1. Product and Company Identification

1.1 Product identifiers
a. Product name: HHBS [Hanks' Buffer with 20 mM Hepes]
b. Product number: 20011
c. CAS number: N/A

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Laboratory chemicals *For Research Use Only*

1.3 Details of the supplier of the data sheet
   520 Mercury Drive, Sunnyvale, CA 94085
b. Telephone: 408-733-1055
c. Fax: 408-733-1304
d. E-Mail: info@aatbio.com

1.4 Emergency telephone number
Emergency telephone number: 408-489-6491

2. Hazards Identification

2.1 Classification
Not a hazardous substance or mixture

2.2 GHS label elements, including precautionary statements
Not a hazardous substance or mixture

2.3 Hazardous not otherwise classified (HNOC) or not covered by GHS
None

2.4 Potential health effects asdfasdf
Avoid contact and inhalation. To our knowledge, the hazards of this material have not been thoroughly investigated. We recommend handling all chemicals with caution.

a. Inhalation: No data available (may be harmful by inhalation)
b. Ingestion: No data available (may be harmful if swallowed)
c. Skin: No data available (may cause skin irritation in susceptible persons)
d. Eyes: No data available (may cause eye irritation in susceptible persons)
a. Chronic exposures: No data available (potentially harmful)
f. Target organs: No data available (potentially harmful)
g. Carcinogenic effects: No data available (potentially harmful)
h. Mutagenic effect: No data available (potentially harmful)
i. Reproductive toxicity: No data available (potentially harmful)
j. Sensitization: No data available (potentially harmful)

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
<th>EINECS#</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHBS (Hanks’ buffer with 20 mM Hepes)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

4. First Aid and Measures

4.1 Skin contact
Rinse with plenty of water. Call a physician to seek medical advice if symptoms arise.
4.2 Eye contact
Wash thoroughly after handling. If eye or skin contact occurs, immediately wash affected area with soap and copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician to seek medical advice.

4.3 Ingestion
Never give anything by mouth to an unconscious person. Call a physician to seek medical advice if symptoms arise.

4.4 Inhalation
If swallowed, wash out mouth with water provided person is conscious and call a physician to seek medical advice. If inhaled, move individual to fresh air and call a physician to seek medical advice.

4.5 Notes to physician
Treat symptomatically.

5. Fire Fighting Measures

5.1 Extinguishing media
Water spray, carbon dioxide, dry chemical powder or appropriate foam.

5.2 Special firefighting procedures
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

5.3 Unusual fire and explosion hazards
Emits toxic fumes under fire conditions.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures
Use appropriate protective equipment and methods to clean up spilled substances promptly.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so.

6.3 Methods for cleaning up
Absorb spill onto an appropriate material. Collect and dispose of all waste in accordance with applicable laws.

7. Handling and Storage

7.1 Personal precautions, protective equipment and emergency procedures
Potentially harmful. Avoid prolonged or repeated exposure. Avoid dust formation. Avoid breathing vapors, mist or gas.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry, cool and well-ventilated place. Protect material from long-term exposure to light.

8. Exposure Controls/Personal Protection

8.1 Control parameters
Contains no substances with occupational exposure limit values.

8.2 Control parameters
a. Engineering measures: General industrial hygiene practice.

b. Personal protective equipment: Wear appropriate gloves, protective clothing and eyewear and follow safe laboratory practices.

8.3 Environmental exposure control
Prevent products from entering drains.

9. Physical and Chemical Properties

Appearance: Liquid
Solubility in water: High
**10. Stability and Reactivity**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>No data available</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>Stable under recommended storage conditions</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>No data available</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>No data available</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>No data available</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**11. Toxicological Information**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Skin/corrosion/irritation</td>
<td>No data available (may cause skin irritation in susceptible persons)</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>No data available (may cause eye irritation in susceptible persons)</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>No data available (may be harmful by inhalation)</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>No data available (potentially harmful)</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not listed by NTP, IARC, or OSHA</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific target organ toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>No data available</td>
</tr>
<tr>
<td>RTECS</td>
<td>No data available</td>
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</tbody>
</table>

**12. Ecological Information**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecotoxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Persistence and degradability</td>
<td>No data available</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>No data available</td>
</tr>
<tr>
<td>Mobility in soil</td>
<td>No data available</td>
</tr>
<tr>
<td>Results of PBT and vPvB assessment</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**13. Disposal Consideration**

Do not allow product to reach ground water, water course, or sewage system. Consult local, state or national regulations for proper disposal.

**14. Transport Information**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT (US)</td>
<td>Not dangerous goods</td>
</tr>
<tr>
<td>IMDG</td>
<td>Not dangerous goods</td>
</tr>
<tr>
<td>IATA</td>
<td>Not dangerous goods</td>
</tr>
</tbody>
</table>

**15. Regulatory Information**
US Toxic Substances Control Act (TSCA): Not listed
SARA 302 components: Not listed
SARA 313 components: Not listed
SARA 311/312 components: Not listed
EEC risk statements: Not listed
Massachusetts-RTK: Not listed
New Jersey-RTK: Not listed
Pennsylvania-RTK: Not listed
California Proposition 65: Not listed

16. Other Information

16.1 HMIS Rating
   Health hazard 0
   Flammability 0
   Reactivity 0

16.2 NFPA Rating
   Health hazard 0
   Flammability 0
   Reactivity 0

16.3 Further information
This material is sold for research purposes only and is not required to appear on the TSCA inventory. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Users should make independent decisions regarding completeness of the information based on all sources available. AAT Bioquest shall not be held liable for any damage resulting from handling or from contact with the above product.