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear, colorless liquid.</td>
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<tr>
<td>Color</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>Odor threshold</td>
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</tr>
<tr>
<td>pH</td>
<td>7.6</td>
</tr>
<tr>
<td>Melting point</td>
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</tr>
<tr>
<td>Freezing point</td>
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</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>
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</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>
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</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water (Log Pow)</td>
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</tr>
<tr>
<td>Auto-ignition temperature</td>
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</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
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<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
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<tr>
<td>Explosive properties</td>
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</tr>
<tr>
<td>Oxidizing properties</td>
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</tr>
</tbody>
</table>

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

Poly(ethylene) Oxide (25322-68-3)

LD50 oral rat > 2000 mg/kg
LD50 dermal rat > 2000 mg/kg

Skin corrosion/irritation : Not classified
pH: 7.6

Serious eye damage/irritation : Not classified
pH: 7.6

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Poly(ethylene) Oxide (25322-68-3)

LOAEL (animal/female, F0/P) 2000 mg/kg body weight Animal: rabbit, Animal sex: female
NOAEL (animal/female, F0/P) 60 mg/kg body weight Animal: rat, Animal sex: female

STOT-single exposure : Not classified
STOT-repeated exposure : Not classified

Poly(ethylene) Oxide (25322-68-3)

LOAEL (oral,rat,90 days) 16000 mg/kg body weight
NOAEL (oral,rat,90 days) 8000 mg/kg body weight
NOAEC (inhalation,rat,dust/mist/fume,90 days) 1 mg/l

Aspiration hazard : Not classified
Viscosity, kinematic : No data available

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

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

Poly(ethylene) Oxide (25322-68-3)

LC50 - Fish [1] 100 mg/l
EC50 - Crustacea [1] 9096 mg/l
EC50 96h - Algae [1] > 100 mg/l
ErC50 algae 15.91 mg/l
NOEC (chronic) 17475.27 mg/l Test organisms (species): Daphnia magna Duration: ‘21 d’
NOEC chronic fish 13671.59 mg/l
12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential
No additional information available

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>
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</thead>
<tbody>
<tr>
<td>14.1. UN number</td>
<td>Not regulated for transport</td>
<td></td>
<td></td>
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<tr>
<td>14.2. Proper Shipping Name</td>
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<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
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<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.4. Packing group</td>
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<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.5. Environmental hazards</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

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 listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

National regulations

WB3 Buffer
All chemical substances in this product are listed in the EPA (Environment Protection Agency) TSCA (Toxic Substances Control Act) Inventory

Poly(ethylene) Oxide (25322-68-3)
All chemical substances in this product are listed in the EPA (Environment Protection Agency) TSCA (Toxic Substances Control Act) Inventory

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


Safety Data Sheet (SDS), USA
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.