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

1.1 Product identifier

Product Identifier	:	Kanamycin Sulfate
Product Number	:	K008, K009
CAS Number	:	[70560-51-9]

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

Identified Uses	:	For research use only - restricted to professional users.
Uses Advised Against	:	Not for human or animal use

1.3 Details of the supplier of the safety data sheet

Company	:	TOKU-E Company 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 (Internat.)	:	+1 (352) 353-3500 (INFOTRAC, 24-Hour Number)
Emergency Phone Number (US Only)	:	1 (800) 535-5053 (INFOTRAC, 24-Hour Number)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS classification in accordance with 29 CFR 1910 (OSHA HCS)

Reproductive Toxicity (Category 1B), H360

For the full text of the H-Statements mentioned in this section, see Section 16.

2.2 GHS label elements, including precautionary statements

Pictogram(s):

Signal Word: Danger

Hazard Statement(s)

H360	May damage fertility or the unborn child

Precautionary Statement(s)

P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container in accordance with governmental regulation

2.3 Hazards otherwise not classified (HNOC) or not covered by GHS

None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula : $C_{18}H_{36}N_4O_{11} \cdot H_2O_4S$

Molecular weight : 582.58 g/mol

Hazardous components

Component	Classification	Concentration
Kanamycin Sulfate		
CAS Number [70560-51-9] EC Number [684-844-0]	Repr. 2, H360	≤ 100%

For the full text of the H-Statements mentioned in this section, see Section 16.

SECTION 4: FIRST-AID MEASURES

4.1 Description of first-aid measures

General information

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. Consult a physician.

In case of skin contact

Wash skin thoroughly with soap and water. Remove any contaminated clothing. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguising media

No data available

5.2 Special hazards arising from the substance or mixture

Hazardous Combustion Products

Carbon and nitrogen oxides, sulfur oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus if necessary.

5.4 Further information

No data available

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed in Section 7 and 8. Use personal protective equipment. Avoid breathing dust, vapors, mist or gas. Avoid direct contact with spilled substances. Ensure adequate ventilation. Avoid dust formation.

For personal protection see Section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

Refer to section 8 for exposure control and personal protection. Refer to section 13 for disposal information.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid exposure: obtain special instructions before use. Avoid contact with skin and eyes.
Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

For precautionary statements see section 2.2

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Protect from humidity.
Recommended storage temperature: 2-8 °C

Incompatibilities:

Strong oxidizing agents

7.3 Specific end use(s)

Refer to section 1.2

SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters:

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls:

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling this product.

Personal Protective Equipment (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).

Skin 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. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the selected EN 374 derived from it.

Full Contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: > 480 min
Material tested: Dermatril® (KCL 740, Size M)

Splash Contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: > 480 min
Material tested: Dermatril® (KCL 740, Size M)

Data source: KCL GmbH, D-36124 Eichenzell,
phone +49 (0)6659 87300, email sales@kcl.de
Test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use. It should not be construed as offering an approval for any specific use scenario.

Eye/Face 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).

Body protection
Wear protective clothing. The type of protective equipment must be selected according to the concentration of the dangerous substance at the specific work place.

Environmental exposure controls
Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	:	White or off-white crystalline powder
Odor	:	No Data Available
Odor Threshold	:	No Data Available
pH	:	No Data Available
Melting Point/Freezing Point	:	250 °C
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/Lower Flammability or Explosive Limits	:	No Data Available
Vapour Pressure	:	No Data Available
Vapour Density	:	No Data Available
Relative Density	:	No Data Available
Solubility(ies)	:	Water: Freely soluble
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
Oxidising Properties	:	No Data Available

9.2 Other safety information
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
No data available

See Section 5 for hazardous combustion products.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

Oral LD_{50}	:	Rat: > 4000 mg/kg, Rabbit: > 3000 mg/kg, Mouse: 17.5 g/kg
Intraperitoneal LD_{50}	:	Rat: 3200 mg/kg, Mouse: 1353 mg/kg
Intravenous LD_{50}	:	Rat: 225 mg/kg, Mouse: 1190 mg/kg
Intramuscular LD_{50}	:	Rat: > 4000 mg/kg, Rabbit: > 3000 mg/kg
Intramuscular TD_{LO}	:	Human child: 390 mg/kg Toxic Effects: Sense organs and special senses (ear) - Change in acuity

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 the International Agency for Research on Cancer Monograph.
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 the National Toxicology Program.
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 the Occupational Health and Safety Association.

Reproductive Toxicity
Rat: Subcutaneous TD_{Lo} 980 mg/kg
Female 8-14 days after conception
Toxic Effects: Effects on Embryo or Fetus - Fetal death
Specific Developmental Abnormalities - Musculoskeletal system

Rat: Intramuscular TD_{Lo} 4400 mg/kg
Female 1-22 day(s) after conception
Toxic Effects: Maternal Effects - Other effects
Specific Developmental Abnormalities - Urogenital system

Guinea Pig: Intramuscular TD_{Lo} 3200 mg/kg
Female 55-62 days after conception
Toxic Effects: Specific Developmental Abnormalities - Eye/ear

Specific Target Organ Toxicity: Single Exposure
No Data Available

Specific Target Organ Toxicity: Repeated Exposure
No Data Available

Aspiration Hazard
No Data Available

Additional Information
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Aminoglycosides are associated with significant ototoxicity and nephrotoxicity.

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 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

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

Product
Offer surplus and non-recyclable products to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Avoid disposal of material in drains or sewers.

Contaminated Packaging
Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

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

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H360	May damage fertility or the unborn child

HMIS Rating

Health Hazard:	1
Chronic Health Hazard:	*
Flammability:	0
Physical Hazard:	0

NFPA Rating

Health Hazard:	0
Fire Hazard	0
Reactivity Hazard:	0

Further information
Revision Date: 2018-06-01

The above information is based upon the present state of our knowledge and is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information is believed to be correct but does not purport to be all inclusive. It does not represent any guarantees of the properties of the product. TOKU-E Company shall not be held liable for damage or injury resulting from contact, handling, or storage of the above product.