

Section 1: Product & Company Information

Product Identifier: Kanamycin Sulfate

Other Means of Identification

Product Number: 15321

Recommended Use and Restrictions on Use

Recommended Use: Disease treatment in ornamental aquariums.

Restrictions on Use: Not to be used as a pesticide.

Manufacturer / Importer / Supplier / Distributor Information

Company Name: Aquarium Life Support Systems
1737 Louisville Dr
Knoxville, TN 37921
USA

Information Telephone Number: 865/588-0108

Fax Number: 865/588-1976

Website: www.aqualifesupport.com

E-mail: cs@aqualifesupport.com

Emergency Phone Number: 865/588-0108

Section 2: Hazards Identification

GHS Hazard Classification(s)

Toxic To Reproduction, Category 1B. H360: May damage fertility or the unborn child.

GHS Signal Word: Danger

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}.

GHS Precaution Phrases:

P308+313: IF exposed or concerned: Get medical attention/advice.

GHS Response Phrases:

Please refer to Section 7 for Storage and Section 13 for Disposal information.

GHS Storage and Disposal Phrases:

Material may be irritating to the mucous membranes and upper respiratory tract.

May be harmful by inhalation, ingestion, or skin absorption.

May cause eye, skin, or respiratory system irritation.

May damage fertility or the unborn child.

Section 3: Composition/Information on Ingredients

Substance

Chemical Identity	Common Name/Synonym(s)	CAS #	Weight %
Kanamycin sulphate	Kanamycin	15321	>60-100

Section 4: First Aid Measures

Inhalation

Remove to fresh air. If symptoms persist, call a physician. Principle Routes of Exposure Potential Health Effects

Notes to Physician

Treat symptomatically Get immediate medical attention.

Skin Contact

Wash off immediately with plenty of water. If symptoms persist, call a physician. HMIS

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician

Ingestion

DO NOT INDUCE VOMITING, unless Directed by a medical personnel. Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention.

Indication of immediate medical attention and special treatment needed

Hazards

No data available.

Treatment

No data available

Section 5: Fire Fighting Measures

Suitable (and Unsuitable) Extinguishing Media

Suitable Extinguishing Media

Dry chemical.

Unsuitable Extinguishing Media

A solid water stream may be inefficient.

Hazardous combustion Products

No data available.

Special Protective Equipment and Precautions for Firefighters

Special Fire-Fighting Equipment Procedures

As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes. Full protective gear to prevent contact with skin and eyes.

Special Protective Equipment for Fire-Fighters

As in any fire, wear self-contained breathing apparatus pressure-demand (OSHA/NIOSH approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

Use personal protective equipment. See Section 8 of the SDS for Personal Protective Equipment. Keep unauthorized personnel away. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Evacuate area. Remove soiled clothing and launder before reuse. Avoid all skin contact with the spilled material. Have emergency equipment readily available.

Methods and Materials for Containment and Clean-Up

Contain spill and collect, as appropriate.

Notification Procedures

Notify authorities if any exposure to the public or environment occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contained.

Environmental Precautions

Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

Section 7: Handling and Storage

Precautions for Safe Handling

All employees who handle this material should be trained to handle it safely. Do not breath dust. Avoid all contact with skin and eyes. Use this product only with adequate ventilation. Wash thoroughly after handling. Avoid contact with water or moisture.

Conditions for Safe Storage, including any Incompatibilities

Keep container tightly closed when not in use. Store containers in a cool, dry location away from water, direct sun light, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers or in a diked area, as appropriate. Store containers away from incompatible chemicals. Storage areas should be made of corrosion- and fire-resistant materials. Post warning and "NO SMOKING" signs in storage and use areas as appropriate. Use corrosion resistant structural materials, lighting, and ventilation systems in the storage area. Floors should be sealed to prevent absorption of this material. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Have appropriate extinguishing equipment in the storage area, i.e. sprinkler system, portable fire extinguishers. Empty containers may contain residual particulates. Therefore, empty containers should be labeled with care. Do not cut, grind, weld, or drill near this container. Do not store this material in open or unlabeled containers. Limit quantity of material stored.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Occupational Exposure Limits

The product does not contain any relevant quantities of hazardous materials with critical values that have to be monitored in the workplace.

Appropriate Engineering Controls

Use mechanical ventilation such as dilution and local exhaust. Use a corrosion-resistant ventilation system and exhaust directly to the outside. Supply ample air replacement.

Individual protection measures, such as personal protective equipment (PPE)

General Information

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product. Have an eyewash fountain and safety shower available in the work area. Use good hygiene when handling this material, including changing and laundering work clothing after use.

Eye/Face Protection

Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.

Skin Protection

Hand Protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing.

