Safety Data Sheet: Gliotoxin

1. Identification of the substance/mixture and of the Company

1.1. Product identifiers

Product name	***Gliotoxin***	**Formula**	$C_{13}H_{14}N_2O_4S_2$
Product Code	***GL***	**RTECS**	***KB4725000***
CAS #	***67-99-2***	**Molecular weight**	***326.4***
EC Number #	***636-170-3***		
Date of version	***<1 April, 2020>***	**Substance?Mixture?**	***Substance***

1.2. Intended uses of the substance or mixture and uses advised against

Intended use:	**Uses advised against:**
Research and development. Laboratory reagent. Reference material. Manufacturing of substances.	Not for drug, Not to be used in humans or animals. Not food additive

1.3. Details of the supplier of the safety data sheet

1.4. Emergency Telephone number

FERMENTEK ltd 4 Yatziv street, POB 47120 Jerusalem 97800, **Israel**	Tel: +972 2 5853953 Fax: +972 2 5853943 eMail: fermentek@fermentek.com Website: www.fermentek.com	For chemical emergency spill, leak, fire, exposure, or accident calls CHEMTREC day or night: Within USA and Canada: 1-800-424-9300. Outside USA and Canada: +1 703-527-3887

This company is the manufacturer of the product, and the supplier of the safety data sheet

1.5. Reach:

See section 15

2. Hazards identification

2.1. Classification of the substance or mixture

GHS Classification:

Acute Toxicity, Ingestion	Category 3	H301	Toxic if swallowed

2.2. GHS Label elements, including precautionary statements

Pictogram:  **Signal word: {DANGER}**

GHS Hazard Statements

H301	Toxic if swallowed

GHS Precautionary Statements

P201	Obtain special instructions before use.
P261	Avoid breathing {dust/fume/gas/mist/vapors/spray}.
P262	Do not get in eyes, on skin, or on clothing
P264	Wash {hands} thoroughly after handling.
P280	Wear {protective gloves/protective clothing/eye protection/face protection}.

GHS Response Phrases:

P308 + P313	If exposed or concerned: Get medical advice/attention
P301 + P310 + P330	IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.
P302 + P352 + P310	IF ON SKIN: Wash with plenty of water. Immediately call a POISON CENTER/doctor
P312	Call a POISON CENTER/ doctor if you feel unwell.

3. Composition/information on ingredients

Substance		
Substance name:	***Gliotoxin***	
Concentration	100%	
	CAS Registry # ***67-99-2*** EC#:***636-170-3***	
	Molecular Formula: ***C13H14N2O*** Molecular Weight: ***326.4***	
Classification	Acute Tox. 3 H301	
Mixture?	***Substance***	

4. First Aid Measures

4.1. Description of First Aid Measures

General advice:	Consult a physician. Show this safety data sheet to the doctor in attendance.
Eye contact:	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Call a physician..
Skin Contact:	Wash affected area with soap and water. Consult a physician if any exposure symptoms are observed.
Ingestion:	Do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Drink plenty of water. Clean mouth with water and drink afterwards plenty of water.
Inhalation:	If inhalled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

4.2. Most important symptoms and effects, both acute and delayed

Skin Contact:	No data available
Eye contact:	No data available
Ingestion:	No data available
Inhalation:	No data available

4.3. Indication of any immediate medical attention and special treatment needed

	No data available

5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	None known

5.2. Other information

Hazardous combustion products	Carbon oxides, Nitrogene oxides
Advice for firefighters	Wear self-contained breathing apparatus for fire fighting if necessary. Wear protective suit.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Use personal protective equipment as required. Keep people away from and upwind of spill/leak.

6.2. Environmental precautions

Environmental precautions	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

6.3. Methods and material for containment and cleaning up

Methods for containment:	Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.
Methods for cleaning up:	Clean-up should be dealt with only by qualified personnel familiar with the specific substance. Cover liquid spill with sand, earth or other non-combustible absorbent material (e.g. sand, earth, diatomaceous earth, and vermiculite). Cover powder spill with plastic sheet or tarp to minimize spreading. Sweep up and shovel into suitable containers for disposal.

7. Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:	Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions:	Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Reportedly, Light sensitive. Store at -20 °C.
Suitable packaging	Must only be kept in original packaging.
Incompatible materials:	None known based on information available.

7.3. Specific End Uses:

	For R&D only.

8. Exposure Controls/Personal Protection

8.1. Control parameters

Control parameters	Components with workplace control parameters

8.2. Exposure controls

Appropriate engineering controls	Showers, Eyewash stations, Ventilation systems Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Use fumehood for routine work.

8.3. Personal protective equipment

[PPE=Personal Protection Equipment]

General:	The employer/end user, prior to use of this product should perform all recommendations below are advisory in nature and a risk assessment. The type of protective equipment must be selected based on the amount and concentration of the dangerous material being used in the workplace.
PPE: Respiratory protection	Where risk assessment shows air-purifying respirators are appropriate use a fullface particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
PPE: Hand Protection:	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal techniques to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices, and wash and dry hands
PPE: Eye Protection:	Use a face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU)
PPE: Skin and Body Protection:	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

9. Physical and chemical properties

9.1. Physical / chemical properties

Physical State at room temperature	Solid / powder
Color	White
Melting/freezing point	200°C-210°C
No further safety relevant data are available	

10. Stability and reactivity

Reactivity:	No information available.
Chemical stability:	Stable under normal conditions.
Conditions to avoid	Heat, flames and sparks. Sunlight.
Incompatible materials	Strong reducers and exidizers
Possibility of Hazardous Reactions	None under normal processing
Hazardous decomposition products	Carbon oxides; nitrous oxides

11. Toxicological information

11.1. Information on toxicological effects

The toxicological effects of this product have not been thoroughly studied.

Acute Toxicity	Oral, mouse; LD50= 67 mg/kg
Skin corrosion/irritation:	No data available
Serious eye damage/eye irritation:	No data available
Respiratory or skin sensitization/corrosion:	No data available

Mutagenicity:	Demonstrated in vitro on bacterial and mamalian cells.
Carcinogenicity:	No data available
Reproductive toxicity / Teratogenicity:	No data available
STOT-SE – single exposure (GHS):	No data available
STOT-SE – repeated exposure (GHS):	No data available
Aspiration hazard:	No data available

11.2. Additional information

RTECS number	***KB4725000***

12. Ecological Information

Eco-Toxicity	No further relevant information available
Other adverse effects	No further relevant information available.

13. Disposal Considerations

13.1. Waste treatment methods

Waste from residues / unused products	Dispose of in accordance with local regulations
Contaminated packaging	Dispose of as unused product

14. Transport information

14.1. UN number, Proper Shipping Name, Transport Hazard Class, packing group

	US DOT	**US IATA**	**US IMDG**	**US ADR/RID**
UN Number **UN proper shipping name**	UN 3642 Toxins, Extracted from Living Sources, Solid, N.O.S. (Gliotoxin)	UN 3642 Toxins, Extracted from Living Sources, Solid, N.O.S. (Gliotoxin)	UN 3642 Toxins, Extracted from Living Sources, Solid, N.O.S. (Gliotoxin)	UN 3642 Toxins, Extracted from Living Sources, Solid, N.O.S. (Gliotoxin)
Transport Hazard Class & Packing Group	6.1, III	6.1, III	6.1, III	6.1, III

14.2. Addional information

Addional information	Excepted quantities (EQ)	Code: E5 ; Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 300 g
Marine pollutant?	Not marine polutant	

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation

USA EPA / TSCA	This product is not listed on the USA EPA TSCA (for research)
EU ECHA Status	This product is registered with the EU ECHA, Number ***636-170-3*** **REACH:** ANNEX III: ***Not Listed*** **REACH: Not Preregistred**
CA: DSL/NDSL Status	This product is not listed on the Canadian DSL/NDSL

16. Other information

16.1. Date of revision: Wednesday, 1 April, 2020

16.2. Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given here is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

End of SDS----------