1. IDENTIFICATION

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Bind Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended use of the chemical and restrictions on use</td>
<td>For research and development</td>
</tr>
<tr>
<td>Identified uses</td>
<td>For laboratory use</td>
</tr>
<tr>
<td>Restrictions on use</td>
<td></td>
</tr>
<tr>
<td>Product Numbers</td>
<td>190405</td>
</tr>
<tr>
<td>Company Identification</td>
<td>Covaris, Inc. 14 Gill Street, Unit H Woburn, MA 01801</td>
</tr>
<tr>
<td>Customer Information Number</td>
<td>(781) 932-3959</td>
</tr>
<tr>
<td>Emergency Telephone Number</td>
<td>(800) 424-9300</td>
</tr>
<tr>
<td>Issue Date</td>
<td>October 26, 2018</td>
</tr>
<tr>
<td>Supersedes Date</td>
<td>This is the first issue.</td>
</tr>
</tbody>
</table>

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
Serious eye damage/eye irritation - Category 1
Skin corrosion/irritation - Category 1C

Label Elements
Hazard Symbols

Signal Word: Danger

Hazard Statements
Causes severe skin burns and eye damage.

Precautionary Statements Prevention
Wear protective gloves, protective clothing, eye protection and face protection.
Wash hands thoroughly after handling. **Response**
Immediately call a poison center or doctor/physician.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
Wash contaminated clothing before re-use. **Storage**
Store locked up.
Disposal
Dispose of contents/container in accordance with local regulation.

2. HAZARD IDENTIFICATION

Other Hazards
None

Specific Concentration Limits
The values listed below represent the percentages of ingredients of unknown toxicity.
Acute oral toxicity <1 %
Acute dermal toxicity <1 %
Acute inhalation toxicity 40 - 50 %
Acute aquatic toxicity 40 - 50%

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>Guanidinium Thiocyanate</td>
<td>593-84-0</td>
<td>10 - 30%</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
Do not induce vomiting. Have victim drink 1-3 glasses of water to dilute stomach contents. Never administer anything by mouth if a victim is losing consciousness, is unconscious or is convulsing. Obtain medical attention immediately.

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.

5. FIRE - FIGHTING MEASURES 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. 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. Use in well ventilated area. Use local exhaust ventilation. Avoid inhaling vapor. Avoid contact with eyes, skin and clothing. Keep container tightly closed when not in use.

Conditions for safe storage
Store between 2° and 8°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.

Guanidinium thiocyanate 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
Face shield and safety glasses

Body Protection
If there is danger of splashing, wear overall or apron.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Color</th>
<th>Odor</th>
<th>Odor Threshold</th>
<th>pH</th>
<th>Specific Gravity</th>
<th>Boiling Range/Point (°C/F)</th>
<th>Melting Point (°C/F)</th>
<th>Flash Point (PMCC) (°C/F)</th>
<th>Vapor Pressure</th>
<th>Evaporation Rate (BuAc=1)</th>
<th>Solubility in Water</th>
<th>Vapor Density (Air = 1)</th>
<th>VOC (g/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid</td>
<td>Clear</td>
<td>None</td>
<td>No data available</td>
<td>7.9 - 8.2</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>Soluble</td>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Revision Date: October 26, 2018
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 - nitrogen oxides - sulfur oxides - sodium oxides - hydrogen chloride gas

11. TOXICOLOGICAL INFORMATION

Acute Toxicity
Guanidinium Thiocyanate
Oral LD50 (rat) 593 mg/kg

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
Guanidinium Thiocyanate: Causes serious eye damage.

Skin Corrosion/Irritation
Guanidinium Thiocyanate: Corrosive to skin.

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
Guanidinium Thiocyanate
EC50 (daphnia magna) 42.4 mg/l 48 hr

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
This product contains a component that is not listed or exempted from listing on the US EPA Toxic Substance Control Act Chemical Substance Inventory. Therefore, this product is restricted to research and development purposes only.

Canada DSL Inventory
This product contains a component that is not listed or exempted from listing on the Domestic Substance List (DSL).

SARA Title III Sect. 311/312 Categorization
Skin corrosion – Serious eye damage
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: October 26, 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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