



Safety Data Sheet: *Cerulenin*

1. Identification of the Substance and the Manufacturer

1.1. Product identifiers

Product name	<i>Cerulenin</i>	Formula	$C_{12}H_{17}NO_3$
Product Code	CER	RTECS	JR1670000
CAS #	17397-89-6	Molecular weight	223.27
EC Number #	241-424-8	Substance? Mixture?	Substance
Synonyms	<i>Helicocerin ; 3-Nona-4,7-dienoyl-oxirane-2-carboxylic acid amide</i>		
Source	<i>Giberella zeae</i>	Date of version	6 December, 2022

1.2. Intended uses of the Substance and uses advised against

1.2.1. Intended use:	1.2.2. Uses advised against:
<i>Research and development. Laboratory reagent. Reference material. Manufacturing of substances. To be used by professionals only</i>	<i>Not a drug, Not a food additive Not to be used in humans or animals.</i>

1.3. Contacts

1.3.1. Details of the supplier of the SDS

FERMENTEK ltd 4 Yatziv street, POB 47120 Jerusalem 97800, Israel	Tel: +972 2 5853953 Fax: +972 2 5853943 eMail: Fermentek@Fermentek.com Safety@Fermentek.com Website: www.Fermentek.com
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This company is the manufacturer of the product and the supplier of the safety data sheet

1.3.2. Emergency Telephone number

*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*

2. Hazards' identification

2.1. Classification of the substance or mixture

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

Acute toxicity - oral	Cat. 4	Harmful if swallowed.
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2.2. GHS Label elements, including precautionary statements

2.2.1. Pictogram: {  } Signal word: {Warning}

2.2.2. Hazard Statements

H302	Harmful if swallowed.
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2.2.3. GHS Precautionary Statements

P201	Obtain special instructions before use.
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P202	<i>Do not handle until all safety precautions have been read and understood</i>
P260	<i>Do not breathe dust or mist.</i>
P262	<i>Do not get in eyes, on skin, or on clothing</i>
P264	<i>Wash {hands} thoroughly after handling.</i>

2.2.4. GHS Response Phrases:

P301+P301+P330	<i>IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</i>
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3. Composition/information on ingredients

Substance	
Substance name:	<i>Cerulenin</i>
Concentration	<i><=100%</i>
CAS Registry#:	<i>17397-89-6</i>
EC#:	<i>241-424-8</i>
Molecular Formula:	<i>C₁₂H₁₇NO₃</i>
Molecular Weight:	<i>223.27</i>
Classification	<i>Acute Oral 4</i>
Mixture?	<i>Substance .</i>

4. First Aid Measures

4.1. Description of First Aid Measures

General advice:	<i>If medical attention is required, consult a physician. Show this safety data sheet to the doctor in attendance.</i>
Eye contact:	<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>
Skin Contact:	<i>Consult a physician if necessary. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes</i>
Ingestion:	<i>Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Do NOT induce vomiting.</i>
Inhalation:	<i>If inhaled, move person into fresh air. Consult a physician</i>

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

General symptoms	<i>None known</i>
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4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians	<i>No data available</i>
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5. Fire-fighting measures

5.1. Extinguishing media

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

5.2. Other information

Hazardous combustion products	<i>Carbon oxides, Nitrogen oxides (NO_x). Sulphur oxides (S_xO_y)</i>
Advice for firefighters	<i>Wear self-contained breathing apparatus for fire fighting if necessary. Wear protective suit.</i>



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6. *Accidental release measures*

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

<i>Personal precautions</i>	<i>Use personal protective equipment as required. 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 the powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.</i>
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<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>
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7. *Handling and storage*

7.1. *Precautions for safe handling*

<i>Advice on safe handling:</i>	<i>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. Handle in accordance with good industrial hygiene and safety practices. Corrosive hazard. Wear protective gloves/clothing and eye/face protection.</i>
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7.2. *Conditions for safe storage, including any incompatibilities*

