




# Safety Data Sheet: *Valinomycin*

<b>1. Identification of the substance and of the Manufacturer</b>			
<b>1.1. Product identifiers</b>			
Product name	<a href="#">Valinomycin</a>	Formula	$C_{54}H_{90}N_6O_{18}$
Product Code	<a href="#">VAL</a>	RTECS	<a href="#">YV9468000</a>
CAS #	<a href="#">2001-95-8</a>	Molecular weight	1111.3
HSDB	<a href="#">6423</a>		
EC Number #	<a href="#">217-896-6</a>	Substance? Mixture?	Substance
Synonyms	cyclo[N-oxa-DL-alanyl-DL-valyl-N-oxa-DL-valyl-DL-valyl-N-oxa-DL-alanyl-DL-valyl-N-oxa-DL-valyl-DL-valyl-N-oxa-DL-alanyl-DL-valyl-N-oxa-DL-valyl-DL-valyl-N-oxa-DL-alanyl-DL-valyl-N-oxa-DL-valyl-DL-valyl]		
	Antibiotic N-329 B	NSC 122023	
Source	Aspergillus ochraceus	Date of version	23 October, 2022
<b>1.2. Intended uses of the substance or mixture and uses advised against</b>			
<b>1.2.1. Intended uses</b>		<b>1.2.2. Uses advised against</b>	
For research For laboratory use as an analytical standard For manufacturing of substances For further processing		Not a drug Not a food additive Not for use in humans	
<b>1.3. Details of the supplier of the SDS</b>			
FERMENTEK ltd 4 Yatziv street, POB 47120 Jerusalem 97800, Israel		Tel: +972 2 5853953 Fax: +972 2 5853943 eMail: <a href="mailto:Fermentek@Fermentek.com">Fermentek@Fermentek.com</a> <a href="mailto:Safety@Fermentek.com">Safety@Fermentek.com</a> Website: <a href="http://www.Fermentek.com">www.Fermentek.com</a>	
<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			
<b>1.5. Reach: see section 15</b>			
<b>2. Hazards' identification</b>			
<b>2.1. Classification of the substance or mixture</b>			
<b>2.1.1. GHS Classification According to EU Reg. 1272/2008 and US OSHA 1910.1200)</b>			
Acute toxicity; Oral	Category 2	H300	Fatal if swallowed
Acute toxicity; Aspiration	Category 1	H304	May be fatal if swallowed and enters airways
Acute toxicity; Dermal	Category 1	H310	Fatal in contact with skin
Serious eye irritation	Category 2	H319	Causes serious eye irritation



# Safety Data Sheet: *Valinomycin*

2.2. <b>GHS Label elements, including precautionary statements</b>	
2.2.1. <b>Pictogram:</b> {  }	<b>Signal word:</b> { <i>Danger</i> }
2.2.2. <b>Hazard Statements</b>	
H300+H310	Fatal if swallowed or in contact with skin.
H304	May be fatal if swallowed and enters airways
H319	Causes serious eye irritation
2.2.3. <b>GHS Precautionary Statements</b>	
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash face, hands and any exposed skin thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection
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
P308 + P313	IF exposed or concerned: Get medical advice/ attention
P331	Do NOT induce vomiting
P405	Store locked up.

## 3. *Composition/information on ingredients*

<b>Substance</b>	
Substance name:	Valinomycin
Concentration	<=100%
CAS Registry#:	2001-95-8
EC#:	217-896-6
Molecular Formula:	<i>C<sub>54</sub>H<sub>90</sub>N<sub>6</sub>O<sub>18</sub></i>
Molecular Weight:	1111.3
Classification	AcOral 2 H300, AccAspir 1 H304; Acc derm 1 H310;
Mixture?	Substance.

## 4. *First Aid Measures*

### 4.1. *Description of First Aid Measures*

General advice:	Immediate medical attention is required. If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.
-----------------	--



# Safety Data Sheet: *Valinomycin*

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. Call a physician.
Skin Contact:	Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
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 immediately. Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. If symptoms persist, call a physician
Inhalation:	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. Move to fresh air in case of accidental inhalation of vapors. If symptoms persist, call a physician
Self-protection of the first aider:	Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.
<b>4.2. Most important symptoms and effects, both acute and delayed</b>	
General symptoms	Behavioral - tremor Behavioral - convulsions or effect on seizure threshold Nutritional and Gross Metabolic - weight loss or decreased weight gain
<b>4.3. Indication of any immediate medical attention and special treatment</b>	
Note to physicians	No data available
<b>5. Fire-fighting measures</b>	
<b>5.1. Extinguishing media</b>	
Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	None known
<b>5.2. Other information</b>	
Hazardous combustion products	Carbon oxides, Nitrogen oxides (NO <sub>x</sub> ). Sulphur oxides (S <sub>x</sub> O <sub>y</sub> )
Advice for firefighters	Wear self-contained breathing apparatus for firefighting if necessary. Wear protective suit.
<b>6. Accidental release measures</b>	
<b>6.1. Personal precautions, protective equipment</b>	
Personal precautions	Use personal protective equipment as required. Keep people away from and upwind of spill/leak.
<b>6.2. Environmental precautions</b>	
Environmental precautions	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.
<b>6.3. Methods and material for containment and cleaning up</b>	
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.



