1. IDENTIFICATION

Product Name
Buffer B5
Buffer BE
Buffer PB

Recommended use of the chemical and restrictions on use
Identified Uses
For Research and Development Use Only

Company Identification
Covaris, Inc.

Customer Information Number
14 Gill Street, Unit H
Woburn, MA 01801
(781) 932-3959

Emergency Telephone Number
(800) 424-9300 (for emergencies only)

Chemtrec Number
(800) 424-9300

Issue Date
September 25, 2013

Supersedes Date
Safety Data Sheet prepared in accordance with OSHA’s Hazard Communication Standard (29 CFR 1910.1200) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

2. HAZARD IDENTIFICATION

Hazard Classification
This product is classified as not hazardous in accordance with the Globally Harmonized System of Classification and Labelling (GHS).

Label Elements
Hazard Symbols
None

Signal Word: None

Hazard Statements
None

Precautionary Statements
Prevention
None
Response
None
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 0%
Acute aquatic toxicity 100%

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>Non hazardous mixture</td>
<td>N.A.</td>
<td>100%</td>
</tr>
</tbody>
</table>

4. FIRST-AID MEASURES

Description of necessary first-aid measures
Eyes
Flush the eye with plenty of water. Obtain medical attention if symptoms persist.
Skin
Wash affected area with plenty of water. Seek medical attention if symptoms persist.
Ingestion
Rinse mouth with plenty of water.
Inhalation
Not an expected route of entry.

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
None known.

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.

Environmental Precautions
Prevent the material from entering drains or watercourses.

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

7. HANDLING AND STORAGE

Precautions for safe handling
Wear appropriate protective equipment when handling. Do not eat or drink while handling this material.

Conditions for safe storage
Store at room temperature away from heat and direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Exposure limits are listed below, if they exist.
Non Hazardous Ingredients
None established.

Appropriate engineering controls
No specific measures necessary.

Individual protection measures
Respiratory Protection
Respiratory protection not normally required.
Skin Protection
Gloves
Eye/Face Protection
Safety glasses
Body Protection
Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Physical State</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Liquid</td>
<td>Colorless</td>
</tr>
</tbody>
</table>

Odor
Buffer B5, Buffer BE: odorless
Buffer PB: alcoholic

Odor Threshold
No data available
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Buffer B5: 7-8</th>
<th>Buffer BE: 8-9</th>
<th>Buffer PB: no data available</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buffer B5: 7-8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buffer BE: 8-9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buffer PB: no data available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>Buffer B5, Buffer BE: 1.00 g/cm³</td>
<td>Buffer PB: 1.11 g/cm³</td>
<td></td>
</tr>
<tr>
<td>Boiling Range/Point (°C/F)</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting Point (°C/F)</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash Point (PMCC) (°C/F)</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate (BuAc=1)</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor Density (Air = 1)</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VOC (g/l)</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper explosive limit</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower explosive limit</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 acids – alkalines – oxidizing agents

Hazardous Decomposition Products
None known

11. TOXICOLOGICAL INFORMATION

Acute Toxicity
No data available to indicate product is acutely toxic.

Specific Target Organ Toxicity (STOT) – single exposure
No data available to indicate product or components will cause target organ effects after a single exposure.
11. TOXICOLOGICAL INFORMATION

Specific Target Organ Toxicity (STOT) – repeat exposure
No data available to indicate product or components will cause target organ effects after repeated exposure.

Serious Eye damage/Irritation
No data available to indicate product or components may cause eye irritation.

Skin Corrosion/Irritation
No data available to indicate product or components may cause skin irritation.

Respiratory or Skin Sensitization
No data available to indicate product or components may cause skin or respiratory sensitization.

Carcinogenicity
No data available to indicate product may present a carcinogenic hazard.

Germ Cell Mutagenicity
No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Reproductive Toxicity
No data available to indicate either product or components present at greater than 0.1% may cause reproductive toxicity or birth defects.

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.
SAFETY DATA SHEET
Buffer B5
Buffer BE
Buffer PB

14. TRANSPORT INFORMATION

DOT CFR 172.101 Data Not Regulated
UN Proper Shipping Name Not Regulated
UN Class None.
UN Number None.
UN Packaging Group None.
Classification for AIR Consult current IATA Regulations prior to shipping by air.
Transportation (IATA) Not a marine pollutant

15. REGULATORY INFORMATION

United States TSCA Inventory
Components of this product have not been verified for the inventory listing requirements of the US Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

Canada DSL Inventory
Components of this product have not been verified for inclusion on the Domestic Substance List (DSL).

WHMIS Classification
None
This product was classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations and the MSDS contains all the information required by these regulations.

SARA Title III Sect. 311/312 Categorization
None

16. OTHER INFORMATION

NFPA Ratings
NFPA Code for Flammability - 0
NFPA Code for Health - 0
NFPA Code for Reactivity - 0
NFPA Code for Special Hazards – None

HMIS Ratings
HMIS Code for Flammability - 0
HMIS Code for Health - 0
HMIS Code for Physical Hazard - 0
HMIS Code for Personal Protection - See Section 8
*Chronic

Legend
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service ECHA: European Chemicals Agency
IARC: International Agency for Research on Cancer
N/A: Denotes no applicable information found or available
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
16. **OTHER INFORMATION**

PEL: Permissible Exposure Limit  
SDS: Safety Data Sheet  
STEL: Short Term Exposure Limit  
TLV: Threshold Limit Value

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

**Prepared By:** EnviroNet LLC.

The information and recommendations presented in this SDS are based on sources believed to be accurate. Covaris assumes no liability for the accuracy or completeness of this information. It is the user's responsibility to determine the suitability of the material for their particular purposes. In particular, 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 ensure that any use or disposal of the material is in accordance with applicable Federal, State, and local laws and regulations.