

SECTION 1 - PRODUCT AND COMPANY INFORMATION

- ◆ **Product name:** G418 sulfate
- ◆ **Catalog number:** GS21000
- ◆ **Chemical name or synonyms:** Geneticin, disulfate salt.
- ◆ **Contact:**

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SECTION 2 – COMPOSITION, INFORMATION ON INGREDIENTS

<u>Ingredient name</u>	<u>CAS number</u>	<u>%</u>	<u>EINECS</u>	<u>Classification</u>
G418 sulfate	108321-42-2	99.8 - 99.9 %	None	None

SECTION 3 – HAZARDS IDENTIFICATION

- ◆ **Individuals with allergies or hypersensitivity to antibiotics should take caution. May cause allergic respiratory and skin reaction. Causes eye, skin and respiratory tract irritation. Possible risk of harm to unborn child. May cause loss of hearing. May cause kidney damage.**
- ◆ This product contains hazardous carcinogens (Yes; No; N/A): **No**
- ◆ This product contains hazardous ingredients to the environment. (Yes; No; N/A): **No**

SECTION 4 – FIRST AID MEASURES

- ◆ **Effects and symptoms:**
 - *Inhalation* May cause irritation of respiratory tract.
 - *Ingestion* May be harmful if swallowed.
 - *Skin contact* May cause skin irritation and/or dermatitis. May cause allergic skin reaction.
 - *Eye contact* Slightly hazardous in case of eye contact.
 - *Aggravating conditions* Repeated or prolonged exposure is not known to aggravate medical conditions.
- ◆ **First-Aid measures:**
 - *Inhalation* If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
 - *Ingestion* Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.
 - *Skin contact* In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothes before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
 - *Eye contact* In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
 - *Notes to physician* Not available.
 - *Protection of first-aiders* Not available.

SECTION 5 – FIRE FIGHTING MEASURES

- ◆ **Flammability of the product:** May be combustible at high temperature.
- ◆ **Flash Point:** Not available.
- ◆ **Fire hazards in presence of various substances:** Not considered to be flammable.
- ◆ **Fire fighting media and instructions:** Use an extinguish agent suitable for surrounding fires.
- ◆ **Protective clothing (fire):** Be sure to use an approved/certified respirator or equivalent.
- ◆ **Hazardous thermal decomposition products:** Emits toxic fumes under fire conditions.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

- ◆ **Personal precautions:** Safety glasses, lab coat and gloves.
- ◆ **Environmental precautions and clean-up methods:** Wear chemical-resistant gloves. Sweep up and shovel product into suitable containers for disposal. Prevent product from entering drains. Ventilate and wash area thoroughly after clean-up is complete.

SECTION 7 – HANDLING AND STORAGE

- ◆ **Handling:** Avoid breathing vapors or spray mists. Avoid contact with eyes, skin and clothes.
- ◆ **Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area. Store at – 20 C.
- ◆ **Intended use:** Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific application.
- ◆ **Packaging materials**
- ◆ **Suitable:** Use original container.

SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION

- ◆ **Engineering Controls:** Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.
- ◆ **Personal protection**
 - **Eyes:** Safety glasses.
 - **Body:** Lab coat and gloves.
 - **Respiratory:** Respirator is not needed under normal and intended conditions of use, if exposures are kept below established limits.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

- ◆ **Appearance**
 - **Physical State:** Solid.
 - **Color:** White to off white powder.
 - **Odor:** Not available.
 - **Taste:** Not available.
- ◆ **Molecular formula:** $C_{20}H_{40}N_4O_{10} \cdot 2 H_2SO_4$
- ◆ **Molecular weight:** 692.44.
- ◆ **pH:** Not available.
- ◆ **Boiling point:** Not available.
- ◆ **Decomposition temperature:** Not available.
- ◆ **Melting point:** Not available.
- ◆ **Flash point:** Not available.
- ◆ **Solubility:** Soluble.

SECTION 10 – STABILITY AND REACTIVITY

- ◆ **Stability and reactivity:** Stable under recommended storage conditions.
- ◆ **Conditions to avoid:** Exposure to air or moisture over prolonged periods.
- ◆ **Materials to avoid:** Strong oxidizing agents.
- ◆ **Hazardous polymerization:** Will not occur.
- ◆ **Hazardous decomposition products:** Nitrogen oxides, ammonia, carbon oxides, sulphur oxides.

SECTION 11 – TOXICOLOGICAL INFORMATION

- ◆ **Toxicity on animals:**
 - **LD50 oral:** 720 mg/Kg mouse, 600 mg/Kg guinea pig.
 - **LD50 intraperitoneal:** 580 mg/mL mouse, 287 mg/mL guinea pig.
 - **LD50 intravenous:** 335 mg/mL mouse, 202 mg/mL guinea pig.
- ◆ **Target organs:** Kidney, ears.
- ◆ **Chronic effects on humans:** Carcinogenic effects: classified none. by NIOSH. By OSHA.
- ◆ **Other toxic effects on humans:** May induce moderate to severe erythema (redness) and moderate edema (raised skin). Chronic exposure may cause nausea and vomiting. Higher exposure causes unconsciousness. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Aminoglycoside antibiotics have the potential to cause auditory nerve damage and neuromuscular paralysis.

SECTION 12 – ECOLOGICAL INFORMATION

- ◆ May cause long-term adverse effects in the aquatic environment.

SECTION 13 – DISPOSAL CONSIDERATIONS

- **Waste stream:** Not available.
- **Waste disposal method:** Contact a licensed professional waste disposal service to dispose of this material. Dispose in accordance with governmental environmental regulations. Observe all federal, state, and local environmental regulations.
- **European waste catalogue (EWC):** Not available.
- **Hazardous waste:** Will not occur.

SECTION 14 – TRANSPORT INFORMATION

- This substance is considered to be non-hazardous for transport and air-transport.

SECTION 15 – REGULATORY INFORMATION

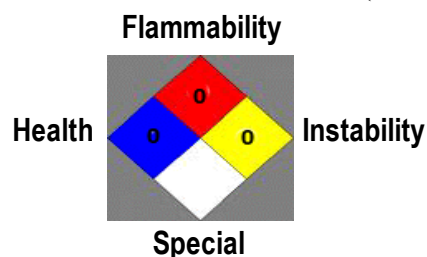
- **Hazard symbols:** T
- **Risk phrases:**
 - R 22 Harmful if swallowed.
 - R 36/37/38 Irritating to eyes, respiratory system and skin.
 - R 43 May cause sensitization by skin contact.
 - R 61 May cause harm to the unborn child.
- **Safety phrases:**
 - S 24 Avoid contact with skin.
 - S 26 In case of contact with eyes, rinse immediately with water and seek medical advice.
 - S 37/39 Wear suitable gloves and eye/face protection.
 - S 45 In case of accident or if you feel unwell, seek medical advice.
 - S 53 Avoid exposure – obtain special instructions before use.

SECTION 16 – OTHER INFORMATION

- **Hazardous Material Information System (U.S.A.):**

Health	0
Fire hazard	0
Reactivity	0
Personal protection	

- **National Fire Protection Association (U.S.A.):**



- **Other Comments:**

To the best of our knowledge, the information contain herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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