



Safety Data Sheet: Manumycin A

Section 1. Identification of the substance/mixture and of the Company

| Product identifiers | | | |
|---------------------|-------------|------------------|------------|
| Product name | Manumycin A | Formula | C31H38N2O7 |
| Product Code | MN | RTECS | N.A. |
| CAS # | 52665-74-4 | Molecular weight | 550.7 |
| EC Number # | N.A. | | |
| | | | |

| Intended uses of the substance or mixture and uses advised against | |
|--|--|
| Intended use | Uses advised against: |
| Only for Research and/or Development | Not for drug, Not to be used in humans or animals. Not food additive |

| Details of the supplier of the safety data sheet | | Emergency Telephone number |
|--|--|--|
| FERMENTEK Ltd 4 Yatziv street, POB 47120 Jerusalem 97800, Israel | Tel: +972 2 5853953 Fax: +972 2 5853943 eMail: fermentek@fermentek.com Website: www.fermentek.com | 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 |

This company is the manufacturer of the product, and the supplier of the safety data sheet

Reach: A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

Section 2. Hazards identification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122).

Classification of the substance or mixture

GHS Classification:

| | | | |
|-------------------------------|-------------|------|--------------------------------|
| Accute toxicity, oral | Category 4 | H302 | Harmful if swallowed. |
| Accute toxicity, dermal | Category 4 | H312 | Harmful in contact with skin. |
| Serious eye damage/irritation | Category 2A | H319 | Causes serious eye irritation. |

GHS Label elements, including precautionary statements

Pictogram: {  } Signal word: { **Warning** }

| | |
|----------------|--|
| H319 | Causes serious eye irritation |
| P270 | Do not eat, drink or smoke when using this product. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P301+P312 | IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. |
| P302+P352 | IF ON SKIN: Wash with plenty of soap and water. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P312 | Call a POISON CENTER or doctor/physician if you feel unwell. |
| P330 | Rinse mouth. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P363 | Wash contaminated clothing before reuse. |



Section 3. *Composition/information on ingredients*

EC 1272/2008

Substance

| | |
|-----------------|--|
| Substance name: | Manumycin A |
| | CAS Registry #:52665-74-4 EC#:N.A. |
| | Molecular Formula: C ₃₁ H ₃₈ N ₂ O ₇ |
| | Concentration: ≤ 100% |
| Classification | Acute Toxicity category 4: H302; Acute Toxicity category 4 H312; Eye Irritation. category 2: H319; |

Mixture: Not mixture.

Section 4. *First Aid Measures*

Description of First Aid Measures

| | |
|--|--|
| General advice: | If medical attention is required, show this safety data sheet to the doctor. |
| Eye contact: | Wash with plenty of water. |
| Skin Contact: | Wash off with soap and plenty of water. |
| Ingestion: | Do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Drink plenty of water. Clean mouth with water and drink afterwards plenty of water. Call a physician |
| Inhalation: | Medical attention may be required. If symptoms persist, call a physician |
| Self-protection of the first aider: | Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. |
| Note to physicians | Treat symptomatically |

Section 5. *Fire-fighting measures*

Extinguishing media

| | |
|---------------------------------------|---|
| Suitable extinguishing media | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| Unsuitable extinguishing media | None |
| Hazardous combustion products | Carbon oxides, Nitrogen oxides. |
| Advice for firefighters | Wear self-contained breathing apparatus for fire fighting if necessary. Wear protective suit. |

Section 6. *Accidental release measures*

Personal precautions, protective equipment and emergency procedures

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

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for containment: Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up: 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.



Section 7. Handling and storage

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.

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, Protect from sunlight. Protect from moisture.

Incompatible materials: None known based on information available.

Section 8. Exposure Controls/Personal Protection

No occupational exposure limits are listed for this material.

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|-----------------------------------|-------------------|
| OSHA Permissible Exposure Limits | No Data Available |
| NIOSH Recommended Exposure Limits | No Data Available |
| ACGIH Threshold Limit Values | No Data Available |

Exposure controls

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering Controls 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.

Personal protective equipment

The employer/end user, prior to use of this product should perform all recommendations below are advisory in nature and a risk assessment. The type of protective equipment must be selected based on the amount and concentration of the dangerous material being used in the workplace.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

[PPE=Personal Protection Equipment]

| | |
|-------------------------------------|---|
| <i>PPE</i> Eye/face protection | Wear safety glasses with side shields (or goggles). |
| <i>PPE</i> Skin and Body Protection | Wear protective gloves and protective clothing. |
| <i>PPE</i> Respiratory Protection | If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations. |

Section 9. Physical and chemical properties

Physical / chemical properties

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|---|----------------|
| Physical State at room temperature | Solid / powder |
| Color | Purple powder |
| Melting/freezing point | 185°C -195°C |
| No further safety relevant data are available | |

Section 10. Stability and reactivity



| | |
|---|------------------------------------|
| Reactivity: | No information available. |
| Chemical stability: | Stable under normal conditions. |
| Conditions to avoid | Heat, flames and sparks. Sunlight. |
| Incompatible materials | Strong reducers and oxidizers |
| Possibility of Hazardous Reactions | None under normal processing |
| Hazardous decomposition products: | Carbon oxides, Nitrogen oxides |

Section 11. Toxicological information

Information on toxicological effects

The toxicological effects of this product have not been thoroughly studied.

| Acute Toxicity | |
|---|-------------------|
| Ingestion | No data available |
| Inhalation | No data available |
| Serious eye damage/eye irritation: | No data available |
| Skin corrosion/irritation: | No data available |
| Respiratory or skin sensitization: | No data available |
| Germ cell mutagenicity: | No data available |
| Reproductive toxicity / Teratogenicity: | No data available |
| Aspiration hazard: | No data available |
| Additional information: | RTECS: DM4676000 |

Section 12. Ecological Information

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|------------------------------|--|
| Eco-Toxicity | No further relevant information available |
| Other adverse effects | No further relevant information available. |

Section 13. Disposal Considerations

| Waste treatment methods | |
|---------------------------------------|---|
| Waste from residues / unused products | Dispose of in accordance with local regulations |
| Contaminated packaging | Dispose of as unused product |

Section 14. Transport information

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

| | US DOT | ADR/RID: | IMDG: | IATA |
|--|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| UN Number | Not regulated | Not regulated | Not regulated | Not regulated |
| UN proper shipping name | Not dangerous goods | Not dangerous goods | Not dangerous goods | Not dangerous goods |
| Transport Hazard Class & Packing Group | Not regulated Not dangerous goods | Not regulated Not dangerous goods | Not regulated Not dangerous goods | Not regulated Not dangerous goods |

Section 15. Regulatory information

| Safety, health and environmental regulations/legislation | |
|--|---|
| USA EPA / TSCA | This product is not listed on the USA EPA TSCA |
| EU ECHA Status | This product is not registered with the EU ECHA |
| CA: DSL/NDSL Status | This product is not listed on the Canadian DSL/NDSL |



Section 16. *Other information*

Date of revision: 28 May 2017

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.

End of SDS