

Safety Data Sheet: **T2 Toxin**

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

### 1.1. Product identifiers

Product name	<b>T2 Toxin</b>	Formula	<b>C<sub>24</sub> H<sub>34</sub> O<sub>9</sub></b>
Product Code	<b>T</b>	RTECS	<b>YD0100000</b>
CAS #	<b>21259-20-1</b>	Molecular weight	<b>466.6</b>
EC Number #	<b>244-297-7</b>		
Date of version	<b>&lt;16 March, 2020&gt;</b>	Substance?Mixture?	<b>Not mixture</b>

### 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. Company information

Details of the supplier of the safety data sheet		Emergency Telephone number
<b>FERMENTEK Ltd</b> 4 Yatziv street, POB 47120 Jerusalem 97800, <b>Israel</b>	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		

### 1.4. Reach:

See section 15
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## 2. Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008:

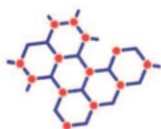
Acute toxicity Oral	Cat 1	H300	
Acute toxicity Inhalation	Cat 1	H330	
Acute toxicity Dermal	Cat 1	H310	
Skin irritation	Cat 2	H315	

#### GHS Label elements, including precautionary statements



Signal word: {DANGER}

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### GHS Hazard Statements

<b>H300 + H310 + H330</b>	Fatal if swallowed, in contact with skin or if inhaled.
<b>H315</b>	Causes skin irritation

### GHS Precautionary Statements

<b>P201</b>	Obtain special instructions before use.
<b>P262</b>	Do not get in eyes, on skin, or on clothing
<b>P264</b>	Wash face, hands and any exposed skin thoroughly after handling
<b>P280</b>	Wear protective gloves/protective clothing/eye protection/face protection
<b>P301 + P310 + P330</b>	IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.
<b>P302 + P352 + P310</b>	IF ON SKIN: Wash with plenty of water. Immediately call a POISON CENTER/doctor.
<b>P304 + P340 + P310</b>	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
<b>P261</b>	Avoid breathing dust/fume/gas/mist/vapors/spray
<b>P271</b>	Use only outdoors or in a well-ventilated area
<b>P304 + P340 -</b>	IF INHALED: Remove person to fresh air and keep comfortable for breathing
<b>P308+313</b>	If exposed or concerned: Get medical advice/attention

## 3. Composition/information on ingredients

### Substance

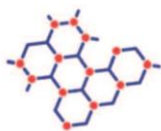
Substance name:	<b>T2 Toxin</b>
Concentration	100%
	CAS Registry #: <b>21259-20-1</b> EC#: <b>244-297-7</b> RTECS <b>YD0100000</b>
	Molecular Formula: <b>C24 H34 O9</b> Molecular Weight: <b>466.6</b>
Classification	Skin Irrit. 2 (H315) ; acute ingest 1 H310; acute derm 1 H310; skin irrit 2 H315
Mixture?	<b>Not mixture</b>

## 4. First Aid Measures

### 4.1. Description of First Aid Measures

<b>General advice:</b>	Consult a physician. Show this safety data sheet to the doctor in attendance.
<b>Eye contact:</b>	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. If symptoms persist, call a physician.
<b>Skin Contact:</b>	Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated

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	clothing before reuse. Wash off immediately with plenty of water. If skin irritation persists, call a physician.
<b>Ingestion:</b>	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. Call a physician.
<b>Inhalation:</b>	Immediate medical attention is required Remove to fresh air If not breathing, give artificial respiration Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Artificial respiration and/or oxygen may be necessary Call a physician Move to fresh air in case of accidental inhalation of vapors. If symptoms persist, call a physician.
<b>Symptoms</b>	
<b>Note to physician</b>	

## 5. Fire-fighting measures

### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>Unsuitable extinguishing media</b>	Solid water stream may be inefficient.

### 5.2. Other information

<b>Hazardous combustion products</b>	Carbon oxides,
<b>Advice for firefighters</b>	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

<b>Personal precautions</b>	Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak
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### 6.2. Environmental precautions

<b>Environmental precautions</b>	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.
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### 6.3. Methods and material for containment and cleaning up

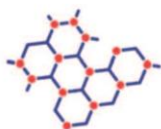
<b>Methods for containment:</b>	Prevent further leakage or spillage if safe to do so. Contain spill and collect, as appropriate
<b>Methods for cleaning up:</b>	Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly. Soak up with inert absorbent material. Dam up. Pick up and transfer to properly labeled containers. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water. Take precautionary measures against static discharges. Sweep up and shovel into suitable containers for disposal.

