SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier
Product Identifier: Ampicillin/sulbactam (2:1)
Product Number: A071
CAS Number: [117060-71-6]
EC Number: No Data Available

1.2 Relevant identified uses of the substance or mixture and uses advised against
Recommended Use: Research chemical. Ampicillin anhydrous is commonly used in clinical in vitro microbiological antimicrobial susceptibility tests (panels, discs, and MIC strips) against gram positive and gram negative microbial isolates.
Restrictions of Use: Not for human or animal use

1.3 Details of the supplier of the safety data sheet
Distributor Name: TOKU-E Company
Distributor Address: 715 W Orchard Dr. Suite 3
                        Bellingham, WA 98225
Phone Number: (360)734-1789
E-mail Address: info@toku-e.com
Safety Data Sheet Issued by: TOKU-E Company (USA)

1.4 Emergency telephone number
Emergency Phone Number (International): +1 (352) 353-3500
Emergency Phone Number (US Only): 1 (800) 535-5053

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS Classification: Skin sensitization (Category 1)
(Please refer to Section 16 for regulatory information)
Respiratory sensitization (Category 1)
Specific target organ toxicity (Repeated exposure, Category 2)
2.2 Label elements, including precautionary statements

GHS Label Elements:

Signal Word: Danger

Hazard Statements:
- H317: May cause an allergic skin reaction
- H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H373: May cause damage to organs through prolonged or repeated exposure

Precautionary Statements:
- P260: Do not breathe dust/fumes/gas/mist/vapors/spray.
- 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/protective clothing/eye protection/face protection.
- P284: In case of inadequate ventilation wear respiratory protection.
- P302+P352: IF ON SKIN: Wash with plenty of water/soap.
- P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P314: Get medical advice/attention if you feel unwell.
- P315: Specific treatment, see applicable response statements on this label.
- P333+P313: IF SKIN irritation or rash occurs: Get medical advice/attention.
- P362+P364: Take off contaminated clothing and wash it before reuse.
- P342+P311: If experiencing respiratory symptoms: call a POISON CENTER or seek medical advice/attention.
- P501: Dispose of contents/container in accordance with governmental regulation.

2.3 Other hazards which do not result in classification

Hazards not otherwise classified (HNOC) by GHS: No Data Available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Synonym(s): Ampicillin sodium/sulbactam sodium, Unacid, Unacyne, Unasyn-S, Yucion-S

Formula:
- **Ampicillin**: C₁₆H₁₉N₃O₄S
- **Sulbactam**: C₈H₁₁NO₅S

Molecular Weight: 625.6281

CAS Number: [117060-71-6]

EC Number: No Data Available

Hazardous Ingredients:
- **Ampicillin**: 66% (w/w)
- **Sulbactam**: 33% (w/w)

SECTION 4: FIRST-AID MEASURES

4.1 Description of first-aid measures

General Advice: Consult a doctor/physician if exposed - additional
medical care may be required. Show this Safety Data Sheet to the medical provider.

If Inhaled
If inhaled, move to fresh air. If not breathing, give artificial respiration and immediately call local emergency telephone number.

In Case of Skin Contact
Wash skin thoroughly with soap and water.

In Case of Eye Contact
Flush eye with water. After initial flush, remove any contact lenses and continue flushing for at least 15 minutes.

If Swallowed
Rinse mouth with water. Immediately call a doctor, physician, or poison control center. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms/effects, acute and delayed
Specific Treatment
Please see Section 2 and Section 11.

4.3 Indication of immediate medical attention and special treatment needed, if necessary
No Data Available

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media
Suitable Extinguishing Media
Water spray, alcohol-resistant foam, dry chemical, carbon dioxide

5.2 Special hazards arising from the substance or mixture
Hazardous Combustion Products
Formed under fire conditions: carbon and nitrogen oxides, carbon monoxide, sulfur dioxide

5.3 Advice for firefighters
Special Protective Equipment for Firefighters
Wear self-contained breathing apparatus

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
General
Evacuate personnel to a safe location. Use appropriate personal protective equipment while in contact with product. Avoid dust formation. Ensure adequate ventilation.

Personal Precautions
Prevent contamination of skin, eyes and clothing with appropriate protective equipment (Section 8). Wear respiratory protection.

6.2 Environmental precautions
General
Recover waste, if possible, and place in suitable closed container for licensed disposal. Prevent spillage - do not let product enter drains.
6.3 Methods and materials for containment and cleaning up

The recommended course of action is to treat any incident that involves the spill/release of a chemical substance as if it were hazardous in nature until the appropriate personnel have been consulted. Wear personal protective equipment as necessary. If accessible, use a spill kit. For powder spills, avoid generating dust during cleanup.

