

## SAFETY DATA SHEET

**Product Name: Gentamicin Sulfate in 0.9% Sodium Chloride Injection**

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<b>Manufacturer Name And Address</b>	Hospira, Inc. 275 North Field Drive Lake Forest, Illinois 60045 USA
<b>Emergency Telephone</b>	CHEMTREC: North America: 800-424-9300;
<b>Hospira, Inc., Non-Emergency</b>	International 1-703-527-3887; Australia - 61-290372994; UK - 44-870-8200418 224 212-2000
<b>Product Name</b>	Gentamicin Sulfate in 0.9% Sodium Chloride Injection
<b>Synonyms</b>	Gentamicin Sulfate, USP; 0-3-Deoxy-4-C-methyl-3(methylamino)-β-L-arabinopyranosyl-(1-> 6 -0-[2,6-diamino-2,3,4,6-tetra-deoxy-α-D-erythro-hexopyranosyl-(1->4)]-2-deoxy-D-streptamine.

### 2. HAZARD(S) IDENTIFICATION

<b>Emergency Overview</b>	Gentamicin Sulfate in 0.9% Sodium Chloride Injection is a solution containing gentamicin sulfate, a complex aminoglycoside antibiotic substance with three components, sulfates of gentamicin C1, gentamicin C2 and gentamicin C1A. Clinically, gentamicin sulfate is used to treat severe systemic infections due to sensitive Gram-negative and other organisms. In the workplace, this material should be considered potentially irritating to the eyes and respiratory system, a potential sensitizer, and a potential occupational reproductive hazard. Based on clinical use, possible target organs include the kidneys, hearing, nervous system, and gastrointestinal system.
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#### U.S. OSHA GHS Classification

Physical Hazards	Hazard Class	Hazard Category
	Not Classified	Not Classified
Health Hazards	Hazard Class	Hazard Category
	Sensitization – Respiratory	1
	Sensitization – Skin	1
	Toxic to Reproduction	2

#### Label Element(s)

**Pictogram**



**Signal Word**

Danger

**Hazard Statement(s)**

May cause allergy or asthma symptoms or breathing difficulties if inhaled  
May cause an allergic skin reaction  
Suspected of damaging fertility or the unborn child

**2. HAZARD(S) IDENTIFICATION: continued**

**Precautionary Statement(s)**

**Prevention**

Obtain special instructions before use  
 Do not handle until all safety precautions have been read and understood  
 Wear protective gloves/protective clothing/eye protection/face protection  
 Avoid breathing vapors/spray  
 In case of inadequate ventilation, wear respiratory protection  
 Contaminated work clothing must not be allowed out of the workplace  
 Wash hands thoroughly after handling

**Response**

If exposed or concerned: Get medical advice/attention.  
 IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a doctor.  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention.  
 IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Active Ingredient Name**            Gentamicin Sulfate  
**Chemical Formula**                NA

Component	Approximate Percent by Weight	CAS Number	RTECS Number
Gentamicin Sulfate	<0.5	1405-41-0	LY2625000

Non-hazardous ingredients include Water for Injection. Hazardous ingredients present at less than 1% include sodium chloride. Sulfuric acid and/or sodium hydroxide are added for pH adjustment.

**4. FIRST AID MEASURES**

**Eye Contact**                            Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

**Skin Contact**                            Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

**Inhalation**                                Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

**Ingestion**                                 Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

**5. FIRE FIGHTING MEASURES**

**Flammability**                            None anticipated for this aqueous product.

**Fire & Explosion Hazard**            None anticipated for this aqueous product.

**Extinguishing Media**                 As with any fire, use extinguishing media appropriate for primary cause of fire such as carbon dioxide, dry chemical extinguishing powder or foam.

**Special Fire Fighting Procedures**    No special provisions required beyond normal firefighting equipment such as flame and chemical resistant clothing and self contained breathing apparatus.

**6. ACCIDENTAL RELEASE MEASURES**

**Spill Cleanup and Disposal** Isolate area around spill. Put on suitable protective clothing and equipment as specified by site spill control procedures. Absorb the liquid with suitable material and clean affected area with soap and water. Dispose of spill materials according to the applicable federal, state, or local regulations.