Respiratory Protection

No Specific Guidelines are available. If airborne concentrations are above the applicable exposure limits, use NIOSH-approved respiratory protection. An approved dust, and air-purifying respirator may be adequate. If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHA'S Respiratory Protection Standard (1910.134-1998)

Hygiene Measures

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

Section 9: Physical and Chemical Properties

Appearance:

Physical State:	Crystalline solid
Color:	White
Odor:	Odorless
Odor Threshold:	No data available.
pH:	No data available.
Melting Point/Freezing Point:	No data available.
Initial Boiling Point and Boiling Range:	No data available.
Flash Point:	No data available.
Evaporation Rate (butyl acetate=1):	No data available.
Flammability (solid, gas):	No data available.
Upper/Lower Limit on Flammability or Explosive Limits	
Flammability Limit – Upper:	No data available.
Flammability Limit – Lower:	No data available.
Explosive Limit – Upper:	No data available.
Explosive Limit – Lower:	No data available.
Vapor Pressure:	No data available.
Vapor Density (air =1):	No data available.
Solubility(ies):	
Solubility in water:	No data available.
Solubility (other):	~10 mg/ml in PBS (pH 7.2)
Partition coefficient (n-octanol/water):	No data available.
Auto-Ignition Temperature:	No data available.
Decomposition Temperature:	No data available.
Viscosity:	No data available.
Molecular Weight:	582.6
Formula:	C18H36N4O11 • H2SO4

Section 10: Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical Stability

Avoid high temperatures, exposure to moisture and incompatible materials.

Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

Conditions to Avoid

Avoid high temperatures, Exposure to moisture and incompatible materials.

Incompatible Materials

This material is incompatible with strong oxidizers. Magnesium Chloride hexahydrate can react explosively when combined with 2-furan percarboxylic acid. When dissolved in water, magnesium chloride hexahydrate gives off considerable heat.

Hazardous Decomposition Products

Hydrogen chloride, Chlorine

Section 11: Toxicological Information

Information on routes of exposure

Ingestion:	No information available.
Inhalation:	May cause respiratory tract irritation.
Skin Contact:	May cause skin irritation.
Eye Contact:	May cause eye irritation.

Acute Toxicity (List all possible routes of exposure)

Kanamycin A (sulfate) - Toxicity Data: Oral LD50 (rat): > 4 g/kg; Intraperitoneal LD50 (rat): 3200mg/kg; Subcutaneous LD50 (rat): 1700 mg/kg; Oral LD50 (mouse): 17500 mg/kg; Intraperitoneal LD50 (mouse): 1353 mg/kg; Subcutaneous LD50 (mouse): 1100 mg/kg

Information on Toxicological Effects:

Kanamycin A (sulfate) - Investigated as a drug, mutagen, natural product, and reproductive effector.

Skin Corrosion/Irritation

May cause skin irritation

Serious Eye Damage/Eye Irritation

Exposure to dust may cause mechanical irritation. Excessive concentrations of nuisance dust in the workplace may reduce visibility and may cause unpleasant deposits in eyes.

Respiratory/Skin Sensitization

May cause respiratory tract irritation.

Section 12: Ecological Information

Ecotoxicity

This compound may be harmful to aquatic life in high concentrations, as it will generate excessive heat upon contact with water.

Acute Hazards to the Aquatic Environment

Fish	No data available.
Aquatic Invertebrates	No data available.
Toxicity to Aquatic Plants	No data available.

Chronic Hazards to the Aquatic Environment

Fish	No data available.
Aquatic Invertebrates	No data available.
Toxicity to Aquatic Plants	No data available.

Persistence and Degradability

Biodegradation	There are no data on the degradability of this product.
BOD/COD Ratio	No data available.

Bioaccumulative Potential

Bioconcentration Factor (BCF)	No data available on bioaccumulation.
Partition Coefficient n-octanol / water (log Kow)	No data available.

Mobility in Soil

The product is water soluble and may spread in water systems.

Other Adverse Effects

No data available.

Section 13: Disposal Considerations

Disposal Instructions

Dispose in accordance with local, state, and federal regulations.

Contaminated Packaging

Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14: Transportation Information

US Department of Transportation (DOT)

This material is not regulated as a hazardous material for transport by the U.S. Department of Transportation in accordance with 49 CFR 172.101.

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

Section 15: Regulatory Information

US Federal Regulations

Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)

No chemical(s) in this material are subject to the reporting requirements of CERCLA.

Clean Air Act (CAA), Section 112(r)

No chemical(s) in this material are subject to the reporting requirements of CAA.

Emergency Planning and Community Right-To-Know Act (EPCRA)

EPCRA 302 Extremely Hazardous Substance

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

EPCRA 304 Emergency Response Notification

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard: No

Sudden Release of Pressure: No

Reactive: No

Acute (Immediate) Health Hazard: Yes

Chronic (Delayed) Health Hazard: No

EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

This material does not contain any chemical(s) with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

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

Section 16: Other Information

Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 1

Chronic Health Hazard: / *

Flammability: 0

Physical Hazard: 0

(Hazard Rating: 0 - Minimal / 1 - Slight / 2 - Moderate / 3 - Serious / 4 - Severe)

National Fire Protection Association (NFPA 704) Rating

Health Hazard: 1

Fire Hazard: 0

Reactivity Hazard: 0

Special: N/A W OX COR POI

(Hazard Rating: 0 - Minimal / 1 - Slight / 2 - Moderate / 3 - Serious / 4 - Severe)

References

HSDB® - Hazardous Substances Data Bank

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