

1 Identification

- **Product identifier**
- **Trade name:** Mitomycin C, Antibiotic Class
- **Article number:** 100498
- **CAS Number:**
50-07-7
- **EC number:**
200-008-6
- **Molecular Formula** C₁₅H₁₈N₄O₅
- **Molecular Weight** 334.33 g/mol
- **Application of the substance / the mixture** Research use only.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
MP Biomedicals, LLC
29525 Fountain Parkway
Solon, OH 44139
United States
www.mpbio.com
- **Information department:** Product safety department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Toxicity (Oral) - Category 2 H300 Fatal if swallowed.



GHS08 Health hazard

Carcinogenicity – Category 2 H351 Suspected of causing cancer.

- **Label elements**

- **GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS06



GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

mitomycin

- **Hazard statements**

Fatal if swallowed.

Suspected of causing cancer.

- **Precautionary statements**

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Wear protective gloves/protective clothing/eye protection/face protection.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

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- Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
 Specific treatment (see on this label).
 IF exposed or concerned: Get medical advice/attention.
 Rinse mouth.
 Store locked up.
 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Hazard description:**
 - **WHMIS-symbols:**
 D1A - Very toxic material causing immediate and serious toxic effects
 D2B - Toxic material causing other toxic effects



- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	*3	Health = *3
FIRE	1	Fire = 1
REACTIVITY	0	Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
50-07-7 mitomycin
- **Identification number(s)**
- **EC number:** 200-008-6

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Do not induce vomiting; immediately call for medical help.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

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- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Thorough dedusting.
Open and handle receptacle with care.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 2 - 8 °C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
- **Breathing equipment:** Not required.

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· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Not required.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Powder
Color:	Indeterminate
Odor:	Characteristic
Odor threshold:	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

Melting point/Melting range:	360 °C
Boiling point/Boiling range:	581.78 °C

· **Flash point:** 306 °C

· **Flammability (solid, gaseous):** Product is not flammable.

· **Ignition temperature:**

Decomposition temperature: Not determined.

· **Auto igniting:** Not determined.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

· **Vapor pressure:** Not applicable.

Density at 20 °C:	1.56 g/cm ³
Relative density	Not determined.
Vapor density	Not applicable.
Evaporation rate	Not applicable.

· **Solubility in / Miscibility with**
 · **Water:** Soluble.

· **Partition coefficient (n-octanol/water):** Not determined.

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· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
Organic solvents:	0.0 %
· Solids content: 100.0 %	
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· LD/LC50 values that are relevant for classification:

50-07-7 mitomycin

Oral	LD50	30 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)

50-07-7	mitomycin	2B
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- **NTP (National Toxicology Program)**

Substance is not listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**

Water hazard class 3 (Assessment by list): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

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- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|---|--|
| <ul style="list-style-type: none"> · UN-Number · DOT, TDG, IMDG, IATA | <p style="margin: 0;">UN2811</p> |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT, IATA · TDG · IMDG | <p style="margin: 0;">Toxic solids, organic, n.o.s. (mitomycin)</p> <p style="margin: 0;">2811 Toxic solids, organic, n.o.s. (mitomycin)</p> <p style="margin: 0;">TOXIC SOLID, ORGANIC, N.O.S. (mitomycin)</p> |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT | <div style="text-align: center; margin-bottom: 10px;">  </div> <p style="margin: 0;">6.1 Toxic substances</p> |
| <ul style="list-style-type: none"> · Class · Label · TDG, IMDG, IATA | <p style="margin: 0;">6.1</p> |
| <ul style="list-style-type: none"> · Class · Label | <div style="text-align: center; margin-bottom: 10px;">  </div> <p style="margin: 0;">6.1 Toxic substances</p> <p style="margin: 0;">6.1</p> |
| <ul style="list-style-type: none"> · Packing group · DOT, TDG, IMDG, IATA | <p style="margin: 0;">II</p> |
| <ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: | <p style="margin: 0;">No</p> |
| <ul style="list-style-type: none"> · Special precautions for user · EMS Number: · Stowage Category | <p style="margin: 0;">Warning: Toxic substances</p> <p style="margin: 0;">F-A,S-A</p> <p style="margin: 0;">B</p> |
| <ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | <p style="margin: 0;">Not applicable.</p> |
| <ul style="list-style-type: none"> · Transport/Additional information: · DOT · Quantity limitations | <p style="margin: 0;">On passenger aircraft/rail: 25 kg</p> <p style="margin: 0;">On cargo aircraft only: 100 kg</p> |

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· Hazardous substance:	104 lbs, 47.2 kg
· TDG	
· Excepted quantities (EQ)	Code: E4 Maximum net quantity per inner packaging: 1 g Maximum net quantity per outer packaging: 500 g
· IMDG	
· Limited quantities (LQ)	500 g
· Excepted quantities (EQ)	Code: E4 Maximum net quantity per inner packaging: 1 g Maximum net quantity per outer packaging: 500 g
· UN "Model Regulation":	UN 2811 TOXIC SOLIDS, ORGANIC, N.O.S. (MITOMYCIN), 6.1, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

Substance is listed.

· **Section 313 (Specific toxic chemical listings):**

Substance is not listed.

· **TSCA (Toxic Substances Control Act):**

Substance is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

Substance is listed.

· **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

Substance is not listed.

· **TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

Substance is not listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

Substance is not listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

Substance is not listed.

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· **GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS06 GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

mitomycin

· **Hazard statements**

Fatal if swallowed.

Suspected of causing cancer.

· **Precautionary statements**

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Wear protective gloves/protective clothing/eye protection/face protection.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

Specific treatment (see on this label).

IF exposed or concerned: Get medical advice/attention.

Rinse mouth.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing MSDS:** Product safety department

· **Date of preparation / last revision** 01/04/2016 / -

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

Acute Toxicity (Oral) - Category 2: Acute toxicity, Hazard Category 2

Carcinogenicity - Category 2: Carcinogenicity, Hazard Category 2