

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name G418 Sulfate

Other means of identification

Product Code(s) A2702

Synonyms No information available

Product Use For Laboratory Research Use Only.

Supplier/Manufacturer

Biomatik Corporation
9-140 McGovern Dr.
Cambridge, Ontario N3H 4R7
Canada

Telephone Number 1-519-489-7195

E-mail Address info@biomatik.com

Emergency Telephone Number Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Respiratory Sensitization	Category 1
Skin Sensitization	Category 1

Label elements

Emergency Overview

Danger

Hazard statements

H317 - May cause an allergic skin reaction

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled



Appearance White

Physical State Powder

Odor No information available

Precautionary Statements - Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray
 In case of inadequate ventilation wear respiratory protection
 Contaminated work clothing must not be allowed out of the workplace
 Wear protective gloves

Precautionary Statements - Response

Specific treatment (see .? on this label)
 IF ON SKIN: Wash with plenty of water and soap
 If skin irritation or rash occurs: Get medical advice/attention
 Wash contaminated clothing before reuse
 If experiencing respiratory symptoms: Call a POISON CENTER or doctor

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not regulated

Other Information

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	EC No.	Weight %	Trade Secret
D-Streptamine, O-2-amino-2,7-dideoxy-D -glycero-.alpha.-D-gluco- heptopyranosyl-(1.fwdar w.4)-O-[3-deoxy-4-C-met hyl-3-(methylamino)-.beta .L-arabinopyranosyl-(1.f wdarw.6)]-2-deoxy-, sulfate (1:2) (salt)	108321-42-2	-	95-100	Not applicable

4. FIRST AID MEASURES

First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin Contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen.
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms/Effects No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing media appropriate to surrounding fire conditions.

Unsuitable Extinguishing Media No information available.

Specific Hazards Arising from the Chemical

No information available.

Hazardous Combustion Products Carbon oxides. Nitrogen oxides (NOx). Sulfur oxides.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal protection Ensure adequate ventilation, especially in confined areas.

Environmental Precautions

Environmental Precautions See Section 12 for additional Ecological information.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Avoid dust formation. Pick up and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Handling Handle in accordance with good industrial hygiene and safety practice. Hygroscopic. Moisture sensitive. Light Sensitive.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Hygroscopic. Protect from light. Protect from moisture.

Incompatible Products No information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
D-Streptamine, O-2-amino-2,7-dideoxy-D-glycero- α - lpha.-D-gluco-heptopyranosyl-(1.fwd arw.4)-O-[3-deoxy-4-C-methyl-3-(m ethylamino)-.beta.-L-arabinopyranos yl-(1.fwdarw.6)]-2-deoxy-, sulfate (1:2) (salt)	-	-	-

Appropriate engineering controls

Engineering Measures
Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Safety glasses with side-shields. Avoid contact with eyes.

Skin and Body Protection Wear protective gloves/clothing.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Powder	Odor	No information available
Appearance	White	Odor Threshold	No information available
Color	No information available		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No information available	
Melting point/freezing point		
Boiling Point/Range	No information available	
Flash Point (High in °C)	No information available	
Evaporation Rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor Density	No information available	
Specific Gravity	No information available	
Water Solubility	No information available	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition Temperature	No information available	
Decomposition Temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive Properties	No information available	
Oxidizing Properties	No information available	

Other Information

Softening Point	No information available
Molecular Weight	No information available
VOC Content	No information available
Density	No information available
Bulk Density	No information available

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to Avoid

Protect from light and moisture. Hygroscopic.

Incompatible Materials

No information available.

Hazardous Decomposition Products

Carbon oxides. Nitrogen oxides (NOx). Sulfur oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Eye Contact	There is no data available for this product.
Skin Contact	Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Ingestion	There is no data available for this product.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
D-Streptamine, O-2-amino-2,7-dideoxy-D-glycero-.alpha.-D-gluco-heptopyranosyl-(1.fwdarw.4)-O-[3-deoxy-4-C-methyl-3-(methylamino)-.beta.-L-arabinopyranosyl-(1.fwdarw.6)]-2-deoxy-, sulfate (1:2) (salt)	-	-	-

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Mutagenic Effects No information available.
Carcinogenicity No information available.