# Safety Data Sheet: *Valinomycin*

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. 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
--------------------	--

### 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 fume-hood for routine work.
----------------------------------	--

### 8.3. *Personal protective equipment*

[PPE=Personal Protection Equipment]

PPE: Respiratory protection	Where risk assessment shows air-purifying respirators are appropriate use a full-face 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.
--------------------------------	---



# Safety Data Sheet: *Valinomycin*

## 9. *Physical and chemical properties*

### 9.1. *Physical / chemical properties*

Physical State at room temperature	Solid / powder
Color	White
Melting/freezing point	Decomposes at 182°C-190°C
Solubility	Soluble in ether, benzene, chloroform, glacial acetic acid, butyl acetate, acetone.
Solubility	Insoluble in water
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	Hazardous decomposition products formed under fire conditions.: Carbon oxides. Nitrogen oxides.

## 11. *Toxicological information*

### 11.1. *Information on toxicological effects*

#### 11.1.1. *Acute Toxicity*

Oral toxicity:	RAT, Oral, LD50 4 mg/kg Mouse , Oral, LD50 2.5 mg/kg
Symptoms	Behavioral - tremor Behavioral - convulsions or effect on seizure threshold Nutritional and Gross Metabolic - weight loss or decreased weight gain
Serious eye damage	No data available
Respiratory or skin sensitization/corrosion:	No data available

#### 11.1.2. *CRM (Carcinogen, Mutagen, Reproductive hazards)*

Germ cell mutagenicity:	Not reported; no data available
Carcinogenicity:	IARC Class: Not identified as carcinogenic to humans
Reproductive toxicity / Teratogenicity:	Not reported; no data available
Additional information	
RTECS number	<b>YV9468000</b>
General symptoms	No data available



# Safety Data Sheet: *Valinomycin*

<b>12. Ecological Information</b>				
Eco-Toxicity	Ecology - general: No data available			
Persistence and degradability	No data available			
Results of PBT and vPvB assessment	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.			
<b>13. Disposal Considerations</b>				
<b>13.1. Waste treatment methods</b>				
Waste from residues / unused products	Dispose of in accordance with local regulations			
Contaminated packaging	Dispose of as unused product			
<b>14. Transport information</b>				
<b>14.1. UN number, Proper Shipping Name, Transport Hazard Class, packing group</b>				
	US DOT	US DOT	US DOT	US DOT
UN Number UN proper shipping name	UN3462 Toxins, extracted from living sources, solid, n.o.s (Valinomycin)	UN3462 Toxins, extracted from living sources, solid, n.o.s (Valinomycin)	UN3462 Toxins, extracted from living sources, solid, n.o.s (Valinomycin)	UN3462 Toxins, extracted from living sources, solid, n.o.s (Valinomycin)
Transport Hazard Class & Packing Group	6.1 PG I	6.1 PG I	6.1 PG I	6.1 PG I
<b>14.2. Additional information</b>				
De Minimis Quantities exemption				
<b>15. Regulatory information</b>				
<b>15.1. Safety, health and environmental regulations/legislation</b>				
USA EPA / TSCA	This product is not listed on the USA EPA TSCA (it is for research)			
SARA 302 Components	This product is subject to the reporting requirements of SARA Title III, Section 302.			
SARA 313	This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.			
SARA 311/312 Hazard Categories	No SARA Hazards			
California Proposition 65	This product does not contain any Proposition 65 chemicals.			
EU ECHA Status	This product is with the EU ECHA. ANNEX III (criteria for 1 - 10 tonne registered substances): Listed REACH: Preregistered			



# Safety Data Sheet: *Valinomycin*

 Canada,  
 DSL/NDSL

On NDSL Canada Gazette

## 16. *Other information*

### 16.1. *Date of revision:*

23 October, 2022

### 16.2. *Department issuing this SDS*

Quality systems and regulatory affairs

### 16.3. *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.

### 16.4. *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.

### 16.5. *No-Copyright statement*

Fermentek\_Ltd does not claim © copyright on this document. Fermentek\_Ltd believes that no one can claim copyright on an MSDS. This sort of document is but a compendium of common knowledge published facts and even the writing style is standard.

### 16.6. *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
PPE	Personal Protection Equipment
PBT:	Persistent, Bioaccumulative and Toxic
PEL:	Permissible Exposure Limit
REL:	Recommended Exposure Limit
Repr.:	Reproductive toxicity
RTECS:	Registry of Toxic Effects of Chemical Substances
Skin Irrit:	Skin corrosion/irritation
STOT RE:	Specific target organ toxicity (repeated exposure)



# Safety Data Sheet: *Valinomycin*

TLV:	Threshold Limit Value
vPvB:	Very Persistent and Very Bioaccumulative

16.7. *End of SDS*