

SAFETY DATA SHEET

NAME OF PRODUCT Mitomycin C

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product/Catalog Number(s):

26-812

0.2 µg/disc, 10 discs/vial

Product name:

Mitomycin C

Synonyms:

MMC; Ametycin; Mitoplus; Ametycine; Mytomycin; 7-Amino-9- α -methoxymitosane

Manufacturer:

Molecular Toxicology Inc.

Address:

157 Industrial Park Drive, Boone, North Carolina, 28607

Phone:

(1) 828 264 9099 (8:30 – 17:00 EST)

Fax:

828 264 0103

**Emergency contact
(Chemtrec):**

Contact 1800-424-9300 (USA) or 703 527 3887 (International) at other times
Email: chemtrec@chemtrec.com; <http://www.chemtrec.com/>

Recommended use:

Laboratory, For Research Only

Restrictions on use:

Not for clinical use

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture per GSH and EU Directive 1272/2008



Danger

Physical hazards

None known

Health hazards

Acute Toxicity, Oral (Category 2)

Carcinogenicity (Category 2)

Environmental hazards

See eco-toxicity section 12.

Labelling

Hazard Statements

H300 Fatal if swallowed

H351 Suspected of causing cancer

Version date 01/20/2017

Molecular Toxicology
828-264-9099

SAFETY DATA SHEET

Precautionary Statements

P201 Receive special instructions before use
P202 Do not handle until all safety precautions are understood
P264 Wash hands thoroughly after handling
P270 Do not eat, drink or smoke when using this product
P281 Use protective equipment as required
P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P330 Rinse mouth
P308 + 313 IF exposed or concerned: get medical advice/attention
P321 - Specific treatment (see supplemental instructions on the administration of antidotes in First Aid Measures section).
P405 Store locked up
P501 Dispose of contents/container in accordance with local/regional/national/international regulations

Hazards not otherwise classified or not covered by GHS

None

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Component	Purpose	CAS-No	EC-No.	Weight %
C ₁₅ H ₁₈ N ₄ O ₅ Mitomycin C	Positive control for Ames test, <i>uvr</i> phenotype testing	50-07-7	200-008-6	Varies by product

SECTION 4. FIRST AID MEASURES

Description of first aid measures

Eye Contact	Rinse eyes and under eyelids immediately with plenty of water. Consult a doctor.
Skin Contact	Wash off immediately with plenty of soap and water and rinse thoroughly. Seek immediate medical advice.
Ingestion	Rinse mouth with plenty of water. Never give anything by mouth to an unconscious person. Seek immediate medical attention.
Inhalation	Move to fresh air. If required, provide artificial respiration. Keep patient warm. Get medical attention for any breathing difficulties.
Protection of first-aiders	Not required
In the event that symptoms develop or persists, obtain medical attention.	

Most important symptoms and effects, both acute and delayed

Acute: Ingestion - Exposure may cause: Nausea, vomiting, diarrhea, alopecia.

Chronic: Inhalation may cause: pulmonary fibrosis and permanent damage

Indication of any immediate medical attention and special treatment needed

Seek medical attention if ingested or if breathing difficulties are observed.

Antidote

Version date 01/20/2017

Molecular Toxicology
828-264-9099

SAFETY DATA SHEET

DMSO: extravasation exposure (topical)

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media

Not flammable; use media suitable for extinguishing surrounding fire (carbon dioxide, extinguishing powder or water spray). Fight larger fires with water spray or alcohol resistant foam. A solid water stream may not be suitable.

Special hazards arising from the substance or mixture

Hazardous thermal decomposition products: Carbon monoxide, nitrogen oxides, sulfur dioxide, sodium oxides, hydrogen chloride gas

Advice for firefighters

Fire-fighters should wear fully protective impervious protective equipment and self-contained breathing apparatus (SCBA).

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Evacuate surrounding areas. Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas.

Environmental precautions

Do not release material into drains.

Methods and material for containment and cleaning up

Dispose contaminated material as waste according to section 13. Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal. Mitomycin is an RCRA listed hazardous waste: EPA Code U010. Reportable Quantity: 10 lbs.

Reference to other sections

Refer to Sections 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Conditions for safe storage, including any incompatibilities

Store according to product packaging, tightly sealed. Keep in a dry, well-ventilated place. Recommended storage temperature 2-8°C.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters*Exposure limits*

Contains no substances with occupational exposure limit values.

Monitoring methods

N/A

Exposure controls*Engineering Measures*

Ensure adequate ventilation, especially in confined areas

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimize release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source. Use of a properly operating chemical fume hood designed for hazardous chemicals is recommended.

Personal protective equipment

Eye Protection: Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Hand Protection

Chemical resistant gloves; nitrile rubber recommended. Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves (refer to manufacturer/supplier for information). If material is solubilized, account for solvent in glove assessment.

Remove gloves with care avoiding skin contamination.

Skin and body protection

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection

Exposure risk assessment must be performed by a qualified Industrial Hygienist. Where risk assessment shows air purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. NIOSH approved Respiratory Protection is required by EPA. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hygiene Measures - Handle in accordance with good industrial hygiene and safety practice. Wash hands, forearms and face thoroughly after handling chemical products, before smoking, eating and using lavatory, and at the end of the work period. Employ techniques to avoid contamination of clothing. Keep away from food, beverages, and feed.

