## Buffer

### Section 1. Identification

**Product Identifier**

Catalog Number: ALL PRODUCTS

Recommended use of the chemical and restrictions on use

For research use only. Not intended for human or animal diagnostic or therapeutic uses

**Manufacture/Supplier Details:** Swift Biosciences, Inc.
58 Parkland Plaza, Suite 100
Ann Arbor, MI 48103

**Emergency Telephone Numbers**

CHEMTREC Emergency Phone Number: 1-800-424-9300

*Chemtrec should only be called in a chemical emergency (spill, leak, fire, exposure, or accident)*

### Section 2. Hazard Identification

**Classification of the substance/mixture:** Not a hazardous substance or mixture.

**GHS Label elements, including precautionary statements**

The substance is classified and labeled according to the Globally Harmonized System (GHS). Not a hazardous substance or mixture.

- **Hazard statements:** None
- **Signal word:** None
- **Precautionary Statements:** None

**HMIS rating (Scale 0-4):**

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRE</td>
<td>0</td>
</tr>
<tr>
<td>REACTIVITY</td>
<td>0</td>
</tr>
</tbody>
</table>

**NFPA Rating:**

![NFPA Rating Diagram](image)

**Hazards not otherwise classified:** None
Buffer

### Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Identifiers</th>
<th>Hazardous</th>
<th>Approximate Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tromethamine</td>
<td>CAS: 77-86-1</td>
<td>nonhazardous</td>
<td>-</td>
</tr>
<tr>
<td>Sodium Chloride</td>
<td>CAS: 7440-23-5</td>
<td>nonhazardous</td>
<td>-</td>
</tr>
<tr>
<td>Magnesium Chloride, 6-hydrate</td>
<td>CAS: 7791-18-6</td>
<td>nonhazardous</td>
<td>-</td>
</tr>
<tr>
<td>Water</td>
<td>CAS: N/A</td>
<td>nonhazardous</td>
<td>-</td>
</tr>
</tbody>
</table>

**Chemical Characterization:** Mixture

Any concentration shown as a range or N/A is to protect confidentiality or is due to batch variation.

### Section 4. First-Aid Measures

**Description of necessary measures**

**Inhalation:**

Move to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Skin:**

Wash exposed area with soap and water. If irritation arises, call a physician.

**Eye:**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

**Ingestion:**

Give several glasses of milk or water. Vomiting may occur spontaneously, but it is no necessary to induce. Never give anything by mouth to an unconscious person.

**Most important symptoms/effects, acute and delayed**

No further relevant information available

**Indication of any immediate medical attention and special treatment needed**

All treatment should be based on observed sign and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

### Section 5. Fire Fighting Measures

**Extinguishing media:**

Suitable extinguishing media: Carbon dioxide, dry chemical, or appropriate foam.

Unsuitable Extinguishing: None known

**Special hazards arising from the substance or mixture**

Unusual fire and explosion hazards: Combustible liquid. Emits toxic fumes under fire conditions.

Hazardous Combustion products: None known
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Special protective equipment and precautions for the fire-fighters: Wear self-contained breathing apparatus and protective suit.

Section 6. Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures**

Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not touch or walk through spilled material. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

**Environmental precautions**

Avoid run off to waterways and sewers.

**Methods and materials for containment and cleaning up**

Soak up with inert absorbent material and put in chemical waste container.

Section 7. Handling And Storage

**Precautions for safe handling:**

Avoid inhalation and prolonged exposure. Use personal protective equipment such as gloves, goggles, and lab coat. Avoid contact with eyes, skin, and clothing.

**Conditions for safe storage, including and incompatibilities**

**Storage:**

Keep tightly closed in properly labeled containers; store in a dry place, at directed temperature indicated on label.

**Incompatible materials or Ignition sources:**

Hygroscopic.

Section 8. Exposure Controls/Personal Protection

**Control parameters**

**Occupational exposure Limit values:**

We are not aware of any national exposure limit.

**Appropriate engineering controls:**

Safety shower and eye wash. Ensure adequate ventilation.

**Personal protective equipment**

**Eye protection:**

Safety glasses with side shields.

**Hand Protection:**

Impervious gloves.
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Respiratory Protection: None required under normal working conditions in use.

Skin and body protection: Lightweight protective clothing.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

Environment exposure controls: Prevent product from entering drains.

Section 9. Physical And Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear</td>
</tr>
<tr>
<td>Odor</td>
<td>Faint</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>5.5-8.0</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point &amp; boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density (water)</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Other information</td>
<td>Liquid</td>
</tr>
</tbody>
</table>

Section 10. Stability And Reactivity

Reactivity: Avoid strong oxidizing agents and strong bases.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Under normal conditions of storage and used, hazardous reactions should not occur.

Conditions to avoid: Protect from heat and moisture.

Incompatible materials: No specific data
Safety Data Sheet (SDS)

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Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity: Not hazardous

<table>
<thead>
<tr>
<th>Product/Ingredient Name</th>
<th>CAS</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffer</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/Ingredient Name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure/Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffer</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
</tr>
</tbody>
</table>

Sensitization: Not available

Mutagenicity: Not available

Carcinogenicity

<table>
<thead>
<tr>
<th>Product/Ingredient Name</th>
<th>OSHA</th>
<th>IARC</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffer</td>
<td>None of the ingredients listed</td>
<td>None of the ingredients listed</td>
<td>None of the ingredients listed</td>
</tr>
</tbody>
</table>

Reproductive toxicity: Not available

Teratogenicity: Not available

Specific target organ toxicity- single exposure: Toxicity is low

Specific target organ toxicity- repeated exposure: May cause injury. Signs and symptoms may be central nervous systems effects and increased blood sugar levels. Persons with preexisting conditions may be more susceptible.

Aspiration Hazard: Not available
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Information on the likely routes of exposure
Routes of entry anticipated: Oral  May be harmful if swallowed

Notes: Water hazard class 1 (self-assessment): slightly hazardous for water

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: May cause eye irritation with susceptible persons.
Inhalation: May be harmful by inhalation.
Skin contact: May cause skin irritation in susceptible persons.
Ingestion: May be harmful if swallowed
Aspiration Hazard: Not available

Delayed and immediate effects and also chronic effects from short and long term exposure
No known significant effects or critical hazards.

Numerical measures of toxicity
Not available

Section 12. Ecological Information

Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffer</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
</tr>
</tbody>
</table>

Persistence and degradability: Not available
Bioaccumulative potential: Not available
Mobility in soil: Not available
Other adverse effects: Not available
Aspiration Hazard: No known significant effects or critical hazards.

Section 13. Disposal Considerations

Waste treatment methods

Product waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations
Packaging waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations

Section 14. Transport Information

<table>
<thead>
<tr>
<th>DOT</th>
<th>UN Number</th>
<th>UN proper shipping name</th>
<th>Transport hazard class(es)</th>
<th>Packaging group</th>
<th>Environmental Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not regulated</td>
<td>No information available</td>
<td>No information available</td>
<td>No information available</td>
<td>No information available</td>
<td>None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IMDG</th>
<th>UN Number</th>
<th>UN proper shipping name</th>
<th>Transport hazard class(es)</th>
<th>Packaging group</th>
<th>Environmental Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not regulated</td>
<td>No information available</td>
<td>No information available</td>
<td>No information available</td>
<td>No information available</td>
<td>None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IATA</th>
<th>UN Number</th>
<th>UN proper shipping name</th>
<th>Transport hazard class(es)</th>
<th>Packaging group</th>
<th>Environmental Hazards</th>
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</thead>
<tbody>
<tr>
<td>Not regulated</td>
<td>No information available</td>
<td>No information available</td>
<td>No information available</td>
<td>No information available</td>
<td>None</td>
</tr>
</tbody>
</table>

Transport in bulk according to Annex II of Marpol 73/78 and the IBC code

This product is provided only in non-bulk containers

Special Precautions for user

None specified

IATA:

**Proper shipping name:** Classified as non-hazardous in the meaning of transport regulations.

**DOT:** This substance is considered to be non-hazardous for transport. No shipping name required.

**Hazard Class**  None

**Subsidiary class**  None

**Packing group**  None

**UN-No**  None

**Marine Pollutant**  No

Section 15. Regulatory Information

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

**Sara:**  Not applicable

**Section 355 (Extremely hazardous substances):**  This product is not regulated by SARA.
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Section 313 (Specific toxic chemical listings):

This product is not regulated by SARA.

SARA 311/312 Hazards:

This product is not regulated by SARA.

TSCA (Toxic substances control act):

Proposition 65, PICCS, ENCS, DSL, ALCS:

Chemicals known to cause cancer:

Tromethamine and magnesium chloride, 6-hydrate

Chemicals known to cause reproductive toxicity:

Not available.

or females:

Not available.

Chemicals known to cause reproductive toxicity for males:

Not available.

Chemicals known to cause developmental toxicity:

Not available.

Carcinogenic categories:

EPA (Environmental protection agency):

Tromethamine, Sodium Chloride, and Magnesium Chloride, 6-hydrayte are listed under MA-RTK.

TLV (Threshold limit value established by ACGIH):

Not available.

NIOSH-CA (National institute for occupational safety and health):

Not available.

OSHA-CA (occupational safety & health administration):

Not available.

GHS label elements:

The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms:

Not available.

Decomposition temperature:

Not available.

Viscosity:

Not available.

Signal Word:

Not available.

Hazard-determining components of labeling:

Not available.

Hazard statements:

Not available.

Precautionary statements:

Not available.

National regulations:

Substance is not listed

State right to know:

This product does not contain chemicals listed under California Proposition 65. Tromethamine, Sodium Chloride, and Magnesium Chloride, 6-hydraye are listed under MA-RTK.

A Chemical Safety Assessment has not been carried out.

Chemical safety assessment:

This product does not contain HAPs.

Chemical safety assessment:

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61):

WHMIS hazard class:

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

Section 16. Other Information

Disclaimer/Statement of Liability: The information contained herein is believed to be accurate but is not warranted to be so. Data and calculation are based on information furnished by the manufacturers of the components of the product. Uses are advised to confirm in advance of need that information is current, applicable and suited to the circumstance of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of
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this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in section 1.

Warranty
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Swift Biosciences, Inc Shall not be held liable for any damage resulting from handling or from contact with the above product. Swift Biosciences, Inc

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