## 7. Handling and storage

### 7.1. Precautions for safe handling

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

### 7.2. Conditions for safe storage, including any incompatibilities

<b>Storage Conditions:</b>	Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Store at -20 °C.
<b>Incompatible materials:</b>	None known based on information available.

## 8. Exposure Controls/Personal Protection

### 8.1. Control parameters

Exposure Limits	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region-specific regulatory bodies
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### 8.2. Exposure controls

Appropriate engineering controls	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.
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### 8.3. Personal protective equipment

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=Personal Protection Equipment]

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.

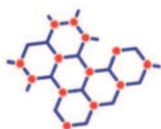
## 9. Physical and chemical properties

### 9.1. Physical / chemical properties

<b>Physical State at room temperature</b>	Solid / powder
<b>Color</b>	
<b>Melting/freezing point</b>	

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Volatile?	Not volatile
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 oxidizers
Possibility of Hazardous Reactions	None under normal processing
Hazardous decomposition products	Carbon oxides

## 11. Toxicological information

### 11.1. Information on toxicological effects

#### Acute Toxicity

Ingestion	TDL0 (oral - mouse) : 3.8 mg/kg LD50 (oral - rat) : 2.7 mg/kg
Inhalation	LC50 (inhalation, rat): 20 mg/m <sup>3</sup> /10min.
Absorption thru Skin	LD50: (on skin, rat) 2.5 mg/kg
Skin corrosion/irritation:	No data available
Serious eye damage/eye irritation:	No data available
Respiratory or skin sensitization/corrosion:	No quantitative data available.

#### Chronic toxicity

Chronic Toxicity	Thapsigargin - Investigated as a mutagen and natural product.
Mutagenicity:	DNA inhibition. DNA damage in animals.
Carcinogenicity:	IARC Cancer Review : Limited evidence for carcinogenicity in animals Tumorigenic - neoplastic by RTECS criteria Lungs, Thorax, or Respiration - tumors Liver - tumors
Reproductive toxicity / Teratogenicity:	TDL0 : 0.5 mg/kg fed to a female mouse 11 days after conception. Effects: Fetal death, specific development abnormalities in musculoskeletal system - , eye/ear, craniofacial,

### 11.2. Additional information

RTECS number	<b>YD0100000</b>
Symptoms	Behavioral - somnolence (general depressed activity. tremor; ataxia Lungs, Thorax, or Respiration - cyanosis Gastrointestinal - ulceration or bleeding from stomach or bleeding from small intestine Liver - other changes Gastrointestinal - nausea or vomiting

## 12. Ecological Information

### 12.1. Toxicity

This product is not classified as environmentally hazardous according to the UN Model Regulations, nor a marine pollutant according to the IMDG Code.

### 12.2. Persistence and degradability

No information available.

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### 12.5. Results of PBT and vPvB assessment

Not performed

### 12.6. Other adverse effects

No 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 IATA	US ADR	US RID	US IMDG
UN Number UN proper shipping name	UN: 3462 toxins extracted from living sources, solid, N.O.S. <b>(T2 Toxin)</b>	UN: 3462 toxins extracted from living sources, solid, N.O.S. <b>(T2 Toxin)</b>	UN: 3462 toxins extracted from living sources, solid, N.O.S. <b>(T2 Toxin)</b>	UN: 3462 toxins extracted from living sources, solid, N.O.S. <b>(T2 Toxin)</b>
Transport Hazard Class & Packing Group	Class: 6.1 P.G. I	Class: 6.1 P.G. I	Class: 6.1 P.G. I	Class: 6.1 P.G. I
				Not marine pollutant

### 14.2. Additional information

Small quantities	When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10. Therefore, packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.
Marine pollutant	Not marine pollutant

## 15. Regulatory information

### 15.1. Safety, health and environmental regulations/legislation

Canadian regulations	This product is Not listed on the Canadian DSL/NDSL.
USA EPA / TSCA	This product is Not listed on the USA TSCA (For R&D)
EU ECHA Status	This product is registered with the EU ECHA, Number 244-297-7 ANNEX III: Listed REACH: Preregistration process.

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## 16. Other information

**16.1. Date of revision: Monday, 16 March, 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. Users should make their own investigations to determine the suitability of the information for their particular purposes

End of SDS

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