


 Safety Data Sheet [Verrucarin A](#)

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

### 1.1. Product identifiers

Product name	<a href="#">Verrucarin A</a>	Formula	$C_{29}H_{40}O_9$
Product Code	VA	RTECS	<a href="#">WH1314900</a>
CAS #	3148-09-2	Molecular weight	502.5
EC Number #	636-535-7	Substance? Mixture?	Substance
Synonyms	Muconomycin A Antibiotic 379Y		
Source	Myrothecium sp.	Date of version	27 November, 2022

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

<b>1.2.1. Intended use:</b> Research and development. Laboratory reagent. To be used by professionals only	<b>1.2.2. Uses advised against:</b> Not for drug, Not to be used in humans or animals. Not food additive
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### 1.3. Details of the manufacturer

<b>FERMENTEK Ltd</b> 4 Yatziv street, POB 47120 Jerusalem 97800, Israel	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
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This company is the manufacturer of the product, and the supplier of the safety data sheet


## 2. Hazards' identification

### 2.1. Classification of the substance

#### 2.1.1. GHS Classification According to EU Reg. 1272/2008 and US OSHA 1910.1200)

Accute tox (Inhal)	(Category 1)	H330 Toxic if swallowed
Accute tox (Dermal)	(Category 2)	H310 Fatal in contact with skin.
Acute toxicit(Oral)	(Category 2)	H300 Fatal if swallowed.

### 2.2. GHS Label elements, including precautionary statements

Pictogram: {  } Signal word {**Danger**}

#### 2.2.1. GHS Hazard Statements

H300 + H310 + H330	Fatal if swallowed, in contact with skin or if inhaled.
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#### 2.2.2. 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



P264	Wash {hands} thoroughly after handling
P270	Do not eat, drink, or smoke when using this product
P280	Wear protective gloves/ protective clothing
P284	Wear respiratory protection.

### 2.2.3. GHS Response Phrases

P301+P312	If swallowed: call a poison center/doctor
P302 + P350	IF ON SKIN: Gently wash with plenty of soap and water.

## 2.3. Other hazards

2.3.1. Other hazards	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
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## 3. Composition/information on ingredients

Substance	
Substance name:	<b>Verrucarin A</b>
Concentration	100%
CAS Registry#:	3148-09-2
EC#:	636-535-7
Molecular Formula:	<i>C<sub>29</sub>H<sub>40</sub>O<sub>9</sub></i>
Molecular Weight:	502.5
Classification	derma acute Tox. 2; H310 inhal acute Tox. 1; H330 ingest acute Tox. 2; H300
Mixture?	Substance.

## 4. First Aid Measures

### 4.1. Description of First Aid Measures

General advice:	Show this safety data sheet to the doctor/physician.
Inhalation:	If inhaled, move person into fresh air. If not breathing, give artificial respiration. Seek medical advice immediately and show this safety data sheet to the doctor/physician
Ingestion:	Toxic if swallowed. <b>DO NOT INDUCE VOMITING.</b> If swallowed, seek medical advice immediately and show this container or label. Never give anything by mouth to an unconscious person. Clean mouth with water Seek medical advice immediately and show this safety data sheet to the doctor/physician



<b>Skin Contact:</b>	<i>Wash off immediately with plenty of soap and water. Remove contaminated clothing. Wash off with soap and plenty of water. Take victim immediately to hospital. Show this SDS to the attending doctor.</i>
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<b>Eye contact:</b>	<i>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.</i>
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#### **4.2. Most important symptoms and effects, both acute and delayed**

	<i>Necrosis, Ulceration, Symptoms may be delayed.</i>
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#### **4.3. Indication of any immediate medical attention and special treatment needed**

<i>Note to physicians</i>	<i>No information available</i>
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### **5. Fire-fighting measures**

#### **5.1. Extinguishing media**

<i>Suitable extinguishing media</i>	<i>Use water foam Carbon dioxide (CO<sub>2</sub>); Dry powder</i>
<i>Unsuitable extinguishing media</i>	<i>Water stream may be ineffective</i>

#### **5.2. Other information**

<i>Hazardous combustion products</i>	<i>Carbon oxides</i>
<i>More information</i>	<i>None</i>
<i>Advice for firefighters</i>	<i>Wear self-contained breathing apparatus for fire fighting if necessary. Wear protective suit.</i>

### **6. Accidental release measures**

#### **6.1. Personal precautions, protective equipment, and emergency procedures**

<i>Personal precautions</i>	<i>Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. Keep people away from and upwind of spill/leak.</i>
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#### **6.2. Environmental precautions**

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

<i>Methods for containment:</i>	<i>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.</i>
<i>Methods for cleaning up:</i>	<i>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.</i>



## 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. Store at -20 °C.
Suitable packaging	
Incompatible materials:	None known based on information available.

