



Material Safety Data Sheet

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TOBRAMYCIN

IDENTIFICATION

EMERGENCY OVERVIEW - Reproductive Hazard.

Common Name: Tobramycin

Chemical Name: D-Streptamine, O-3-amino-3-deoxy-alpha-D-glucofuranosyl-(1 to 6)-O-[2,6-diamino-2,3,6-trideoxy-alpha-D-ribo-hexopyranosyl-(1 to 4)]-2-deoxy-

Synonym: Nebramycin Factor 6

Formula: C₁₈H₃₇N₅O₉

CAS Number: 32986-56

RTECS Number: WK2100000

Chemical Family: A Glycoside antibiotic

Therapeutic Category: Aminoglycoside antibacterial (systemic)

INGREDIENT INFORMATION

<u>Principle Components</u>	<u>Percent</u>	<u>Exposure Limits</u>
Tobramycin	Pure Material	n/f

HEALTH HAZARD INFORMATION

Usual Adult Dose: The usual adult dose of tobramycin by intramuscular or intravenous infusion is 0.75 to 1.7 mg per kilogram of body weight every six to eight hours; not to exceed 8 mg per kg of body weight daily.

Adverse Effects: Adverse effects may include greatly increased or decreased frequency of urination or amount of urine; increased thirst; loss of appetite; nausea; vomiting; muscle twitching; numbness; seizures; tingling; auditory ototoxicity (any loss of hearing, high-pitched ringing or buzzing, or feeling of fullness in ears); vestibular ototoxicity (clumsiness, dizziness, nausea, vomiting, unsteadiness); skin itching, redness, rash, or swelling; and headache. Possible allergic reaction to material if inhaled, ingested or in contact with skin.

Overdose Effects: Overdose effects include severe dizziness, ringing in ears, vertigo, loss of high tone hearing acuity, respiratory failure, and neuromuscular blockade.

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

n/f = not found

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TOBRAMYCIN

HEALTH HAZARD INFORMATION CONTINUED

Chronic: Possible hypersensitization, superinfection, kidney damage, and irreversible hearing damage.

Inhalation: May cause irritation. 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. 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, impaired kidney function, and eighth-cranial nerve impairment.

Cross Sensitivity: Persons sensitive to one of the aminoglycosides may be sensitive to this material also.

Pregnancy Comments: Tobramycin has been shown to cause total irreversible bilateral congenital deafness as well as kidney damage in the human fetus.

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 of tobramycin overdose is symptomatic and supportive. Hemodialysis and peritoneal dialysis may aid in elimination. [USP DI 2001]

TOXICOLOGICAL INFORMATION

Oral Rat: LD50: >7500 mg/kg

Oral Mouse: LD50: >11500 mg/kg

Irritancy Data: n/f

Target Organ(s): Kidneys and inner ears

Listed as a Carcinogen? NTP: No
Other: No

IARC: No

OSHA: No

n/f = not found

TOBRAMYCIN

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: Strong oxidizing agents.

Decomposition Products: When heated to decomposition material emits toxic fumes of NOx. 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, below 25° C, as defined in the USP-NF. This material should be handled and stored per label instructions to ensure product integrity. Store in a cold place. Allow to attain room temperature before opening. 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

TOBRAMYCIN

PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: White or almost white powder; odorless.

Melting Point: Approximately 287° C (decomposes)

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