Mitomycin C

Cat#: orb340242 (MSDS)

Section 1. Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product Code: orb340242
Product Name: Mitomycin C
Synonyms: 6-amino-8-[[(aminocarbonyl)oxy]methyl]-1,1aS,2,8S,8aR,8bS-hexahydro-8a-methoxy-5-methyl-azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione; Ametycine; MitoExtra; Mitonco; Mitoplus; MMC;NSC 26980;

1.2 Relevant identified uses of the substance or mixture and uses advised against:
Relevant identified uses: For research use only, not for human or veterinary use.

Section 2. Hazards Identification

2.1 Classification of the Substance or Mixture:
Acute Toxicity: Oral, Category 2
Carcinogenicity, Category 2

2.2 Label Elements:
GHS Signal Word: Danger
GHS Hazard Phrases:
H300: Fatal if swallowed.
H351: Suspected of causing cancer.
GHS Precautionary Phrases:
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P264: Wash {hands} thoroughly after handling.
P280: Wear {protective gloves/protective clothing/eye protection/face protection}.
GHS Response Phrases:
P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P308+313: IF exposed or concerned: Get medical attention/advice.
P330: Rinse mouth.
GHS Storage and Disposal Phrases:
Please refer to Section 7 for Storage and Section 13 for Disposal information.

2.3 Adverse Human Health California Prop. 65 carcinogen
Effects and Symptoms: Fatal if swallowed.
Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation or skin absorption.
May cause eye, skin, or respiratory system irritation.

Suspected of causing cancer.
To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Section 3. Composition/Information on Ingredients

CAS # / RTECS #	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
50-07-7 CN0700000	Mitomycin C	100.0 %	200-008-6 NA	Acute Tox.(O) 2: H300 Carcinogen 2: H351

Section 4. First Aid Measures

4.1 Description of First Aid Measures:
In Case of Eye Contact:
Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Have eyes examined and tested by medical personnel.
In Case of Skin Contact:
Immediately wash skin with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.
In Case of Ingestion:
Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
In Case of Inhalation:
Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

4.2 Important Symptoms and Effects, Both Acute and Delayed:
Exposure may cause: Nausea, vomiting, diarrhea, alopecia.
Inhalation may cause: pulmonary fibrosis and permanent damage.
To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Section 5. Fire Fighting Measures

5.1 Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
Unsuitable Extinguishing Media: A solid water stream may be inefficient.

5.2 Flammable Properties and Hazards: No data available.
Flash Pt: No data.
Explosive Limits: LEL: No data. UEL: No data.
Autoignition Pt: No data.

5.3 Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

Section 6. Accidental Release Measures

6.1 Protective Precautions, Protective Equipment and Emergency Procedures: Avoid raising and breathing dust, and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

6.2 Environmental Precautions: Take steps to avoid release into the environment, if safe to do so.

6.3 Methods and Material For Containment and Cleaning Up: Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

Section 7. Handling and Storage

7.1 Precautions To Be Taken in Handling: Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.

7.2 Precautions To Be Taken in Storing: Keep container tightly closed. Store in accordance with information listed on the product insert.

Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:
8.2 Exposure Controls:
8.2.1 Engineering Controls (Ventilation etc.): Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
8.2.2 Personal protection equipment:
Eye Protection: Safety glasses
Protective Gloves: Compatible chemical-resistant gloves
Other Protective Clothing: Lab coat
Respiratory Equipment (Specify Type): NIOSH approved respirator, as conditions warrant.
Work/Hygienic/Maintenan ce Practices: Do not take internally.
Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.
Wash thoroughly after handling.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties
Physical States: [ ] Gas [ ] Liquid [X] Solid
Appearance and Odor: A crystalline solid
pH: No data.
Melting Point: No data.
Boiling Point: No data.
Flash Pt: No data.

Evaporation Rate: No data.
Flammability (solid, gas): No data available.
Explosive Limits: LEL: No data. UEL: No data.
Vapor Pressure (vs. Air or mm Hg): No data.
Vapor Density (vs. Air = 1): No data.
Specific Gravity (Water = 1): No data.
Solubility in Water: No data.
Solubility Notes: ~0.5 mg/ml in PBS (pH 7.2); ~0.1 mg/ml in EtOH; ~20 mg/ml in DMSO & DMF;
Octanol/Water Partition Coefficient: No data
Autoignition Pt: No data.
Decomposition Temperature: No data.
Viscosity: No data.

9.2 Other Information
Percent Volatile: No data.
Molecular Formula & Weight: C15H18N4O5 334.3

Section 10. Stability and Reactivity

10.1 Reactivity: No data available.
10.2 Stability: Unstable [ ] Stable [X]
10.3 Stability Note(s): Stable if stored in accordance with information listed on the product insert.
Polymerization: Will occur [ ] Will not occur [X]
10.4 Conditions To Avoid: No data available.
10.5 Incompatibility – Materials To Avoid: strong acids
strong bases
strong oxidizing agents
10.6 Hazardous Decomposition or Byproducts: carbon dioxide
carbon monoxide
nitrogen oxides

Section 11. Toxicological Information

11.1 Information on Toxicological Effects: The toxicological effects of this product have not been thoroughly studied. Mitomycin C - Toxicity Data: Oral LD50 (rat): 30 mg/kg; Subcutaneous LD50 (rat): 3250 ug/kg; Oral LD50 (mouse): 23 mg/kg; Intraperitoneal LD50 (mouse): 4 mg/kg; Subcutaneous LD50 (mouse): 7300 ug/kg;
Chronic Toxicological Effects: Mitomycin C - Investigated as a drug, mutagen, natural product, reproductive effector, and tumorigen.
Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information. Mitomycin C RTECS Number: CN0700000
Carcinogenicity/Other Information: California Prop. 65 carcinogen.
IARC: Group 2B: Possible human carcinogen (Mitomycin C)

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
50-07-7	Mitomycin C	n.a.	2B	n.a.	n.a.

Section 12. Ecological Information

12.1 Toxicity: Avoid release into the environment.
Runoff from fire control or dilution water may cause pollution.
12.2 Persistence and Degradability: No data available.
12.3 Bioaccumulative Potential: No data available.
12.4 Mobility in Soil: No data available.
12.5 Results of PBT and vPvB assessment: No data available.
12.6 Other adverse effects: No data available.

Section 13. Disposal Considerations

13.1 Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT):
DOT Proper Shipping Name: Toxin, extracted from living sources, solid, n.o.s. (Mitomycin C)
DOT Hazard Class: 6.1 POISON
UN/NA Number: UN3462 **Packing Group:** III
14.1 LAND TRANSPORT (European ADR/RID):
ADR/RID Shipping Name: Toxin, extracted from living sources, solid, n.o.s. (Mitomycin C)
UN Number: 3462 **Packing Group:** III
Hazard Class: 6.1 – POISON
14.3 AIR TRANSPORT (ICAO/IATA):
ICAO/IATA Shipping Name: Toxin, extracted from living sources, solid, n.o.s. (Mitomycin C)
UN Number: 3462 **Packing Group:** III
Hazard Class: 6.1 - POISON **IATA Classification:** 6.1
Additional Transport Information: Transport in accordance with local, state, and federal regulations.
When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10. Therefore, packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.

Section 15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
50-07-7	Mitomycin C	Yes 500 LB	Yes 10 LB	No

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
50-07-7	Mitomycin C	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory, 5A(2), 12(b); CA PROP.65: Yes: Canc.