Section 1. Identification

Product Identifier

Catalog Number: C2130

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: Alpha Teknova, Inc.
2290 Bert Dr.
Hollister, CA 95023
Telephone Number: 831-637-1100

Emergency Telephone Numbers
CHEMTREC Emergency Phone Number: (800) 424-9300

Section 2. Hazard Identification

Classification of the substance/mixture: Hazardous substance or mixture.

GHS Label elements, including precautionary statements
The substance is classified and labeled according to the Globally Harmonized System (GHS).
Hazardous substance or mixture.

Pictograms:

Hazard statements:
May cause an allergic skin reaction.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Signal word:
Danger

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves.
In case of inadequate ventilation wear respiratory protection.
IF ON SKIN: Wash with plenty of soap and water.

Precautionary Statements:
IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
If skin irritation or rash occurs: Get medical advice/ attention.
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.
Wash contaminated clothing before reuse.
Dispose of contents/ container to an approved waste disposal plant.

HMIS rating (Scale 0-4):

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FIRE</th>
<th>REACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

NFPA Rating:

Hazards not otherwise classified:
None
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>Carbenicillin</td>
<td>CAS: 4800-94-6</td>
<td>hazardous</td>
<td>10%</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 is to protect confidentiality or is due to batch variation.

Section 4. First-Aid Measures

Description of necessary measures

Inhalation:
Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Skin:
Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops or persists.

Eye:
Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Ingestion:
Do not induce vomiting. Get medical attention if adverse health effects develop or persist.

Most important symptoms/effects, acute and delayed
Non 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: Water Spray. Carbon Dioxide, Dry Chemical Powder Or Appropriate Foam. Use an extinguishing agent suitable for the surrounding fire.

Unsuitable Extinguishing:
None known

Special hazards arising from the substance or mixture
Unusual fire and explosion hazards: No specific fire or explosion hazard
Hazardous Combustions products: None known
Special protective equipment and precautions for the fire-fighters: No special measures required
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**
Absorb with liquid-binding material. Dispose contaminated material as waste according to item 13.

Section 7. Handling And Storage

Precautions for safe handling: Provide exhaust ventilation at places where dust is formed. Normal measures for preventive fire Protection. Avoid contact with skin and eyes. Avoid formation aerosols.

**Conditions for safe storage, including and incompatibilities**
Storage: Keep labeled container tightly closed and upright. Keep frozen.

Incompatible materials or Ignition sources: Keep away from strong oxidizers.

Section 8. Exposure Controls/Personal Protection

**Control parameters**
Occupational exposure Limit values: Contains no substances with occupational exposure limit values.
Appropriate engineering controls: General industrial hygiene practice.

**Personal protective equipment**
Eye protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Hand Protection: Protective gloves. The glove material has to be impermeable and resistant to the product/the substance/ the preparation.
Respiratory Protection: None required under normal conditions of use

Section 9. Physical And Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>none</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>no data available</td>
</tr>
<tr>
<td>pH</td>
<td>no data available</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>Product does not sustain combustion</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>
</tbody>
</table>
100mg/mL Carbenicillin Solution

Vapor density: no data available
Relative density (water): no data available
Solubility: Soluble in water
Upper/lower flammability or explosive limits: no data available
Auto-ignition temperature: no data available
Decomposition temperature: no data available
Viscosity: no data available
Other information: None

Section 10. Stability And Reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients
Chemical stability: Stable under recommended storage conditions.
Possibility of hazardous reactions: Under normal conditions of storage and used, hazardous reactions should not occur.
Conditions to avoid: No specific data
Incompatible materials: No specific data
Hazardous decomposition products: Under normal conditions of storage and used, hazardous decomposition products should not be produced.

Section 11. Toxicological Information

<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>Carbenicillin</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

<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>Carbenicillin</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</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>Carbenicillin</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 Not available
Specific target organ toxicity- repeated exposure Not available
Aspiration Hazard Not available
Information on the likely routes of exposure
Routes of entry anticipated: Oral

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: No specific data
Inhalation: No specific data
Skin contact: No specific data
Ingestion: No specific data
Aspiration Hazard: No specific data

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>Carbenicillin</td>
<td>-</td>
<td>-</td>
<td>-</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>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>DOT</td>
<td>Not regulated</td>
<td>-</td>
<td>-</td>
<td>none</td>
</tr>
<tr>
<td>IMDG</td>
<td>Not regulated</td>
<td>-</td>
<td>-</td>
<td>none</td>
</tr>
<tr>
<td>IATA</td>
<td>Not regulated</td>
<td>-</td>
<td>-</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

Section 15. Regulatory Information
Safety health and environmental regulations/ legislation specific for the substance or mixture

Sara : Not applicable
Section 355 (Extremely hazardous substances) : Substance is not listed
Section 313 (Specific toxic chemical listings) : Substance is not listed
SARA 311/312 Hazards
No SARA Hazards
TSCA (Toxic substances control act) : Substance is not listed
Proposition 65:
Chemicals known to cause cancer : Substance is not listed
Chemicals known to cause reproductive toxicity or females : Substance is not listed
Chemicals known to cause reproductive toxicity for males : Substance is not listed
Chemicals known to cause developmental toxicity : Substance is not listed

Carcinogenic categories
EPA (Environmental protection agency) : Substance is not listed
TLV (Threshold limit value established by ACGIH) : Substance is not listed
NIOSH-CA (National institute for occupational safety and health) : Substance is not listed
OSHA-CA (occupational safety & health administration) : Substance is not listed
The product is classified and labeled according to the Globally Harmonized System (GHS).

GHS label elements
Hazard pictograms
Decomposition temperature : Not applicable
Viscosity : Not applicable
Signal Word : Danger

Hazard-determining components of labeling : Not applicable

Hazard statements
May cause an allergic skin reaction.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves.
In case of inadequate ventilation wear respiratory protection.
IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
If skin irritation or rash occurs: Get medical advice/ attention.
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.
Wash contaminated clothing before reuse.
Dispose of contents/ container to an approved waste disposal plant

Precautionary statements

National regulations : Substance is not listed
State right to know : Substance is not listed
Chemical safety assessment
A Chemical Safety Assessment has not been carried out.
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 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. Teknova, inc. Shall not be held liable for any damage resulting from handling or from contact with the above product.
Teknova, inc.

Key to abbreviations: NDA= No data available