Chemical Name	ACGIH	IARC	NTP	OSHA
D-Streptamine, O-2-amino-2,7-dideoxy-D-glycero-.alpha.-D-gluco-heptopyranosyl-(1.fwdarw.4)-O-[3-deoxy-4-C-methyl-3-(methylamino)-.beta.-L-arabinopyranosyl-(1.fwdarw.6)]-2-deoxy-, sulfate (1:2) (salt)	-	-	-	-

Reproductive Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Chronic Toxicity Suspected teratogen. Suspected mutagen.
Target Organ Effects Kidneys, Ears.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

12. ECOLOGICAL INFORMATION

Ecotoxicity

100% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Toxicity to Fish	Crustacea
D-Streptamine, O-2-amino-2,7-dideoxy-D-glycero-.alpha.-D-gluco-heptopyranosyl-(1.fwd arw.4)-O-[3-deoxy-4-C-methyl-3-(methylamino)-.beta.-L-arabinopyranosyl-(1.fwdarw.6)]-2-deoxy-, sulfate (1:2) (salt)	-	-	-

Persistence and Degradability

No information available.

Bioaccumulation/Accumulation

No information available.

Chemical Name	Partition coefficient
D-Streptamine, O-2-amino-2,7-dideoxy-D-glycero-.alpha.-D-gluco-heptopyranosyl-(1.fwd arw.4)-O-[3-deoxy-4-C-methyl-3-(methylamino)-.beta.-L-arabinopyranosyl-(1.fwdarw.6)]-2-deoxy-, sulfate (1:2) (salt)	-

Other Adverse Effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Method

Dispose of material in accordance with all federal, state, and local regulations.

Contaminated Packaging

Do not re-use empty containers.

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
D-Streptamine, O-2-amino-2,7-dideoxy-D-glycero-.alpha.-D-gluco-heptopyranosyl-(1.fwdarw.4)-O-[3-deoxy-4-C-methyl-3-(methylamino)-.beta.-L-arabinopyranosyl-(1.fwdarw.6)]-2-deoxy-, sulfate (1:2) (salt)	-	-	-	-

Chemical Name	California Hazardous Waste Status
D-Streptamine, O-2-amino-2,7-dideoxy-D-glycero-.alpha.-D-gluco-heptopyranosyl-(1.fwd arw.4)-O-[3-deoxy-4-C-methyl-3-(methylamino)-.beta.-L-arabinopyranosyl-(1.fwdarw.6)]-2-deoxy-, sulfate (1:2) (salt)	-

14. TRANSPORT INFORMATION

DOT

Not regulated

IATA

Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Does not comply
DSL/NDSL	Does not comply
EINECS/ELINCS	Does not Comply
ENCS	Does not Comply
IECSC	Complies
KECL	Does not Comply
PICCS	Does not Comply
AICS	Does not Comply

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	SARA 313 - Threshold Values %
D-Streptamine, O-2-amino-2,7-dideoxy-D-glycero-.alpha.-D-gluco-heptopyranosyl-(1.fwdarw.4)- O-[3-deoxy-4-C-methyl-3-(methylamino)-.beta.-L-arabinopyranosyl-(1.fwdarw.6)]-2-deoxy-, sulfate (1:2) (salt)	-

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
D-Streptamine, O-2-amino-2,7-dideoxy-D-gl ycero-.alpha.-D-gluco-hepto pyranosyl-(1.fwdarw.4)-O-[3-deoxy-4-C-methyl-3-(methyl amino)-.beta.-L-arabinopyra nosyl-(1.fwdarw.6)]-2-deoxy-, sulfate (1:2) (salt)	-	-	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
D-Streptamine, O-2-amino-2,7-dideoxy-D-glycero- α -D-glucopyranosyl-(1 \rightarrow 4)-O-[3-deoxy-4-C-methyl-3-(methylamino)- β -L-arabinopyranosyl-(1 \rightarrow 6)]-2-deoxy-, sulfate (1:2) (salt)	-	-	-

U.S. State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

Chemical Name	California Prop. 65
D-Streptamine, O-2-amino-2,7-dideoxy-D-glycero- α -D-glucopyranosyl-(1 \rightarrow 4)-O-[3-deoxy-4-C-methyl-3-(methylamino)- β -L-arabinopyranosyl-(1 \rightarrow 6)]-2-deoxy-, sulfate (1:2) (salt)	-

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
D-Streptamine, O-2-amino-2,7-dideoxy-D-glycero- α -D-glucopyranosyl-(1 \rightarrow 4)-O-[3-deoxy-4-C-methyl-3-(methylamino)- β -L-arabinopyranosyl-(1 \rightarrow 6)]-2-deoxy-, sulfate (1:2) (salt)	-	-	-

U.S. EPA Label Information

EPA Pesticide Registration Number Not regulated

16. OTHER INFORMATION

Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet