

Safety Data Sheet

Section 1: Chemical Identification

Chemical Name: Amikacin sulfate
Alternative Name: Amikacin sulphate, Amikacin disulphate salt, 4-amino-N-[5-amino-2-[4-amino-3,5-dihydroxy-6-(hydroxymethyl)oxan-2-yl]oxy-4-[6-(aminomethyl)-3,4,5-trihydroxyoxan-2-yl]oxy-3-hydroxycyclohexyl]-2-hydroxybutanamide;sulfuric acid
Catalog Number: A-532-5
Recommended use: Amikacin sulfate is a broad spectrum aminoglycoside antibiotic that targets gram negative bacteria and several key enteric species. This product is not for use in humans. It is intended for research purposes only.
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Section 2: Hazardous Information

GHS Classification
 Acute toxicity, Oral (Category 5)

GHS Label Elements, including Precautionary statements

WARNING

Hazard Statements:
H303: May be harmful if swallowed

Precautionary Statements:
 None

OSHA Hazards
 Target Organ Effect, Teratogen

Potential Health Effects

Eye: May cause eye irritation.
 Skin: May be harmful if absorbed through skin. May cause skin irritation.
 Ingestion: May be harmful if swallowed.
 Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

HMIS Classification

Health hazard: 1
Chronic health hazard *

Flammability: 0
Physical hazards: 0

NFPA Rating

Health Hazard: 0
Fire: 0
Reactivity Hazard: 0

Section 3: Composition/Information on Ingredients

Identity: Amikacin sulfate
Synonyms: Amikacin sulphate, Amikacin disulphate salt, 4-amino-N-[5-amino-2-[4-amino-3,5-dihydroxy-6-(hydroxymethyl)oxan-2-yl]oxy-4-[6-(aminomethyl)-3,4,5-trihydroxyoxan-2-yl]oxy-3-hydroxycyclohexyl]-2-hydroxybutanamide;sulfuric acid

CAS number: 39831-55-5
Molecular Formula: $C_{22}H_{43}N_5O_{13} \cdot 2H_2SO_4$
Molecular Weight: 781.75 g/mol

Section 4: First Aid Measures

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin: Wash off with soap and plenty of water. Consult a physician.

Eye: Flush eyes with water as a precaution.

Ingestion: Wash out mouth with water. Drink plenty of water. Consult a physician.

Section 5: Fire Fighting Measures

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Specific hazards arising from the chemical: During a fire, highly toxic gases may be generated by thermal decomposition or combustion – Carbon oxides, Nitrogen oxides, Sulfur oxides.

Special protective actions for fire-fighters: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions: Do not let product enter drains.

Methods and materials for containment and cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7: Handling and Storage

Precautions for safe handling: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: 2-8 °C. Keep in a dry place.

Section 8: Exposure Controls / Personal Protection

Control parameters: Contains no substances with occupational exposure limit values.

Appropriate engineering controls: Use only in a chemical fume hood. Safety shower and eye bath.

Personal Protective Equipment (PPE)

Eye/Face Protection: Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) 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 type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection: Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Other Protective Clothing or Equipment: Wear appropriate protective clothing to prevent exposure.

Section 9: Physical and Chemical Properties

Appearance:	White crystalline powder
Odor:	Not available
Odor Threshold:	Not available
pH:	Not available
Melting Point:	203-204 °C
Freezing Point:	Not available
Boiling Point/Range:	1102.4 °C
Flash Point:	620.5 °C
Evaporation Rate:	Not available
Flammability:	Not available
Lower Explosion Limit:	Not available
Upper Explosion Limit:	Not available
Vapor Pressure:	Not available
Vapor Density:	Not available
Relative Density:	Not available
Solubility:	Not available
Partition Coefficient: <i>n</i>-octanol/water	Not available
Auto-Ignition Temperature:	Not available
Decomposition	

Temperature:

Not available

Viscosity:

Not available

Section 10: Stability and Reactivity Data

Reactivity: Not available.

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: Not available.

Conditions to avoid: Incompatible materials.

Incompatible materials: Strong oxidizing agents.

Hazardous decomposition products: Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides, Sulfur oxides.

Section 11: Toxicological Information

Acute toxicity:

Oral:

LD₅₀ (Rat) = >4,000 mg/kg

Skin corrosion/irritation:

Not available.

Respiratory or skin sensitization:

Not available.

Chronic effects:

Not available.

Germ cell mutagenicity:

Not 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 IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

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 NTP.

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 OSHA.

Reproductive toxicity:

Reproductive toxicity - rat - Subcutaneous

Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth).

Reproductive toxicity - mouse - Subcutaneous

Effects on Newborn: Growth statistics (e.g., reduced weight gain).

Developmental Toxicity - rat - Subcutaneous

Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Specific Developmental Abnormalities: Musculoskeletal system. Specific

Developmental Abnormalities: Homeostasis

Developmental Toxicity - mouse - Subcutaneous

Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).
Specific Developmental Abnormalities: Musculoskeletal system.

Laboratory experiments have shown teratogenic effects.

STOT-single exposure:

Not available.

STOT-repeated exposure:

Not available.

Aspiration hazard:

Not available.

Likely routes of exposure:

Respiratory organs, mouth, skin, and eyes.

Symptoms of exposure:

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

Section 12: Ecological Information

Toxicity:

Not available.

Persistence and degradability:

Not available.

Bioaccumulative potential:

Not available.

Mobility in soil:

Not available.

Other adverse effects:

Not available.

Section 13: Disposal Considerations

Only professional staff trained in such techniques must undertake waste disposal. Observe all appropriate federal, provincial or state and local regulations. The material for disposal should be mixed with, or dissolved in, a combustible solvent and burnt in a chemical incinerator equipped with an afterburner and scrubber.

Section 14: Transport Information

US Department of Transportation (DOT)

Not dangerous goods.

International Maritime Dangerous Goods (IMDG)

Not dangerous goods.

International Air Transport Association (IATA)

Not dangerous goods.

Section 15: Regulatory Information

OSHA Hazards

Target Organ Effect, Teratogen

SARA 302 Components:

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components:

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

SARA 311/312 Hazards:

Chronic Health Hazard

Massachusetts Right To Know Components:

No Components Listed

Pennsylvania Right To Know Components:

Amikacin sulfate

CAS-No.

39831-55-5

New Jersey Right To Know Components:

Amikacin sulfate

CAS-No.

39831-55-5

California Prop. 65 Components:

California Proposition 65: This product does not contain chemical(s) known to the state of California to cause developmental toxicity.

Section 16: Other Information

While Gold Biotechnology, Inc. believes the information contained herein to be true and accurate, it has relied on information provided by others. Gold Biotechnology, INC. makes no warranties, express or implied, as to the accuracy or adequacy of the information contained herein or with respect to the results to be obtained from the use of the product. Gold Biotechnology, Inc. disclaims all liability with respect to the use of this product, including without limitation, liability for injury to the user or third-party persons.

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