1. IDENTIFICATION
   Product Identifier          Cefozopran hydrochloride
   Product Number              C099
   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                  [113981-44-5]
   EC/REACH Number             Not available
   Recommended Use             For research applications. Cefozopran HCl is a
                                 fourth-generation cephalosporin antibiotic with a
                                 broad spectrum. It targets gram-positive and
                                 gram-negative bacteria, including Pseudomonas
                                 aeruginosa
   Restrictions on Use         Not for human or animal use

2. HAZARD(S) IDENTIFICATION
   GHS Classification          Respiratory Sensitization (Category 1)
                                 Skin Sensitization (Category 1)
   GHS Label Elements, Including
   Precautionary Statements
                                 Danger
                                 H334: May cause allergy or asthma symptoms or
                                 breathing difficulties if inhaled
                                 H317: May cause an allergic skin reaction
                                 P261: Avoid breathing dust/ fumes/ gas/ mist/ vapors/ spray
                                 P272: Contaminated work clothing should not be allowed out of the
                                 workplace
                                 P280: Wear protective gloves/ eye protection/ face protection
                                 P285: In case of inadequate ventilation, wear respiratory protection
3. COMPOSITION/INFORMATION ON INGREDIENTS
Formula C_{19}H_{17}N_{9}O_{5}S_{2}HCl
Molecular Weight 551.99 g/mol
CAS Number [113981-44-5]
EC/REACH 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 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.

5. FIRE-FIGHTING MEASURES
Conditions of Flammability Not flammable or combustible
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 and Hydrogen Chloride gas

6. ACCIDENTAL RELEASE MEASURES
P302 + P352: IF ON SKIN: Wash with plenty of soap and water
P304+P341: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
P321: Specific treatment (see supplemental first aid instructions)
P333 + P313: If skin irritation or rash occurs: Get medical advice/attention
P342 + P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician
P362: Take off contaminated clothing and wash before reuse
P501: Dispose of contents/ container to an approved waste disposal plant

Hazards not otherwise classified (HNOC) by GHS
None
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 is formed

Precautions for Safe Storage
Keep container tightly closed and in a dry, well-ventilated place. Protect from light. 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
Powder
pH
No data available
Melting Point/Freezing Point
300°C
Boiling Point
No data available
10. STABILITY AND REACTIVITY

Chemical Stability
Stable under recommended storage conditions

Possibility of Hazardous Reactions
No data available

Conditions to Avoid
Light

Materials to Avoid
Strong oxidizing agents

Hazardous Decomposition Products
Carbon, Nitrogen, and Sulfur oxides and Hydrogen chloride gas formed under fire conditions

11. TOXICOCLOGICAL INFORMATION

Oral LD₅₀
No data available

Inhalation LC₅₀
No data available

Dermal LD₅₀
No data available

Intraperitoneal LD₅₀
No data available

Intraperitoneal LD₅₀
No data available

Intravenous LD₅₀
No data available

Skin Corrosion/Irritation
No data available

Serious Eye Damage/ Eye Irritation
No data available

Respiratory or Skin Sensitization
No data available

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

Aspiration Hazard
- No data available

Potential Health Effects
- See Section 2, Hazard(s) Identification

Signs and Symptoms of Exposure
- No data available

Synergistic Effects
- No data available

Additional Information
- RTECS: Not available

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
- No chemicals in this material are subject to the reporting requirements of SARA Title III, Section
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 cancer, birth defects, or any other reproductive harm

Canada Information  
Identifier: [113981-44-5]  
This substance is not specified on any list. There is no control measure imposed on this substance

EU Information  
SDS in accordance with REACH 1907/2006  
Not an ECHA Pre-Registered or Registered Substance  
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.