

# Material Safety Data Sheet

## Kanamycin Sulfate

ACC# 60936

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Kanamycin Sulfate

**Catalog Numbers:** AC611290050, BP906-5

**Synonyms:** Kanamycin monosulfate

**Company Identification:**

Fisher Scientific

1 Reagent Lane

Fair Lawn, NJ 07410

**For information, call:** 201-796-7100

**Emergency Number:** 201-796-7100

**For CHEMTREC assistance, call:** 800-424-9300

**For International CHEMTREC assistance, call:** 703-527-3887

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
25389-94-0	Kanamycin sulfate	ca.100	246-933-9

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: colorless to white powder.

**Warning!** Individuals with allergies or hypersensitivity to antibiotics should take caution. Causes eye, skin, and respiratory tract irritation. May cause allergic respiratory and skin reaction. Possible risk of harm to the unborn child. May cause loss of hearing. May cause kidney damage. May cause reproductive and fetal effects.

**Target Organs:** Kidneys, central nervous system, eyes, skin, auditory system.

#### Potential Health Effects

**Eye:** Causes eye irritation. Exposure to solid may cause pain and redness. May cause chemical conjunctivitis.

**Skin:** May cause skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. May be harmful if absorbed through the skin.

**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause kidney damage. May cause central nervous system effects. Hearing loss and deafness have been reported. May be harmful if swallowed. May cause auditory damage with possible loss of hearing. May cause neuromuscular paralysis. Causes photosensitivity with possible allergic skin reactions when exposed to light.

**Inhalation:** Causes respiratory tract irritation. May cause an allergic response. May cause hearing impairment. May cause central nervous system effects.

**Chronic:** Animal studies have reported that fetal effects/abnormalities may occur when maternal toxicity is seen. Chronic exposure may cause kidney damage. May cause adverse reproductive effects. Kanamycin is an aminoglycoside antimicrobial. Aminoglycosides are associated with significant nephrotoxicity (toxic to kidney cells) and ototoxicity (having a toxic effect on the structures of the ear, especially the nerve supply).

### Section 4 - First Aid Measures

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:** Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

**Ingestion:** Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:** Treat symptomatically and supportively.

### Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or appropriate foam.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 2; Flammability: 0; Instability: 0

## Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Do not breathe dust, vapor, mist, or gas. Keep container tightly closed. Avoid ingestion and inhalation.

**Storage:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Kanamycin sulfate	none listed	none listed	none listed

**OSHA Vacated PELs:** Kanamycin sulfate: No OSHA Vacated PELs are listed for this chemical.

### Personal Protective Equipment

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## Section 9 - Physical and Chemical Properties

**Physical State:** Powder

**Appearance:** colorless to white

**Odor:** odorless

**pH:** 6.5-8.5 (1% soln.)

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:** Not available.

**Decomposition Temperature:** > 250 deg C

**Solubility:** Soluble.

**Specific Gravity/Density:** Not available.

**Molecular Formula:** C<sub>18</sub>H<sub>36</sub>N<sub>4</sub>O<sub>11</sub>.H<sub>2</sub>SO<sub>4</sub>

**Molecular Weight:** 582.58

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** High temperatures, incompatible materials, dust generation.

**Incompatibilities with Other Materials:** Strong oxidizing agents.

**Hazardous Decomposition Products:** Carbon monoxide, oxides of nitrogen, oxides of sulfur, carbon dioxide.

**Hazardous Polymerization:** Will not occur.

## Section 11 - Toxicological Information

### RTECS#:

**CAS#** 25389-94-0: NZ3225030

### LD50/LC50:

**CAS#** 25389-94-0:

Oral, mouse: LD50 = 17500 mg/kg;

Oral, rabbit: LD50 = >3 gm/kg;

Oral, rat: LD50 = >4 gm/kg;

### Carcinogenicity:

CAS# 25389-94-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information available.

**Teratogenicity:** Effects of Newborn: Biochemical and Metabolic, subcutaneous-rat TDLo=660mg/kg; Growth statistics, intra- peritoneal-rat TDLo=375mg/kg. Specific Developmental Abnormalities: Cardiovascular system and Urogenital, subcutaneous-rat TDLo=660mg/kg.

**Reproductive Effects:** May impair fertility.

**Mutagenicity:** No information available.

**Neurotoxicity:** Aminoglycoside antibiotics have the potential to cause auditory nerve damage and neuromuscular paralysis.

**Other Studies:**

## Section 12 - Ecological Information

**Ecotoxicity:** No data available. No information available.

**Environmental:** No information reported.

**Physical:** No information available.

**Other:** None.

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

## Section 14 - Transport Information

	US DOT	Canada TDG
<b>Shipping Name:</b>	Not regulated as a hazardous material	No information available.
<b>Hazard Class:</b>		
<b>UN Number:</b>		
<b>Packing Group:</b>		

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 25389-94-0 is not listed on the TSCA inventory. It is for research and development use only.

#### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

#### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

#### Section 12b

None of the chemicals are listed under TSCA Section 12b.

#### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

#### CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

#### SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

**Section 313** No chemicals are reportable under Section 313.

#### Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

#### Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

#### OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

#### STATE

CAS# 25389-94-0 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

### California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

### European/International Regulations

#### European Labeling in Accordance with EC Directives

#### Hazard Symbols:

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#### Risk Phrases:

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 42/43 May cause sensitization by inhalation and skin contact.

R 60 May impair fertility.  
R 61 May cause harm to the unborn child.

**Safety Phrases:**

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

**WGK (Water Danger/Protection)**

CAS# 25389-94-0: No information available.

**Canada - DSL/NDSL**

None of the chemicals in this product are listed on the DSL or NDSL list.

**Canada - WHMIS**

This product has a WHMIS classification of D2B, D2A.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

**Canadian Ingredient Disclosure List**

Section 16 - Additional Information
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**MSDS Creation Date:** 7/13/1999

**Revision #5 Date:** 1/25/2005

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.*