Environmental exposure controls – Properly operating chemical fume hood designed for hazardous chemicals.

Exposure limits

Permissible Exposure Limits and Threshold Limit Values not specified by OSHA.

SAFETY DATA SHEET

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	60-100	Blue – purple powder
	60-100.10	
	60-100.20	
	60-100.6	
	60-100.7	
	60-100.11	
	60-100A100D	Liquid, light blue-purple
	60-100A100W	
	60-123	
	60-172	
	60-183	
	26-812	Paper disc, light blue-purple
Auto-ignition temperature	no data available	
Boiling point	no data available	
Decomposition temperature	no data available	
Evaporation Rate	no data available	
Flammable limits in air	no data available	
Flash point	no data available	
Formula	C ₁₅ H ₁₈ N ₄ O ₅	
Melting point	≥ 360°C (powder; N/A for liquid part numbers or 26-812)	
Molecular weight	334.3 g/mol	
Odor threshold	no data available	
Osmolality	no data available	
Partition coefficient	no data available	
pH	no data available	
Solubility in water	Soluble	
Specific gravity	no data available	
Vapor density	no data available	
Vapor pressure	no data available	
Viscosity	no data available	

SAFETY DATA SHEET

Other information

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive.

Chemical stability

Stable under normal conditions. Decomposition will not occur if used and stored appropriately.

Possibility of hazardous reactions

No hazardous reactions known.

Conditions to avoid

No specific data.

Incompatible materials

Strong acids, strong bases, strong oxidizers

Hazardous decomposition products

Carbon monoxide, carbon dioxide, nitrogen oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

For active ingredient Mitomycin C: RTCES #CN0700000

LD ₅₀ oral, rat:	30 mg/kg
LD ₅₀ oral, mouse:	23 mg/kg
LD ₅₀ subcutaneous, rat:	3250 µg/kg
LD ₅₀ intraperitoneal, mouse:	4 mg/kg
LD ₅₀ intraperitoneal, rat:	1 mg/kg
LD ₅₀ subcutaneous, mouse:	7300 µg/kg
LD ₅₀ intravenous, rat:	3 mg/kg
LD ₅₀ intravenous, dog:	720 µg/kg

Other information on acute toxicity

Microsomal mutagenicity toxicity: 5 mcg/plate

Cytogenic analysis system test (human, fibroblast): 100 mcg/L

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

Version date 01/20/2017

Molecular Toxicology
828-264-9099

SAFETY DATA SHEET

California prop. 65 carcinogen

IARC: Group 2B: Possible human carcinogen (Mitomycin C)

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

Teratogenicity

No data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

No data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

No data available

Aspiration hazard

No data available

Potential health effects

Inhalation Harmful if inhaled.

Ingestion Harmful if swallowed.

Skin May be fatal if absorbed through skin. Causes skin irritation.

Eyes Causes eye irritation.

Synergistic effects

No data available

Additional toxicological information:

RTECS: CN0700000

SECTION 12. ECOLOGICAL INFORMATION

Toxicity

Aquatic ecotoxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Behavior in environment systems: No further relevant information available.

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Additional ecological information:

General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course, or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

Results of PBT and vPVB Assessment

PBT: Not applicable

Version date 01/20/2017

Molecular Toxicology
828-264-9099

SAFETY DATA SHEET

vPvB: Not applicable

Other adverse effects: No further relevant information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

DOT regulations:

UN Number: UN 3462

Class: 6.1 - POISON

Packing Group: II

Proper shipping name: Toxins, extracted from living sources, solid, n.o.s. (Mitomycin C)

Marine pollutant: No

Land transport ADR/RID (cross-border)

UN Number: UN 3462

Class: 6.1 - POISON

Packing Group: II

Proper shipping name: Toxins, extracted from living sources, solid, n.o.s. (Mitomycin C)

Marine pollutant: No

Maritime transport IMDG:

UN Number: UN 3462

Class: 6.1 - POISON

Packing Group: II

Proper shipping name: Toxins, extracted from living sources, solid, n.o.s. (Mitomycin C)

Marine pollutant: No

Air transport ICAO_TI and IATA-DGR:

UN Number: UN 3462

Class: 6.1 - POISON

Packing Group: II

Proper shipping name: Toxins, extracted from living sources, solid, n.o.s. (Mitomycin C)

Marine pollutant: No

Special precautions for user: Not applicable

Transport/Additional information:

SAFETY DATA SHEET

When sold in quantities of less than or equal to 1 ml, or 1g, 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.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

SECTION 15. REGULATORY INFORMATION

SARA 302 Components

SARA 302: Chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302:

50-07-7 Mitomycin C: 500 lbs

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

50-07-7 Mitomycin C Codes: 1, 7*E*C*F6 F8

Pennsylvania Right To Know Components

50-07-7 Mitomycin C Code: ES

New Jersey Right To Know Components

50-07-7 Mitomycin C Listed as an extremely hazardous substance

California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer.

50-07-7 Mitomycin C

SECTION 16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Molecular Toxicology, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product. See www.moltox.com and/or the invoice or packing slip for additional terms and conditions of sale.