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

8.1. *Control parameters*

<i>Control parameters</i>	<i>Components with workplace control parameters</i>
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8.2. *Exposure controls*

<i>Appropriate engineering controls</i>	<i>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.</i>
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8.3. *Personal protective equipment*

<i>[PPE=Personal Protection Equipment]</i>	
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<i>PPE: Respiratory protection</i>	<i>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).</i>
<i>PPE: Hand Protection:</i>	<i>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</i>
<i>PPE: Eye Protection:</i>	<i>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)</i>
<i>PPE: Skin and Body Protection:</i>	<i>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.</i>

9. *Physical and chemical properties*

9.1. *Physical/chemical properties*

<i>Physical State at room temperature</i>	<i>Solid / powder</i>
<i>Color</i>	<i>White</i>
<i>Melting/freezing point</i>	<i>93 °C</i>
<i>No further safety relevant data are available</i>	

10. *Stability and reactivity*

<i>Reactivity:</i>	<i>No information available.</i>
<i>Chemical stability:</i>	<i>Stable under normal conditions.</i>
<i>Conditions to avoid</i>	<i>Heat, flames and sparks. Sunlight.</i>
<i>Incompatible materials</i>	<i>Strong reducers and oxidizers</i>
<i>Possibility of Hazardous Reactions</i>	<i>None under normal processing</i>
<i>Hazardous decomposition products</i>	<i>Hazardous decomposition products formed under fire conditions.: Carbon oxides. Nitrogen oxides (NO_x)</i>

11. *Toxicological information*

11.1. *Information on toxicological effects*

To the best of our knowledge, the toxicological effects of this product have not been thoroughly studied yet.

11.1.1. *Acute Toxicity*

<i>Oral toxicity:</i>	<i>Oral, Mouse; LD50 =547 mg/kg</i>
<i>Skin corrosion/irritation:</i>	<i>No data available</i>
<i>Serious eye damage/eye irritation:</i>	<i>No data available</i>
<i>Respiratory or skin sensitization/corrosion:</i>	<i>No data available</i>



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11.1.2. Chronic toxicity

Chronic toxicity	Zearalenone - Investigated as a drug, hormone, mutagen, natural product, primary irritant, reproductive effector, and tumorigen
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11.1.3. CRM (Carcinogene, Mutagene, Reproductive hazards)

Germ cell mutagenicity:	No data available
Carcinogenicity:	IARC: Group 3: Not classifiable as to its carcinogenicity to humans (Zearalenone)
Reproductive toxicity / Teratogenicity:	Suspected of damaging the unborn child.

11.2. Additional information

RTECS number	JR1670000
General symptoms	Cough, Shortness of breath, Headache, Nausea, Vomiting

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	ADR/RID	IATA	IMDG
UN Number UN proper shipping name	Not dangerous goods. Not hazardous for transportation (Cerulenin)	Not dangerous goods. Not hazardous for transportation (Cerulenin)	Not dangerous goods. Not hazardous for transportation (Cerulenin)	Not dangerous goods. Not hazardous for transportation (Cerulenin)
Transport Hazard Class & Packing Group	Not regulated	Not regulated	Not regulated	Not regulated
Additional information			Not marine pollutant	

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)
SARA 302 Components	No chemicals in this material are 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



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<i>California Proposition 65</i>	<i>This product does not contain any Proposition 65 chemicals.</i>
<i>EU ECHA Status</i>	<i>This product is REGISTERED with the EU ECHA, Number 241-424-8 ANNEX III (criteria for 1 - 10 tonne registered substances): Listed REACH: Preregistered</i>
<i>Canada, DSL/NDSL</i>	<i>Not listed (As of 10-2022)</i>

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. **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.

16.5. **Abbreviations and acronyms:**

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



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STOT RE: *Specific target organ toxicity (repeated exposure)*

TLV: *Threshold Limit Value*

vPvB: *Very Persistent and Very Bioaccumulative*

16.6. End of SDS