1. **IDENTIFICATION**
   - Product Identifier: Ceftizoxime Sodium
   - Product Number: C021
   - Distributor Name: TOKU-E Company
   - Distributor Address: 715 W Orchard Dr, Suite 3, Bellingham, WA 98225
   - Phone Number: (360) 734-1789
   - Emergency Phone Number (International): +1 (352) 323-3500
   - Emergency Phone Number (US only): 1 (800) 535-5053
   - Safety Data Sheet Issued by: TOKU-E USA
   - CAS-No.: [68401-82-1]
   - EC/REACH Number: Not available
   - Recommended Use: Third-generation cephalosporin antibiotic which is very soluble in aqueous solution
   - Restrictions on Use: Not for human or animal use

2. **HAZARD(S) IDENTIFICATION**
   - GHS Classification
     - Skin irritation (Category 2)
     - Eye irritation (Category 2)
     - Specific target organ toxicity - single exposure (Category 3) (Respiratory System)
   - GHS Label Elements, Including Precautionary statements
     - Signal word: Warning
     - Hazard Statements: H315: Causes skin irritation; H319: Causes serious eye irritation; H335: May cause respiratory irritation
     - Precautionary Statements: P261: Avoid breathing dust/fume/gas/mist/vapours/spray; P264: Wash hands/skin thoroughly after handling; P271: Use only outdoors or in a well-ventilated area; P280: Wear protective gloves/protective clothing/eye protection/face protection; P302+P352: IF ON SKIN: Wash with plenty of soap and water; P304+P340: IF INHALED: Remove victim to fresh
air and keep at rest in a position comfortable
P305+P351+P338: IF IN EYES: Rinse cautiously with
water for several minutes. Remove contact lenses, if present and easy to do, continue rinsing.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.
P321: Specific treatment, see label
P332+P313: IF SKIN irritation occurs: Get medical advice/attention.
P337+P313: If eye irritation persists: Get medical advice/attention.
P362: Take off contaminated clothing and wash before reuse
P403+P233: Store in a well-ventilated place. Keep container tightly closed
P405: Store Locked up
P501: Dispose of contents/container to proper waste container

Hazards not otherwise classified (HNOC) by GHS
None

3. COMPOSITION/INFORMATION ON INGREDIENTS

   Synonym(s)
   Ceftizoxime Sodium Salt;
   5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[[(2Z)-2-(2-
amino-4-thiazolyl)-2-(methoxyimino)acetyl]amino]-8-oxo-,sodium;
   7-[[2-Amino-4-thiazolyl](methoxyimino)acetyl]amino]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid sodium salt

   Formula
   C_{13}H_{12}N_{5}NaO_{5}S_{2}

   Molecular Weight
   405.38 g/mol

   CAS-No.
   [68401-82-1]

   EC-No.
   Not available

   Index-No.
   Not available

   Hazardous components
   Component: Ceftizoxime Sodium
   Classification: Skin irritation (2); Eye irritation (2A); Specific target organ toxicity- single exposure (3) (Respiratory System)

4. FIRST-AID MEASURES

   General Advice
   Consult a physician. Show this Safety Data Sheet to the medical provider

   If Inhaled
   If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a
In Case of Eye Contact

Rinse thoroughly with plenty of water for at least 15 minutes, consult a doctor

If Swallowed

Never give anything by mouth to an unconscious person. Consult a doctor. Rinse mouth with water.

Most important symptoms and effects, both acute and delayed

Please see Section 2 and/or Section 11

Indication of any immediate medical attention and special treatment needed

No data available

5. **FIRE-FIGHTING MEASURES**

Suitable Extinguishing Media

Water spray, alcohol-resistant foam, dry chemical, carbon dioxide

Special Protective Equipment for Firefighters

Wear self-contained breathing apparatus

Hazardous Combustion Products

Formed under fire conditions: Carbon, Nitrogen, Sodium, and Sulfur oxides

6. **ACCIDENTAL RELEASE MEASURES**

General

Evacuate personnel to safe location

Personal Precautions

Wear respiratory protection. Avoid dust formation and breathing vapors/mist/dust/gas. Ensure adequate ventilation

Environmental Precautions

Prevent spillage, do not let product enter drains

Methods of Containment and Cleanup

Place in suitable, closed containers for licensed disposal. Avoid dust formation

7. **HANDLING AND STORAGE**

Precautions for Safe Handling

Avoid contact with skin and eyes. Provide exhaust ventilation in areas where dust if formed

Precautions for Safe Storage

Keep container tightly closed and in a dry, well-ventilated place. Recommended storage temperature: -20°C

Incompatibilities

None known

8. **EXPOSURE CONTROLS/ PERSONAL PROTECTION**

Contains no substances with occupational exposure limit values

PPE: Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate, use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)
PPE: Hand Protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal techniques to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices, and wash and dry hands.