6.4 Reference to other sections

Refer to section 8 for exposure control.
Refer to section 13 for disposal information.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Wear appropriate protective clothing/gear to prevent contact with skin and eyes. Provide exhaust ventilation or respiratory protection in areas where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities

Store in a tightly closed container. Protect from humidity.
Recommended storage temperature: < 30°C
Incompatibilities
No Data Available

7.3 Specific end use(s)

Refer to section 1.2

SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control parameters

Contains no substance/substances with occupational exposure limit values

OSHA Permissible Exposure Limits    No Data Available
NIOSH Recommended Exposure Limits   No Data Available
ACGIH Threshold Limit Values        No Data Available

8.2 Exposure controls

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

SECTION 9: PHYSICAL/CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
Appearance
White or almost-white crystalline powder
Odor
No Data Available
Odor Threshold
No Data Available
pH
8.0 - 10.0
Melting Point/Freezing Point
No Data Available
Initial Boiling Point and Range
No Data Available
Flash Point
No Data Available
Evaporation rate
No Data Available
Flammability (solid, gas)
No Data Available
Upper Flammability/Explosion Limit
No Data Available
Lower Flammability/Explosion Limit
No Data Available
Vapor Pressure
No Data Available
Vapor Density
No Data Available
Relative Density
No Data Available
Water Solubility
No Data Available
Solubility in Other Solvents
No Data Available
Partition Coefficient: n-octanol/water
No Data Available
Auto-Ignition Temperature
No Data Available
Decomposition Temperature
No Data Available
Viscosity
No Data Available
Explosive Properties
No Data Available
Oxidizing Properties
No Data Available
Optical Rotation
No Data Available
Absorbance (290nm, 5% in H₂O)
No Data Available
Water Content (Loss on Drying)
≤ 2.0%

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity
No Data Available

10.2 Chemical stability
Stable under recommended storage conditions
10.3 Possibility of hazardous reactions No Data Available

10.4 Conditions to avoid No Data Available

10.5 Incompatible materials Strong oxidizing agents

10.6 Hazardous decomposition products Formed under fire conditions: carbon and nitrogen oxides, carbon monoxide, sulfur dioxide

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Route</th>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD&lt;sub&gt;50&lt;/sub&gt;</td>
<td>Acute Toxicity Estimate (ATE) &gt; 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Inhalation LC&lt;sub&gt;50&lt;/sub&gt;</td>
<td>No Data Available</td>
<td></td>
</tr>
<tr>
<td>Dermal LD&lt;sub&gt;50&lt;/sub&gt;</td>
<td>No Data Available</td>
<td></td>
</tr>
<tr>
<td>Intraperitoneal LD&lt;sub&gt;50&lt;/sub&gt;</td>
<td>No Data Available</td>
<td></td>
</tr>
<tr>
<td>Intravenous LD&lt;sub&gt;50&lt;/sub&gt;</td>
<td>No Data Available</td>
<td></td>
</tr>
<tr>
<td>Subcutaneous LD&lt;sub&gt;50&lt;/sub&gt;</td>
<td>No Data Available</td>
<td></td>
</tr>
<tr>
<td>Skin Corrosion/Irritation</td>
<td>No Data Available</td>
<td></td>
</tr>
<tr>
<td>Respiratory or Skin Sensitization</td>
<td>Ampicillin sodium is a Category 1 skin/respiratory sensitizer and is present within this mixture at a classifiable concentration.</td>
<td></td>
</tr>
</tbody>
</table>

Germ Cell Mutagenicity No Data Available

Carcinogenicity This substance has not been identified as a potential carcinogen within the National Toxicology Program Report on Carcinogens or within the International Agency for Research on Cancer Monograph.

Reproductive Toxicity No Data Available

Specific Target Organ Toxicity: Single Exposure (GHS) No Data Available

Specific Target Organ Toxicity: Repeated Exposure (GHS) Sulbactam sodium is a Category 2 specific target organ toxicant and is present within this mixture at a classifiable concentration.

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 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 expos-
ed 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.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity
No Data Available

12.2 Persistence and degradability
No Data Available

12.3 Bioaccumulative potential
No Data Available

12.4 Mobility in Soil
No Data Available

12.5 PBT and vPvB assessment
No Data Available

12.6 Other adverse effects
No Data Available

In the absence of complete ecological information, treat product as environmentally hazardous. Use proper storage, handling, and disposal to prevent unintentional release into the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Dispose unused/spoiled product in accordance with local and federal regulations. Sewering is not an acceptable form of waste disposal. Product Contaminated Packaging Dispose of product through a licensed disposal company. Dispose of as unused product.

SECTION 14: TRANSPORTATION INFORMATION

DOT (US) IMDG IATA Not a Dangerous Good Not a Dangerous Good Not a Dangerous Good

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Section 2/3: Hazards identification/labelling in accordance with OSHA 29 CFR 1910.1200
Section 2/3: Hazards identification/labelling in accordance with Regulation (EC) 1272/2008
SDS in accordance with Regulation (EC) 1907/2006

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
No chemicals in this material are subject to the reporting requirements of 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
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right to Know
No components are subject to the Pennsylvania Right to Know Act.

New Jersey Right to Know
No components are subject to the New Jersey Right to Know Act.

California Prop. 65 Components
No
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 Regulation (EC) 1907/2006
A registration number is not available for this substance or its uses are exempted from registration, or the registration is envisaged for a later registration deadline.
Identification, classification and labelling in accordance with Regulation (EC) 1272/2008.

15.2 Chemical safety assessment

EU Information
For this product a chemical safety assessment was not carried out.

16. OTHER INFORMATION
Revision Date: 2017-01-16

This safety data sheet represents TOKU-E Company's current understanding of the hazards associated with this product. The stated hazard information is based on existing experimental data and is not guaranteed to be all-inclusive. TOKU-E Company strives to maintain current and comprehensive safety information but recognizes that this safety data sheet may require revision as new information becomes available. TOKU-E Company shall not be held liable for damage or injury resulting from contact, handling, or storage of this product.