1. IDENTIFICATION
   - Product Identifier: Meropenem
   - Product Number: M002
   - 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.: [119478-56-7]
   - EC/REACH Number: Not available
   - Recommended Use: β-lactam antibiotic in the Carbapenem class
   - Restrictions on Use: Not for human or animal use

2. HAZARD(S) IDENTIFICATION
   - GHS Classification: Skin irritation (Category 2), Eye irritation (Category 2A)
   - GHS Label Elements, Including Precautionary statements
     - Signal Word: Warning
     - Hazard Statements: H315: Causes skin irritation, H319: Causes serious eye irritation
     - Precautionary Statements: P264: Wash skin thoroughly after handling, P280: Wear protective gloves/eye protection/face protection, P302 + P352: IF ON SKIN: Wash with plenty of soap and water, P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing, P321: Specific treatment (see supplemental first aid instructions), 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

Hazards not otherwise classified (HNOC) by GHS
None

3. COMPOSITION/INFORMATION ON INGREDIENTS
Synonym(s) Meropenem trihydrate;
1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid,3-[(3S,5S)-5-[(dimethylamino)carbonyl]-3-pyrrolidinyl]thio]-6-[(1R)-1-hydroxyethyl]-4-methyl-7-oxo-hydrate (1:3), (4R,5S,6S)-
Formula
C<sub>17</sub>H<sub>25</sub>N<sub>3</sub>O<sub>5</sub>S·3H<sub>2</sub>O
Molecular Weight
437.52 g/mol
CAS-No.
[119478-56-7]
EC-No.
Not available
Index-No.
Not available
Hazardous components
Meropenem
Skin irritation (Category 2)
Eye irritation (Category 2A)

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
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: 2-8°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
Appearance
Almost white or yellowish crystalline powder
pH: 4.0-6.0
Melting Point/Freezing Point: No data available
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: 5.63 mg/mL
Solubility in Other Solvents: No data available
Partition Coefficient: n-octanol/water: No data available
Optical Rotation: -17.0° to -21.0°
Absorbance (290nm, 5% in H₂O): No data available
Water content (Karl Fisher): 11.4-13.4%

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, and Sulfur oxides formed under fire conditions

11. TOXICOLOGICAL INFORMATION
Oral LD₅₀: No data available
Inhalation LC₅₀: No data available
Dermal 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
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
Specific Target Organ Toxicity: Single Exposure (Globally Harmonized System)
Specific Target Organ Toxicity: Repeated Exposure (Globally Harmonized System)
Aspiration Hazard
Potential Health Effects
Signs and Symptoms of Exposure
Synergistic Effects
Additional Information
RTECS: Not available

12. ECOLOGICAL INFORMATION
   Toxicity
   Persistence and Degradability
   Bioaccumulative Potential
   Mobility in Soil
   PBT and vPvB Assessment
   Treat as if harmful if released into environment

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

14. TRANSPORTATION INFORMATION
   DOT (US)
   IMDG
   IATA
   Not Dangerous Goods
   Not Dangerous Goods
   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 311/312
   Massachusetts Right to Know Components
   No components are subject to the Massachusetts Right to Know Act
   Pennsylvania Right to Know Components
   Meropenem Trihydrate
CAS-No. [119478-56-7]
Revision Date: Not available

New Jersey Right to Know Components
Meropenem Trihydrate
CAS-No. [119478-56-7]
Revision Date: Not available

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
A registration number is not available for this substance or its uses are exempted from registration, the annual tonnage does not require a registration, or the registration is envisaged for a later registration deadline.
See GHS Information under Section 2, Hazard Identification

16. OTHER INFORMATION
Date of last revision: 2016-04-11

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.