## 8. Exposure Controls/Personal Protection

### 8.1. Control parameters

Control parameters	No occupational exposure limits are listed for this material.
OSHA Permissible Exposure Limits	No Data Available
NIOSH Recommended Exposure Limits	No Data Available
ACGIH Threshold Limit Values	No Data Available

### 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]	
8.3.1. 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).
8.3.2. 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



8.3.3. 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)
8.3.4. 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 must 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 powder
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.**

11.1.1. Acute Toxicity	LD50 Oral – (Rodent, Mouse) –5.1 mg/kg; Data Source: Toxicol., 23(731), 1985 [PMID:4089869]
Information on likely routes of exposure	
Inhalation	LC50 Inhalation 4 hours - - 0,005 mg/l ; explanation: If exposed to the poison where its concentration is 0.005 milligram/liter, half of test population will die after 4 hours.
Dermal contact	LD50 Dermal - 51 mg/kg
Skin corrosion/irritation:	No data available
Serious eye damage/eye irritation:	No data available



### 11.1.2. CMR hazards (Carcinogenic, mutagenic, reprotoxic)

Mutagenicity	Mouse lymphocyte DNA inhibition observed Blood - changes in leukocyte (WBC) count Source: ARZNAD Arzneimittel-Forschung. Drug Research. (Editio Cantor Verlag, Postfach 1255, W-7960 Aulendorf, Fed. Rep. Ger.) V.1- 1951- Volume(issue)/page/year: 15,893,1965
Germ cell mutagenicity:	No data available
Carcinogenicity:	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.
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

11.2.1. Symptoms	Necrosis, Ulceration, Symptoms may be delayed
	Skin and Appendages - dermatitis, other (after systemic exposure) Biochemical - Metabolism (Intermediary) - effect on inflammation or mediation of inflammation Source: TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 15,262,1969
RTECS number	WH1314900

## 12. Ecological Information

Persistence and degradability	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
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	IATA	IMDG	ADR/RID
UN Number UN proper shipping name	ADR/RID: 3172. Toxins extracted from living sources (Verrucarin A)	ADR/RID: 3172. Toxins extracted from living sources (Verrucarin A)	ADR/RID: 3172. Toxins extracted from living sources (Verrucarin A)	ADR/RID: 3172. Toxins extracted from living sources (Verrucarin A)
Transport Hazard Class & Packing Group	Class 6.1 PG II	Class 6.1 PG II	Class 6.1 PG II	Class 6.1 PG II
			Not marine pollutant	

### 14.2. Additional information

Excepted quantities (EQ)	Not applicable
De Minimis exemption	Not applicable

## 15. Regulatory information

### 15.1. Product-specific safety, health, and environmental regulations/legislation

USA EPA / TSCA	This product is not listed on the USA EPA TSCA (it is for research)
California proposit. 65	This product is not listed on California proposit. 65 as on Jan 3, 2020
EU ECHA Status	This product is registered with the EU ECHA, 636-535-7 REACH: pre-registered; ANNEX III: exempted from registration due to low tonnage.but is Listed nevertheless
Canada	This product is not listed on the Canadian DSL/NDSL

## 16. Other information

### 16.1. Department issuing this SDS

Quality systems and regulatory affairs

### 16.2. General 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.



### 16.3. The users'/employers' responsibility:

- A risk assessment should be performed by the employer/user prior to use of this product.
- All recommendations included in this document, are advisory in nature.
- The type of protective equipment must be selected based on the amount and concentration of all dangerous materials being used in the workplace.

### 16.4. Copyright statement



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### 16.5. Abbreviations and acronyms:

- Acute Tox.: Acute toxicity
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- DOT: US Department of Transportation
- EINECS: European Inventory of Existing Commercial Chemical Substances
- Eye Dam.: Serious eye damage/eye irritation
- HMIS: Hazardous Materials Identification System (USA)
- IATA: International Air Transport Association
- IMDG: International Maritime Code for Dangerous Goods
- LC50: Lethal concentration, Median
- LD50: Lethal dose, Median
- NFPA: National Fire Protection Association (USA)
- NIOSH: National Institute for Occupational Safety
- OSHA: Occupational Safety & Health
- PBT: Persistent, Bioaccumulative and Toxic
- PEL: Permissible Exposure Limit
- REL: Recommended Exposure Limit
- Repr.: Reproductive toxicity
- Skin Irrit: Skin corrosion/irritation
- STOT RE: Specific target organ toxicity (repeated exposure)
- TLV: Threshold Limit Value
- vPvB: very Persistent and very Bioaccumulative

### 16.6. End of SDS