PPE: Eye Protection
Use a face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

PPE: Skin and Body Protection
When deemed needed according to the concentration and amount of this product, use a complete body suit.

9. PHYSICAL/CHEMICAL PROPERTIES
Appearance
White or pale yellow crystalline powder
pH
6.0-8.0
Melting Point/Freezing Point
227°C
Boiling Point
No data available
Flash Point
No data available
Ignition Temperature
No data available
Autoignition Temperature
No data available
Lower Explosion Limit
No data available
Upper Explosion Limit
No data available
Vapor Pressure
No data available
Density
No data available
Water Solubility
Freely soluble
Solubility in Other Solvents
No data available
Partition Coefficient: n-octanol/water
No data available
Optical Rotation
+125° to +145°
Absorbance (290nm, 5% in H₂O)
No data available
Water content (Karl Fisher)
≤8.5%

10. STABILITY AND REACTIVITY
Chemical Stability
Stable under recommended storage conditions
Possibility of Hazardous Reactions
No data available
Conditions to Avoid
No data available
Materials to Avoid
Strong oxidizing agents
Hazardous Decomposition Products
Carbon, Nitrogen, Sodium, and Sulfur oxides formed under fire conditions

11. TOXICOLOGICAL INFORMATION
Oral LD₅₀
 Rat: >10,000 mg/kg
Inhalation LC₅₀
No data available
Dermal LD₅₀
No data available
Intraperitoneal LD₅₀
Rat: 8,130 mg/kg
Remarks: Peripheral nerve and sensation: Flaccid
paralysis without anesthesia (usually neuromuscular blockage)

Lungs, Thorax, or Respiration: Other changes

Subcutaneous LD$_{50}$
Rat: $>10,000$ mg/kg

Intravenous LD$_{50}$
Rat: $5,570$ mg/kg

Remarks: Peripheral nerve and sensation: Flaccid paralysis without anesthesia (usually neuromuscular blockage)

Lungs, Thorax, or Respiration: Other changes

Skin Corrosion/Irritation
No data available

Serious Eye Damage/ Eye Irritation
No data available

Respiratory or Skin Sensitization
β-lactams are a broad class of antibiotics and include penicillins and cephalosporins. Some individuals experience adverse immunological responses or allergic reactions to β-lactam antibiotics. Because of the similarity in structure between penicillins and cephalosporins, those who are allergic to one class of agents may manifest cross-allergenicity when exposed to a member of another class.

TOKU-E Company assumes this chemical has the potential to induce an allergic reaction in some individuals. To the best of our knowledge, the correlation between this specific material and respiratory or skin sensitization has not been thoroughly investigated.

Germ Cell Mutagenicity
Laboratory experiments have shown mutagenic effects

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA

Reproductive Toxicity
No data available

Teratogenicity
No data available

Specific Target Organ Toxicity: Single Exposure (Globally Harmonized System)
No data available

Specific Target Organ Toxicity: Repeated Exposure (Globally Harmonized System)
No data available
<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. ECOLOGICAL INFORMATION</td>
<td></td>
</tr>
<tr>
<td>Toxicity</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>PBT and vPvB Assessment</td>
<td>No data available</td>
</tr>
<tr>
<td>13. DISPOSAL CONSIDERATIONS</td>
<td>Dispose of product through a licensed disposal company</td>
</tr>
<tr>
<td>Contaminated Packaging</td>
<td>Dispose of as unused product</td>
</tr>
<tr>
<td>14. TRANSPORTATION INFORMATION</td>
<td>Not Dangerous Goods</td>
</tr>
<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>
<tr>
<td>15. REGULATORY INFORMATION</td>
<td>No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302</td>
</tr>
<tr>
<td>SARA 313 Components</td>
<td>This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313</td>
</tr>
<tr>
<td>SARA 311/312 Hazards</td>
<td>Acute Health Hazard</td>
</tr>
<tr>
<td>Massachusetts Right to Know Components</td>
<td>No components are subject to the Massachusetts Right to Know Act</td>
</tr>
<tr>
<td>Pennsylvania Right to Know Components</td>
<td>7-[<a href="methoxyimino">2-Amino-4-thiazolyl</a>acetyl]amino]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid sodium salt CAS-No. [68401-82-1] Revision Date: Not available</td>
</tr>
<tr>
<td>New Jersey Right to Know Components</td>
<td>7-[<a href="methoxyimino">2-Amino-4-thiazolyl</a>acetyl]amino]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid sodium salt CAS-No. [68401-82-1]</td>
</tr>
</tbody>
</table>
California Prop. 65 Components
This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

EU Information
SDS in accordance with REACH 1907/2006
See GHS Information under Section 2, Hazard Identification

16. OTHER INFORMATION
Date of last revision: 2016-02-23

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. TOKU-E Company shall not be held liable for any damage resulting from handling or from contact with the above product. Please see reverse side of invoice or packing slip for additional terms and conditions of sale.