



Safety Data Sheet: *Mitomycin C*

1. Identification of the Substance and the Manufacturer

1.1. Product identifiers

Product name	Mitomycin C	Formula	$C_{15}H_{18}N_4O_5$
Product Code	MI	RTECS	CN0700000
CAS #	50-07-7	Molecular weight	334.37
EC Number #	200-008-6	Substance? Mixture?	Substance
Synonyms	<ul style="list-style-type: none"> • Ametycin • 7-Amino-9-alpha-methoxymitosane • Azirino(2',3':3,4)pyrrolo(1,2-a)indole-4,7-dione,6-amino-1,1a,2,8,8a,8b-hexahydro-8-(hydroxymethyl)-8a-methoxy-5-methyl-, carbamate (ester) 		
Source	<i>Streptomyces caespitosus</i>	Version Date	13 December, 2022

1.2. Intended uses of the Substance and uses advised against

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



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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. 2	H300 Fatal if swallowed
Carcinogenicity	Cat. 2	H351 Suspected of causing cancer
Reproductive toxicity	Cat. 1B	H360FD May damage fertility. May damage the unborn child.

2.2. GHS Label elements, including precautionary statements

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

2.2.2. Hazard Statements

H300	Fatal if swallowed.
H350	May cause cancer
H360FD	May damage fertility. May damage the unborn child.

2.2.3. GHS Precautionary Statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood
P261	Avoid breathing dust or mist.
P264	Wash {hands} thoroughly after handling.

2.2.4. GHS Response Phrases:

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor
P308+313	If exposed or concerned: Get medical advice/attention

3. Composition/information on ingredients

Substance	
Substance name:	Mitomycin C
Concentration	<=100%
CAS Registry#:	50-07-7
EC#:	200-008-6
Molecular Formula:	<i>C₁₅H₁₈N₄O₅</i>
Molecular Weight:	334.3
Classification	Acute Tox. 3; H301
Mixture?	Substance .

4. First Aid Measures

4.1. Description of First Aid Measures

General advice:	First-aiders need to protect themselves. If medical attention is required, show this safety data sheet to the doctor in attendance.
Eye contact:	Rinse out with plenty of water. Remove contact lenses.
Skin Contact:	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.
Ingestion:	If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not



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	available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.
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Inhalation:	If inhaled, move the person into fresh air.
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4.2. Most important symptoms and effects, both acute and delayed

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

Note to physicians	No data available
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5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
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Unsuitable extinguishing media	None known
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5.2. Other information

Hazardous combustion products	Carbon oxides, Nitrogen oxides (NO _x). Sulphur oxides (S _x O _y)
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Advice for firefighters	Wear self-contained breathing apparatus for fire fighting if necessary. Wear protective suit.
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6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Use personal protective equipment as required. Keep people away from and upwind of spill/leak.
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6.2. Environmental precautions

Environmental precautions	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 the powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.
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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.
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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. Store at -20 °C.
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<i>Suitable packaging</i>	<i>Must only be kept in original packaging.</i>
<i>Incompatible materials:</i>	<i>None known based on information available.</i>

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</i> <i>Avoid contact with skin, eyes and clothing.</i> <i>Wash hands before breaks and immediately after handling the product.</i> <i>Use fumehood for routine work.</i>
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8.3. Personal protective equipment

<i>[PPE=Personal Protection Equipment]</i>	
<i>PPE: Respiratory protection</i>	<i>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).</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>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>



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<i>Hazardous decomposition products</i>	<i>Hazardous decomposition products formed under fire conditions.: Carbon oxides.</i>
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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>Acute toxicity:</i>	<i>Oral, rat; LD50 =30 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>

11.1.2. Chronic toxicity

<i>Chronic toxicity</i>	<i>No data available</i>
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11.1.3. CRM (Carcinogene, Mutagene, Reproductive hazards)

<i>Germ cell mutagenicity:</i>	<i>No data available</i>
<i>Carcinogenicity:</i>	<i>No data available</i>
<i>Reproductive toxicity / Teratogenicity:</i>	<ul style="list-style-type: none"> • <i>Rat, male, 15 day(s) pre-mating, 7.5 mg/kg: Paternal Effects - testes, epididymis, sperm duct; prostate, seminal vesicle, Cowper's gland, accessory glands</i> • <i>Rat, female, 6-10 days after conception, intraperitoneal, 2 mg/kg Effects on Embryo or Fetus – fetotoxicity; fetal death Teratogenicity: developmental abnormalities: craniofacial (including nose and tongue)</i>

11.2. Additional information

<i>RTECS number</i>	<i>CN0700000</i>
<i>General symptoms</i>	<i>Behavioral - somnolence (general depressed activity) Gastrointestinal - hypermotility, diarrhea Nutritional and Gross Metabolic - weight loss or decreased weight gain</i>

12. Ecological Information

<i>Eco-Toxicity</i>	<i>No data available</i>
<i>Other adverse effects</i>	<i>No data available</i>

13. Disposal Considerations

13.1. Waste treatment methods

<i>Waste from residues / unused products</i>	<i>Dispose of in accordance with local regulations</i>
<i>Contaminated packaging</i>	<i>Dispose of as unused product</i>

14. Transport information

14.1. UN number, Proper Shipping Name, Transport Hazard Class, packing group

<i>US DOT</i>	<i>ADR/RID</i>	<i>IATA</i>	<i>IMDG</i>
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<i>UN Number UN proper shipping name</i>	<i>UN 3462 Toxins, extracted from living sources, solid, n.o.s. (Mitomycin C)</i>	<i>UN 3462 Toxins, extracted from living sources, solid, n.o.s. (Mitomycin C)</i>	<i>UN 3462 Toxins, extracted from living sources, solid, n.o.s. (Mitomycin C)</i>	<i>UN 3462 Toxins, extracted from living sources, solid, n.o.s. (Mitomycin C)</i>
<i>Transport Hazard Class & Packing Group</i>	<i>6.1 poison III</i>	<i>6.1 poison III</i>	<i>6.1 poison III</i>	<i>6.1 poison III</i>
<i>Additional information</i>			<i>Not marine pollutant</i>	
<i>Excepted quantities</i>	<i>Not applicable</i>			
<i>De Minimis exemption</i>	<i>Not applicable</i>			

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation

<i>USA EPA / TSCA</i>	<i>This product is not listed on the USA EPA TSCA (it is for research)</i>
<i>SARA 302 Components</i>	
<i>SARA 313</i>	
<i>SARA 311/312 Hazard Categories</i>	<i>Acute health hazard Yes Chronic Health Hazard No</i>
<i>California Proposition 65</i>	
<i>EU ECHA Status</i>	<i>This product is REGISTERED with the EU ECHA, Number 200-008-6 ANNEX III (criteria for 1 - 10 tonne registered substances): Listed REACH: Preregistered</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.



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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>
<i>STOT RE:</i>	<i>Specific target organ toxicity (repeated exposure)</i>
<i>TLV:</i>	<i>Threshold Limit Value</i>
<i>vPvB:</i>	<i>Very Persistent and Very Bioaccumulative</i>

16.6. End of SDS