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

1.1 Product identifier

Product Identifier	Antibiotic-Antimycotic Solution (100X)
Product Number	A045

1.2 Relevant identified uses of the substance or mixture and uses advised against

Recommended Use	Research chemical, for in vitro use only. The antibiotic-antimycotic solution is effective against both gram-positive and gram-negative bacteria as well as yeasts and other fungi in plant cell culture.
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) Reproductive toxicity (Category 1)

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
H360	May damage fertility or the unborn child

Precautionary Statements

P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
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.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P321	Specific treatment, see applicable response statements on this label
P333+P313	IF SKIN irritation or rash occurs: Get medical advice/attention.
P342+P311	If experiencing respiratory symptoms: call a POISON CENTER or
P362+P364	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.
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

Component Name	CAS Number	EC Number	Concentration (w/w)
Streptomycin Sulfate	[3810-74-0]	[223-286-0]	6.5%
Penicillin G Na	[69-57-8]	[200-710-2]	2.8%

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: -20°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	Light yellow solution
Odor	No Data Available
Odor Threshold	No Data Available
pH	6.3 - 6.9
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 H_2O)	No Data Available
Water Content (Loss on Drying)	No Data Available

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

Oral LD_{50}	Acute Toxicity Estimate (ATE) > 5,000 mg/kg

Inhalation LC_{50}	No Data Available
Dermal LD_{50}	No Data Available
Intraperitoneal LD_{50}	No Data Available
Intravenous LD_{50}	No Data Available
Subcutaneous LD_{50}	No Data Available
Skin Corrosion/Irritation	No Data Available
Serious Eye Damage/ Eye Irritation	No Data Available
Respiratory or Skin Sensitization	Penicillin G Sodium is a Category 1 skin and respiratory sensitizer and is present within solution at a classifiable concentration.
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	Streptomycin Sulfate is a Category 1 reproductive toxicant and is present within solution at a classifiable concentration.
Specific Target Organ Toxicity: Single Exposure (GHS)	No Data Available
Specific Target Organ Toxicity: Repeated Exposure (GHS)	No Data Available
Aspiration Hazard	No Data Available
Potential Heath Effects	See Section 2, Hazard(s) Identification
Signs and Symptoms of Exposure	No Data Available
Synergistic Effects	No Data Available
Additional Information	ß-Lactam ß-lactams are a broad class of antibiotics and include penicillins and cephalosporins. Some individuals experience adverse immunological responses or allergic reactions to ß-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.

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	Dispose of product through a licensed disposal company.
Contaminated Packaging	Dispose of as unused product.

SECTION 14: TRANSPORTATION INFORMATION

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

	Streptomycin sulfate	[3810-74-0]
		Revision Date 2009-07-17
	Penicillin G Sodium	[69-57-8]

California Prop. 65 Components

	Streptomycin Sulfate	Reproductive WARNING! This product contains a chemical known to the State of California to cause birth defects or other developmental harm

EU Information	Streptomycin Sulfate	SDS in accordance with Regulation (EC) 1907/2006 CAS Number [3810-74-0] EC Number [223-286-0] Envisaged Registration Deadline: DD/MM/YYYY Identification, classification and labelling in accordance with Regulation (EC) 1272/2008
	Penicillin G Sodium	SDS in accordance with Regulation (EC) 1907/2006 CAS Number [69-57-8] EC Number [200-710-2] Envisaged Registration Deadline: DD/MM/YYYY 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: 2017-01-17

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.