Material Safety Data Sheet

Section 1: Product and Company Identification			
Product Name	Geneticin Disulfate (G418)		
Catalogue Number:	AS-2011	**CAS Number:**	108321-42-2
E-mail:	Sales@ausamics.com	**Website**:	Ausamics.com

Section 2: Hazards Identification	
Classification of the substance or mixture **GHS Classification in accordance with Hazardous Products Regulations (HPR) (SOR/2015-17)** Respiratory sensitization (Category 1), H334 Skin sensitization (Category 1), H317	
GHS Label elements, including precautionary statements	
Pictogram	
Signal Word	Danger
Hazard statement(s) H317 May cause an allergic skin reaction. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.	
Precautionary statement(s) P261 Avoid breathing dust. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves. P284 Wear respiratory protection. P302 + P352 IF ON SKIN: Wash with plenty of water. P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor. P362 + P364 Take off contaminated clothing and wash it before reuse. P501 Dispose of contents/ container to an approved waste disposal plant.	
Hazards not otherwise classified (HNOC) or not covered by GHS none	

Section 3: Composition / Information on Ingredients			
Mixture			
Synonyms	Antibiotic G418		
Formula Molecular weight CAS-No. EC-No.	C20H40N4O10 · 2H2SO4 692.71 g/mol 108321-42-2 600-864-4		
Component		**Classification**	**Concentration***

(1S,2S,3R,4S,6R)-4,6-Diamino-3-({(5R)-2-amino-2-deoxy-5-[(1S)-1-hydroxyethyl]-α-D-xylopyranosyl}oxy)-2-hydroxycyclohexyl 3-deoxy-4-C-methyl-3-(methylamino)-β-D-arabinopyranoside sulfate (1:2)			
		Resp. Sens. 1; Skin Sens. 1; H334, H317	<= 100 %
* Weight %			

Section 4: First Aid Measures	
Description of first-aid measures	
General advice	First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.
If inhaled	After inhalation: fresh air. Call in physician.
In case of skin contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.
In case of eye contact	After eye contact: rinse out with plenty of water. Remove contact lenses.
If swallowed	After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.
Most important symptoms and effects, both acute and delayed The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.	
Indication of any immediate medical attention and special treatment needed No data available	

Section 5: Fire Fighting Measures
Extinguishing media
Suitable extinguishing media Water Foam Carbon dioxide (CO2) Dry powder
Unsuitable extinguishing media For this substance/mixture no limitations of extinguishing agents are given.
Special hazards arising from the substance or mixture Carbon oxides Nitrogen oxides (NOx) Sulfur oxides Combustible. Development of hazardous combustion gases or vapors possible in the event of fire.
Advice for firefighters Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
Further information Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Section 6: Accidental Release Measures
Personal precautions, protective equipment and emergency procedures Advice for non-emergency personnel: Avoid inhalation of dust. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

Environmental precautions Do not let product enter drains.
Methods and materials for containment and cleaning up Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.
Reference to other sections For disposal see section 13.

Section 7: Handling and Storage	
Precautions for safe handling **Advice on safe handling** Work under hood. Do not inhale substance/mixture.	
Hygiene measures Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.	
Conditions for safe storage, including any incompatibilities	
Storage conditions	Tightly closed. Dry. Keep locked up or in an area accessible only to qualified or authorized persons.
Storage stability	Recommended storage temperature 2 - 8 °C
Storage class	Storage class (TRGS 510): 11: Combustible Solids

Section 8: Exposure Controls / Personal Protection
Control parameters **Ingredients with workplace control parameters** Contains no substances with occupational exposure limit values.
Exposure controls **Appropriate engineering controls** Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. **Personal protective equipment**
Eye/face protection Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses.
Skin protection Full contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested: KCL 741 Dermatril® L Splash contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested: KCL 741 Dermatril® L
Body Protection protective clothing
Respiratory protection required when dust is generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure Do not let product enter drains.

Section 9: Physical and Chemical Properties	
Physical state	Powder
Color	White
Odor	Odorless
Odor Threshold	No data available
Melting point/freezing point	Melting point/range: 137 - 139 °C (279 - 282 °F)
Initial boiling point and boiling range	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Flash point	No data available
Vapor pressure	No data available
Vapor density	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
pH	No data available
Viscosity	No data available
Water solubility	soluble
Partition coefficient: n-octanol/water	No data available
Density	1.0 g/cm3 at 20.0 °C (68.0 °F)
Relative density	No data available
Explosive properties	No data available
Oxidizing properties	none
Other safety information	No data available

Section 10: Stability and Reactivity
Reactivity The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.
Chemical stability The product is chemically stable under standard ambient conditions (room temperature).
Possibility of hazardous reactions Violent reactions possible with: Strong oxidizing agents
Conditions to avoid no information available

Incompatible materials No data available
Hazardous decomposition products In the event of fire: see section 5

Section 11: Toxicological Information	
Information on toxicological effects	
Mixture	
Acute toxicity	LD50 Oral - Rat - > 5,000 mg/kg Remarks: (RTECS) (in analogy to similar products) Inhalation: No data available Dermal: No data available
Skin corrosion/irritation	No data available
Serious eye damage/eye irritation	No data available
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	No data available
Carcinogenicity	No data available
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Specific target organ toxicity - repeated exposure	No data available
Aspiration hazard	No data available
Additional Information	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. Possible symptoms: After uptake of large quantities: Vertigo Nausea Vomiting ataxia (impaired locomotor coordination) Physiologically highly active substance. Other dangerous properties cannot be excluded. Handle in accordance with good industrial hygiene and safety practice. Liver - Irregularities - Based on Human Evidence

Section 12: Ecological Information	
Toxicity	No data available
Persistence and degradability	No data available
Bio accumulative potential	No data available
Mobility in soil	No data available

Results of PBT and vPvB assessment	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.
Endocrine disrupting properties	No data available
Other adverse effects	No data available

Section 13: Disposal Consideration
Waste treatment methods **Product** Offer surplus and non- recyclable solutions to a licensed company. Contact a licensed professional waste disposal service to dispose of this material
Contaminated packaging Dispose of as unused product.

Section 14: Transport Information	
TDG	Not regulated as a dangerous good
IMDG	Not dangerous goods
IATA	Not dangerous goods
Further information	Not classified as dangerous in the meaning of transport regulations.

Section 15: Regulatory Information
This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

Section 16: Additional Notes	
Documented By	Ausamics Life Science Sales@Ausamics.com
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Summary of Revisions	This document has been revised to meet the requirements of the US OSHA HazCom 2012 Standard, which supersedes the existing regulations outlined in 29 CFR 1910.1200, in order to align with the internationally recognized globally Harmonized System of Classification and Labeling of chemicals (GHS).
Disclaimer	The information presented in this Safety Data sheet is accurate to the best of our knowledge, information, and belief at the time of publication. It is intended as a guide for the safe handling, use, processing, storage, transportation, disposal, and release of specific materials. However, it should be interpreted as a warranty or quality specification. The provided information pertains solely to the designated material and may not be applicable to its use in combination with other materials or in any process, unless explicitly stated in the text.