**7. HANDLING AND STORAGE**

**Handling** No special handling required for hazard control.

**Storage** No special storage required for hazard control. For product protection, follow storage recommendations noted on the product case label, the primary container label, or the product insert.

**Special Precautions** No special precautions required for hazard control. Employees with known allergies to gentamicin sulfate or related antibiotics should consult a health and/or safety professional prior to handling open containers of this material.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Guidelines**

Component	Exposure Limits			
	OSHA-PEL	ACGIH-TLV	AIHA WEEL	Hospira EEL
Gentamicin Sulfate	8-hr TWA: Not Established	8-hr TWA: Not Established	8-hr TWA: Not Established	8-hr TWA: Not Established

Notes: OSHA PEL: US Occupational Safety and Health Administration – Permissible Exposure Limit  
 ACGIH TLV: American Conference of Governmental Industrial Hygienists – Threshold Limit Value.  
 AIHA WEEL: Workplace Environmental Exposure Level  
 EEL: Employee Exposure Limit.  
 TWA: 8-hour Time Weighted Average

**Respiratory Protection** Respiratory protection is normally not needed during intended product use. However, if the generation of aerosols is likely, and engineering controls are not considered adequate to control potential airborne exposures, the use of an approved air-purifying respirator with a HEPA cartridge (N95 or equivalent) is recommended under conditions where airborne aerosol concentrations are not expected to be excessive. Since protection provided by air purifying respirators is limited, a powered air purifying respirator or supplied air should be considered during an uncontrolled release event, if exposure levels are not known, or during events where air-purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions require respirator use. Personnel who wear respirators should be fit tested and approved for respirator use as required.

**Skin Protection** If skin contact with the product formulation is likely, the use of latex or nitrile gloves is recommended.

**Eye Protection** Eye protection is normally not required during intended product use. However, if eye contact is likely to occur, the use of chemical safety goggles (as a minimum) is recommended.

**Engineering Controls** Engineering controls are normally not needed during the normal use of this product.

## 9. PHYSICAL/CHEMICAL PROPERTIES

<b>Appearance/Physical State</b>	A sterile, nonpyrogenic solution
<b>Odor</b>	NA
<b>Odor Threshold</b>	NA
<b>pH</b>	3.8 (3.0 to 5.5)
<b>Melting point/Freezing Point</b>	NA
<b>Initial Boiling Point/Boiling Point Range</b>	NA
<b>Flash Point</b>	NA
<b>Evaporation Rate</b>	NA
<b>Flammability (solid, gas)</b>	NA
<b>Upper/Lower Flammability or Explosive Limits</b>	NA
<b>Vapor Pressure</b>	NA
<b>Vapor Density (Air =1)</b>	NA
<b>Relative Density</b>	NA
<b>Solubility</b>	Gentamicin Sulfate is soluble in water, moderately soluble in methanol, ethanol, acetone and practically insoluble in benzene.
<b>Partition Coefficient: n-octanol/water</b>	NA
<b>Auto-ignition Temperature</b>	NA
<b>Decomposition Temperature</b>	NA
<b>Viscosity</b>	NA

## 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	Not determined.
<b>Chemical Stability</b>	Stable under standard use and storage conditions.
<b>Hazardous Reactions</b>	Not determined
<b>Conditions to Avoid</b>	Not determined
<b>Incompatibilities</b>	Not determined
<b>Hazardous Decomposition Products</b>	Not determined. During thermal decomposition, it may be possible to generate irritating vapors and/or toxic fumes of carbon oxides (CO <sub>x</sub> ), nitrogen oxides (NO <sub>x</sub> ), and sulfur oxides (SO <sub>x</sub> ).
<b>Hazardous Polymerization</b>	Not anticipated to occur with this product.

## 11. TOXICOLOGICAL INFORMATION

**Acute Toxicity** - Not determined for the product formulation. Information for the active ingredient is as follows:

Ingredient(s)	Percent	Test Type	Route of Administration	Value	Units	Species
Gentamicin Sulfate	100	LD50	Oral	> 5000 > 11,269 > 9050	mg/kg mg/kg mg/kg	Rat Mouse Mouse
Gentamicin Sulfate	100	LD50	Intravenous	96 47 75	mg/kg mg/kg mg/kg	Rat Mouse Mouse
Gentamicin Sulfate	100	LD50	Intraperitoneal	630 245 430	mg/kg mg/kg mg/kg	Rat Mouse Mouse

LD 50: Dosage that produces 50% mortality.

**11. TOXICOLOGICAL INFORMATION: continued**

<b>Occupational Exposure Potential</b>	Information on the absorption of this product via inhalation or skin contact is not available. Avoid liquid aerosol generation and skin contact.
<b>Signs and Symptoms</b>	None anticipated from normal handling of this product. In clinical use, adverse effects may include nausea, vomiting, diarrhea, headache, depression, dizziness, impaired balance and eye irritation, skin rashes, respiratory depression, possible kidney injury and hearing loss. Nephrotoxicity manifested by an elevated BUN or serum creatinine level or a decrease in the creatinine clearance has been reported with gentamicin. Gentamicin has produced vestibular and auditory toxicity in man and in experimental animals. Neurotoxicity manifested by ototoxicity, both vestibular and auditory, can occur in patients treated with gentamicin sulfate. Gentamicin-induced ototoxicity is usually irreversible. Allergic reactions have also been reported.
<b>Aspiration Hazard</b>	None anticipated from normal handling of this product.
<b>Dermal Irritation/ Corrosion</b>	None anticipated from normal handling of this product.
<b>Ocular Irritation/ Corrosion</b>	None anticipated from normal handling of this product. However, inadvertent contact of this product with eyes may produce irritation. Gentamicin sulfate produced significant conjunctival irritation in an irritation study in animals.
<b>Dermal or Respiratory Sensitization</b>	None anticipated from normal handling of this product. Allergic reactions have been reported during the clinical use of this product in patients.
<b>Reproductive Effects</b>	None anticipated from normal handling of this product. Animal reproduction studies conducted on rats and rabbits did not reveal evidence of impaired fertility or harm to the fetus due to gentamicin sulfate. Aminoglycoside antibiotics cross the placenta, and there have been several reports of total irreversible bilateral congenital deafness in children whose mothers received streptomycin or tobramycin during pregnancy. Also, aminoglycosides may be nephrotoxic in the human fetus. FDA Pregnancy Category D.
<b>Mutagenicity</b>	The mutagenic potential of gentamicin sulfate has not been evaluated.
<b>Carcinogenicity</b>	The carcinogenic potential of gentamicin sulfate has not been evaluated.
<b>Carcinogen Lists</b>	<b>IARC:</b> Not listed <b>NTP:</b> Not listed <b>OSHA:</b> Not listed
<b>Specific Target Organ Toxicity – Single Exposure</b>	NA
<b>Specific Target Organ Toxicity – Repeat Exposure</b>	Gentamicin has produced vestibular and auditory toxicity in patients and experimental animals. Based on clinical use, possible target organs include the kidneys, hearing, nervous system, and gastrointestinal system.

**12. ECOLOGICAL INFORMATION**

<b>Aquatic Toxicity</b>	Not determined for product.
<b>Persistence/Biodegradability</b>	Not determined for product.
<b>Bioaccumulation</b>	Not determined for product.
<b>Mobility in Soil</b>	Not determined for product.

Notes:

### 13. DISPOSAL CONSIDERATIONS

<b>Waste Disposal</b>	All waste materials must be properly characterized. Further, disposal should be performed in accordance with the federal, state or local regulatory requirements.
<b>Container Handling and Disposal</b>	Dispose of container and unused contents in accordance with federal, state and local regulations.

### 14. TRANSPORTATION INFORMATION

<b>ADR/ADG/ DOT STATUS</b>	Not regulated
<b>Proper Shipping Name</b>	NA
<b>Hazard Class</b>	NA
<b>UN Number</b>	NA
<b>Packing Group</b>	NA
<b>Reportable Quantity</b>	NA

<b>ICAO/IATA STATUS</b>	Not regulated
<b>Proper Shipping Name</b>	NA
<b>Hazard Class</b>	NA
<b>UN Number</b>	NA
<b>Packing Group</b>	NA
<b>Reportable Quantity</b>	NA

<b>IMDG STATUS</b>	Not regulated
<b>Proper Shipping Name</b>	NA
<b>Hazard Class</b>	NA
<b>UN Number</b>	NA
<b>Packing Group</b>	NA
<b>Reportable Quantity</b>	NA

Notes: DOT - US Department of Transportation Regulations

### 15. REGULATORY INFORMATION

<b>US TSCA Status</b>	Exempt
<b>US CERCLA Status</b>	Not listed
<b>US SARA 302 Status</b>	Not listed
<b>US SARA 313 Status</b>	Not listed
<b>US RCRA Status</b>	Not listed
<b>US PROP 65 (Calif.)</b>	This product contains an aminoglycoside, a chemical known to the State of California to cause developmental reproductive toxicity.

Notes: TSCA, Toxic Substance Control Act; CERCLA, US EPA law, Comprehensive Environmental Response, Compensation, and Liability Act; SARA, Superfund Amendments and Reauthorization Act; RCRA, US EPA, Resource Conservation and Recovery Act; Prop 65, California Proposition 65

**15. REGULATORY INFORMATION: continued**

**GHS/CLP Classification\***

\*In the EU, classification under GHS/CLP does not apply to certain substances and mixtures, such as medicinal products as defined in Directive 2001/83/EC, which are in the finished state, intended for the final user.

<b>Hazard Class</b>	<b>Hazard Category</b>	<b>Pictogram</b>	<b>Signal Word</b>	<b>Hazard Statement</b>
NA	NA	NA	NA	NA

**Prevention**

Obtain special instructions before use  
 Do not handle until all safety precautions have been read and understood  
 Wear protective gloves/protective clothing/eye protection/face protection  
 Avoid breathing vapors/spray  
 In case of inadequate ventilation, wear respiratory protection  
 Contaminated work clothing must not be allowed out of the workplace  
 Wash hands thoroughly after handling

**Response**

If exposed or concerned: Get medical advice/attention.  
  
 IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a doctor.  
  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention.  
  
 IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

**EU Classification\***

\*Medicinal products are exempt from the requirements of the EU Dangerous Preparations Directive.

- Classification(s)**
- Symbol**
- Indication of Danger**
- Risk Phrases**
- Safety Phrases**

NA  
 NA  
 NA  
 NA  
 S23: Do not breathe vapor/spray  
 S24: Avoid contact with the skin  
 S25: Avoid contact with eyes  
 S37/39 Wear suitable gloves and eye/face protection  
 R42/43 - May cause sensitization by inhalation and skin contact

**16. OTHER INFORMATION**

Notes:

ACGIH TLV	American Conference of Governmental Industrial Hygienists – Threshold Limit Value
CAS	Chemical Abstracts Service Number
CERCLA	US EPA law, Comprehensive Environmental Response, Compensation, and Liability Act
DOT	US Department of Transportation Regulations
EEL	Employee Exposure Limit
IATA	International Air Transport Association
LD <sub>50</sub>	Dosage producing 50% mortality
NA	Not applicable/Not available
NE	Not established
NIOSH	National Institute for Occupational Safety and Health
OSHA PEL	US Occupational Safety and Health Administration – Permissible Exposure Limit
Prop 65	California Proposition 65
RCRA	US EPA, Resource Conservation and Recovery Act
RTECS	Registry of Toxic Effects of Chemical Substances
SARA	Superfund Amendments and Reauthorization Act
STEL	15-minute Short Term Exposure Limit
STOT - SE	Specific Target Organ Toxicity – Single Exposure
STOT - RE	Specific Target Organ Toxicity – Repeated Exposure
TSCA	Toxic Substance Control Act
TWA	8-hour Time Weighted Average

MSDS Coordinator: Hospira GEHS  
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**Disclaimer:**

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