1. IDENTIFICATION
   Product Identifier: Cefoxitin
   Product Number: C091
   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-Number: [35607-66-0]
   EC/REACH Number: [252-641-2]
   Recommended Use: Cephamycin β-lactam antibiotic grouped with the second-generation cephalosporins
   Restrictions on Use: Not for human or animal use

2. HAZARD(S) IDENTIFICATION
   GHS Classification: Not a hazardous substance or mixture
   GHS Label Elements, Including Precautionary statements
   Hazard Statements: None
   Precautionary Statements: None
   Hazards not otherwise classified (HNOC) by GHS: None

3. COMPOSITION/INFORMATION ON INGREDIENTS
   Synonym(s): Cephoxitin; CFX; Rephoxitin; 5-Thia-1-azabicyclo(4.2.0)oct-2-ene-2-carboxylic acid, 3-(((aminocarbonyl)oxy)methyl)-7-methoxy-8-oxo-7-((2-thienylacetyl)amino)-, (6R-cis)-
   Formula: C_{16}H_{17}N_{3}O_{5}S_{2}
   Molecular Weight: 427.46 g/mol
   CAS-Number: [35607-66-0]
   EC-List Number: [252-641-2]
   Index-Number: Not available
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 doctor
   In Case of Skin Contact  Wash thoroughly with plenty of soap and water
   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, 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
Handle with gloves. Wear protective clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place. When deemed needed according to the concentration and amount of this product, use a complete body suit

9. PHYSICAL/CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>White or almost-white powder</td>
</tr>
<tr>
<td>pH</td>
<td>2.5-3.5</td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>149-150°C</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>No data available</td>
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<tr>
<td>Flash Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Ignition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower Explosion Limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper Explosion Limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>0.195 mg/mL (predicted)</td>
</tr>
<tr>
<td>Solubility in Other Solvents</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition Coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Optical Rotation</td>
<td>+195° to +208°</td>
</tr>
<tr>
<td>Absorbance (290nm, 5% in H₂O)</td>
<td>No data available</td>
</tr>
<tr>
<td>Water content (Karl Fisher)</td>
<td>5.0%</td>
</tr>
</tbody>
</table>
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, Bases
   Hazardous Decomposition Products: Carbon, Nitrogen, and Sulfur oxides formed under fire conditions

11. TOXICOLOGICAL INFORMATION
   Oral LD$_{50}$
   Rat: >10,000 mg/kg
   Remarks, Gastrointestinal: Hypermotility, diarrhea
   Mouse: >10,000 mg/kg
   Remarks, Gastrointestinal: Hypermotility, diarrhea
   Oral TD$_{LO}$: No data available
   Inhalation LC$_{50}$: No data available
   Dermal LD$_{50}$: No data available
   Mouse: 500 mg/kg/5D-I
   Remarks, Immunological including Allergic: Decrease in humoral immune response
   Intraperitoneal TD$_{LO}$
   Rat: 8,580 mg/kg
   Remarks, Behavioral: Altered sleep time (including change in righting reflex). Convulsions or effect on seizure threshold
   Remarks, Lungs, Thorax, or Respiration: Respiratory depression
   Mouse: 4,970 mg/kg
   Remarks, Behavioral: Altered sleep time (including change in righting reflex). Convulsions or effect on seizure threshold
   Remarks, Lungs, Thorax, or Respiration: Respiratory depression
   Dog: >10 g/kg
   Intravenous LD$_{50}$
   Human, Woman: 75 mg/kg/18H-I
   Remarks, Blood: Leukopenia
   Rat: 45 g/kg/30D-I
   Remarks, Gastrointestinal: Other changes
   Remarks, Blood: Changes in leukocyte (WBC) count
   Remarks, Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels-phosphatases
   Rat: 182 g/kg/26W-I
   Remarks, Kidney, Ureter, Bladder: Urine volume increased
Remarks, Nutritional and Gross Metabolic: Changes in Sodium. Changes in Chlorine

**Rat:** >10 mg/kg
Remarks, Skin and Appendages: Hair. Dermatitis, other (after systemic exposure)

**Mouse:** 9,250 mg/kg
Remarks, Behavioral: Somnolence (general depressed activity)
Remarks, Lungs, Thorax or Respiration: Respiratory depression
Remarks, Skin and Appendages: Hair

**Subcutaneous LD_{50}**

**Intramuscular TD_{LO}**
No data available

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**
No data available

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
Specific Target Organ Toxicity: Single Exposure (Globally Harmonized System) No data available
Specific Target Organ Toxicity: Repeated Exposure (Globally Harmonized System) No data available
Aspiration Hazard No data available
Potential Health Effects See Section 2, Hazard(s) Identification
Signs and Symptoms of Exposure To the best of our knowledge, the chemical, physical, and toxicological properties of this material have not been thoroughly investigated
Synergistic Effects No data available
Additional Information RTECS: X10386500

12. ECOLOGICAL INFORMATION
   Toxicity No data available
   Persistence and Degradability No data available
   Bioaccumulative Potential No data available
   Mobility in Soil No data available
   PBT and vPvB Assessment No data available
   Treat as if harmful if released into environment

13. DISPOSAL CONSIDERATIONS
   Product Dispose of product through a licensed disposal company
   Contaminated Packaging Dispose of as unused product

14. TRANSPORTATION INFORMATION
   DOT (US) Not Dangerous Goods
   IMDG Not Dangerous Goods
   IATA Not Dangerous Goods

15. REGULATORY INFORMATION
   SARA 302 Components No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302
   SARA 313 Components 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
   SARA 311/312 Hazards Chronic Health Hazard
   Massachusetts Right to Know Components No components are subject to the Massachusetts Right to Know Act
   Pennsylvania Right to Know Components No components are subject to the Pennsylvania Right to Know Act
   New Jersey Right to Know Components No components are subject to the New Jersey Right to Know Act
California Prop. 65 Components

This product does not contain any chemicals known to the State of California to cause birth defects, cancer, or any other reproductive harm.

EU Information

SDS in accordance with REACH 1907/2006
EC Number [252-641-2]
CAS-Number [35607-66-0]
Name: cefoxitin
Envisaged Registration Deadline: 30/11/2010
See GHS Information under Section 2, Hazard Identification.

16. OTHER INFORMATION

Date of last revision: 2016-04-02

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.