

Material Safety Data Sheet

G418 Sulfate

ACC# 90872

Section 1 - Chemical Product and Company Identification

MSDS Name: G418 Sulfate

Catalog Numbers: AC329400000, AC329400010, BP673-1, BP673-5

Synonyms: Geneticin.

Company Identification:

Fisher Scientific

1 Reagent Lane

Fair Lawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
108321-42-2	G418 Sulfate	100.0	unlisted

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white.

Warning! Individuals with allergies or hypersensitivity to antibiotics should take caution. Causes eye, skin, and respiratory tract irritation. Harmful if swallowed, inhaled, or absorbed through the skin. May cause allergic respiratory and skin reaction. Possible risk of harm to the unborn child. May cause loss of hearing. May cause kidney damage. May cause reproductive and fetal effects.

Target Organs: Kidneys, central nervous system, eyes, skin, auditory system.

Potential Health Effects

Eye: Causes eye irritation. Exposure to solid may cause pain and redness. May cause chemical conjunctivitis.

Skin: May cause skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. May be harmful if absorbed through the skin.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause kidney damage. May cause central nervous system effects. Hearing loss and deafness have been reported. May be harmful if swallowed. May cause auditory damage with possible loss of hearing. May cause neuromuscular paralysis. Causes photosensitivity with possible allergic skin reactions when exposed to light.

Inhalation: Causes respiratory tract irritation. May cause an allergic response. May cause hearing impairment. May cause central nervous system effects.

Chronic: Animal studies have reported that fetal effects/abnormalities may occur when maternal toxicity is seen. Chronic exposure may cause kidney damage. May cause adverse reproductive effects. G418 Sulfate is an aminoglycoside antimicrobial. Aminoglycosides are associated with significant nephrotoxicity (toxic to kidney cells) and ototoxicity (having a toxic effect on the structures of the ear, especially the nerve supply).

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Flash Point: Not applicable.

Autoignition Temperature: Not applicable.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Do not breathe dust, vapor, mist, or gas. Keep container tightly closed. Avoid ingestion and inhalation.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Deep freeze (below -20°C).

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
G418 Sulfate	none listed	none listed	none listed

OSHA Vacated PELs: G418 Sulfate: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: white

Odor: odorless

pH: Not available.

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: Not available.

Decomposition Temperature: Not available.

Solubility: Not available.

Specific Gravity/Density: Not available.

Molecular Formula: C₂₀H₄₀N₄O₁₀·2H₂SO₄

Molecular Weight: 692.444

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid: Incompatible materials, dust generation, excess heat.

Incompatibilities with Other Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide, oxides of nitrogen, oxides of sulfur, carbon dioxide.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 108321-42-2 unlisted.

LD50/LC50:

Not available.

Carcinogenicity:

CAS# 108321-42-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found

Teratogenicity: Teratogenic effects have occurred in experimental animals.

Reproductive Effects: May impair fertility.

Mutagenicity: No information found

Neurotoxicity: No information found Aminoglycoside antibiotics have the potential to cause auditory nerve damage and neuromuscular paralysis.

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.

Environmental: This is an antibiotic active against bacteria, yeasts, fungi, algae.

Physical: No information available.

Other: None.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	CARBON DIOXIDE, SOLID USED FOR DIAGNOSTIC OR TREATMENT PURPOSE	No information available.
Hazard Class:	9	
UN Number:	UN1845	
Packing Group:	III	

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 108321-42-2 is not listed on the TSCA inventory. It is for research and development use only.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 108321-42-2 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T

Risk Phrases:

R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 42/43 May cause sensitization by inhalation and skin contact.

R 60 May impair fertility.
R 61 May cause harm to the unborn child.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

WGK (Water Danger/Protection)

CAS# 108321-42-2: No information available.

Canada - DSL/NDSL

None of the chemicals in this product are listed on the DSL or NDSL list.

Canada - WHMIS

This product has a WHMIS classification of D2B, D2A.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

Section 16 - Additional Information

MSDS Creation Date: 7/13/1999

Revision #5 Date: 1/25/2005

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.