



Material Safety Data Sheet

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STREPTOMYCIN SULFATE

IDENTIFICATION

EMERGENCY OVERVIEW - Toxic. Reproductive Hazard. Allergen.

Common Name: Streptomycin Sulfate

Chemical Name: D-Streptamine, O-2-deoxy-2-(methylamino)-alpha-L-glucopyranosyl-(1 to 2)-O-5-deoxy-3-C-formylalpha- L-lyxofuranosyl-(1 to 4)-N,N'-bis(aminoiminomethyl)-, sulfate (2:3) (salt)

Synonym: Streptomycin sesquisulfate

Formula: (C₂₁H₃₉N₇O₁₂)₂ .3(H₂SO₄)

CAS Number: 3810-74-0

RTECS Number: WK4990000

Chemical Family: A Glycoside antibiotic

Therapeutic Category: Antibacterial (tuberculostatic)

INGREDIENT INFORMATION

Principle Components

Streptomycin Sulfate

Percent

Pure Material

Exposure Limits

n/f

HEALTH HAZARD INFORMATION

Usual Adult Dose: Streptomycin sulfate is usually administered by intramuscular injection in combination therapy in doses not to exceed a maximum of 4 grams (base) per day.

Adverse Effects: Adverse effects may include greatly increased or decreased frequency of urination or amount of urine; muscle twitching; numbness; tingling; seizures; loss of hearing; ringing, buzzing, or feeling of fullness in ears; clumsiness; dizziness; burning of face or mouth; red, swollen, or itching skin; and loss of vision. Possible allergic reaction to material if inhaled, ingested or in contact with skin.

Overdose Effects: n/f.

Acute: Possible eye, skin, gastrointestinal and/or respiratory tract irritation.

n/f = not found

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STREPTOMYCIN SULFATE

HEALTH HAZARD INFORMATION CONTINUED

Chronic: Possible hyper sensitization, auditory dysfunction, and super infection.

Inhalation: May cause irritation and sensitization. Avoid inhalation. Remove to fresh air.

Eye: May cause irritation. Flush with copious quantities of water.

Skin: May cause irritation, severe dermatitis, and sensitization. Avoid contact. Flush with copious quantities of soap and water. This material may be absorbed through the skin.

Ingestion: May cause irritation and toxicity. Flush out mouth with water. This material is poorly absorbed from the gastrointestinal tract.

Medical Conditions Aggravated by Exposure: Hypersensitivity to material, myasthenia gravis, Parkinsonism, eighth-cranial-nerve (hearing) impairment, and impaired kidney function.

Cross Sensitivity: Persons sensitive to one aminoglycoside antibiotic may be sensitive to this material also.

Pregnancy Comments: Adequate and well-controlled pregnancy studies in humans have not been done. Aminoglycosides may cause nerve damage in the human fetus; streptomycin has been shown to cause total irreversible, bilateral congenital deafness in infants whose mothers received it during pregnancy.

Pregnancy Category: D

FIRST AID MEASURES

General: Remove from exposure. Remove contaminated clothing. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention. If person is not breathing give artificial respiration. If breathing is difficult give oxygen. Obtain medical attention.

Overdose Treatment: Treatment is symptomatic and supportive and may include the following:
1. In patients with impaired renal function, use hemodialysis (removes up to 50% in each 4 to 6 hour period) or peritoneal dialysis (removes up to 25% of a dose in 48 to 72 hours) to remove aminoglycosides from blood.
2. Treat neuromuscular blockade with anticholinesterase agents, calcium salts, or mechanical respiratory assistance. [USP DI 20th ed. 2000]

TOXICOLOGICAL INFORMATION

Oral Rat: LD50: 430 mg/kg

Oral Mouse: LD50: 430 mg/kg

Irritancy Data: n/f

Target Organ(s): Ears

Listed as a Carcinogen? NTP: No
Other: No

IARC: No

OSHA: No

n/f = not found

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STREPTOMYCIN SULFATE

FIREFIGHTING MEASURES

Flash Point: n/f

Upper Flammable Limit: n/f

Auto-Ignition Temperature: n/f

Lower Flammable Limit: n/f

Extinguisher Media: Water spray, dry chemical, carbon dioxide or foam as appropriate for surrounding fire and materials.

Fire and Explosion Hazards: This material is assumed to be combustible. As with all dry powders it is advisable to ground mechanical equipment in contact with dry material to dissipate the potential buildup of static electricity.

Firefighting Procedures: As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing.

PHYSICAL HAZARDS

Conditions to Avoid: Avoid exposure to light, heat, and moisture.

Incompatibilities: Acids and alkalis.

Decomposition Products: When heated to decomposition material emits very toxic fumes of SO_x and NO_x. Emits toxic fumes under fire conditions.

Stable? Yes

Hazardous Polymerization? No

HANDLING / SPILL / DISPOSAL MEASURES

Handling: As a general rule, when handling USP Reference Standards avoid all contact and inhalation of dust, mists, and/or vapors associated with the material. Wash thoroughly after handling.

Storage: Store in tight, light-resistant container as defined in the USP-NF. This material should be handled and stored per label instructions to ensure product integrity. Store in a freezer

Spill Response: Wear approved respiratory protection, chemically compatible gloves and protective clothing. Wipe up spillage or collect spillage using a high efficiency vacuum cleaner. Avoid breathing dust. Place spillage in appropriately labeled container for disposal. Wash spill site.

Disposal: Dispose of waste in accordance with all applicable Federal, State and local laws.

EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: Use a NIOSH approved respirator, if it is determined to be necessary by an industrial hygiene survey involving air monitoring. In the event that a respirator is not required, an approved dust mask should be used

Ventilation: Recommended.

Gloves: Rubber

Eye Protection: Safety Glasses

Protective Clothing: Protect exposed skin.

n/f = not found

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STREPTOMYCIN SULFATE

PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: White or practically white powder; faint odor.

Melting Point: n/f

Solubility in Water: Freely Soluble

Boiling Point: n/f

Specific Gravity: n/f

Vapor Pressure: n/f

Vapor Density: n/f

Evaporation Rate: n/f

Reactivity in Water: n/f

% Volatile by Volume: n/f

n/f = not found