


 Safety Data Sheet: **Nodularin**
**1. Identification of the substance/mixture and of the Company**
**1.1. Product identifiers**

Product name	<b>Nodularin</b>	Formula	<b>C<sub>41</sub> H<sub>60</sub> N<sub>8</sub> O<sub>10</sub></b>
Product Code	<b>NDL</b>	RTECS	<b>GT2810000</b>
CAS #	<b>118399-22-7</b>	Molecular weight	<b>825.0</b>
EC Number #	<b>621-437-9</b>		
Synonyms	<b>Nodularin R</b>	Substance?Mixture?	<b>Substance</b>
		Date of version	<b>&lt;24 April, 2020&gt;</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. Details of the supplier of the safety data sheet**

<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	<b>1.4. Emergency Telephone number</b>  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
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**2. Hazards identification**
**2.1. Classification of the substance or mixture**
**GHS Classification According to EU Reg. 1272/2008 and US OSHA 1910.1200)**

Acute Toxicity, Ingestion	Category 2	H300	Fatal if swallowed
Acute Toxicity, Dermal contact	Category 2	H313	Fatal if in contact with skin
Acute Toxicity, Inhalation	Category 1	H330	Fatal if inhaled
Skin Irritation	Category 2	H315	Causes skin irritation
Serious Eye Irritation	Category 2A	H319	Causes serious eye irritation
Skin Sensitisation	Category 1	H317	May cause an allergic skin reaction
STOT/SE/Respiratory Tract Irritation	Category 3	H335	May cause respiratory tract irritation



## 2.2. GHS Label elements, including precautionary statements

Pictogram:  Signal word: {DANGER}

### GHS Hazard Statements

H300 + H330 + H310	Fatal if swallowed, or if inhaled or if in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H335	May cause respiratory tract irritation

### GHS Precautionary Statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P262	Do not get in eyes, on skin, or on clothing
P264	Wash {hands} thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear {protective gloves/protective clothing/eye protection/face protection}.
P284	Wear respiratory protection

### GHS Response Phrases

P308+313	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
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

## 3. Composition/information on ingredients

Substance	
Substance name:	<b>Nodularin</b>
Concentration	100%
	CAS Registry #: <b>118399-22-7</b> EC#: <b>621-437-9</b>
	Molecular Formula: <b>C<sub>41</sub> H<sub>60</sub> N<sub>8</sub> O<sub>10</sub></b> ; Molecular Weight: <b>825.0</b>
Classification	Acute Tox. 2; H300, H330, H310, H340, H350
Mixture?	<b>Substance</b>

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## 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>	Flush eyes with 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>	Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
<b>Ingestion:</b>	Never give anything by mouth to an unconscious person. Wash out mouth with water. Do not induce vomiting. If conscious, give half a litre of water to drink immediately. Transfer to hospital as soon as possible. Consult a physician.
<b>Inhalation:</b>	If inhaled, 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

<b>Skin Contact:</b>	There may be redness or whiteness of the skin in the area of exposure. Irritation or pain may occur at the site of contact. Absorption through the skin may be fatal.
<b>Eye contact:</b>	There may be severe pain. The eyes may water profusely.
<b>Ingestion:</b>	There may be soreness and redness of the mouth and throat. There may be vomiting. Convulsions may occur. There may be loss of consciousness.
<b>Inhalation:</b>	There may be shortness of breath with a burning sensation in the throat. Absorption through the lungs can occur causing symptoms similar to those of ingestion. Convulsions may occur. There may be loss of consciousness.

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

	No data available
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## 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>	None known

### 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>	Use personal protective equipment as required. 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

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.
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### 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.

## 8. Exposure Controls/Personal Protection

### 8.1. Control parameters

Control parameters	Components with workplace control parameters
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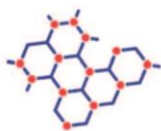
### 8.2. Exposure controls

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.
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### 8.3. Personal protective equipment

[PPE=Personal Protection 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: 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	289°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 oxidizers
Possibility of Hazardous Reactions	None under normal processing
Hazardous decomposition products	Carbon oxides

## 11. Toxicological information

### 11.1. Information on toxicological effects

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

Acute Toxicity	No quantitative data available
Skin corrosion/irritation:	No data available
Serious eye damage/eye irritation:	No data available
Respiratory or skin sensitization/corrosion:	
Germ cell mutagenicity:	
Carcinogenicity:	Group 3: Not classified as human carcinogen
Reproductive toxicity / Teratogenicity:	No data available
STOT-SE – single exposure (GHS):	Respiratory tract irritation
STOT-SE – repeated exposure (GHS):	No data available
Aspiration hazard:	No data available

### 11.2. Additional information

RTECS number	<b>GT2810000</b>
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## 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. <b>(Nodularin)</b>	UN 3642 Toxins, Extracted from Living Sources, Solid, N.O.S. <b>(Nodularin)</b>	UN 3642 Toxins, Extracted from Living Sources, Solid, N.O.S. <b>(Nodularin)</b>	UN 3642 Toxins, Extracted from Living Sources, Solid, N.O.S. <b>(Nodularin)</b>
Transport Hazard Class & Packing Group	6.1, I	6.1, I	6.1, I	6.1, I
Additional information		Not allowed on passenger aircraft.	Not marine pollutant	
Exempted quantities (EQ)		Code: E5	Maximum net quantity per inner packaging: 1 g	Maximum net quantity per outer packaging: 300 g

## 15. Regulatory information

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

USA EPA / TSCA	This product is not listed on the USA EPA TSCA (it is for research)
EU ECHA Status	This product is registered with the EU ECHA, Number <b>621-437-9</b> ANNEX III: <b>Not Listed</b> REACH: <b>Not Listed</b>
CA: DSL/NDSL Status	This product is not listed on the Canadian DSL/NDSL

## 16. Other information

### 16.1. Date of revision: Friday, 24 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