






Safety Data Sheet: Puromycin-DiHydrochloride from FERMENTEK

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

1.1. Product identifiers

Product name	<u>Puromycin-DiHydrochloride</u> 	Formula	$C_{22}H_{29}N_7O_5 \cdot 2HCl$
Product Code	PU	RTECS	AU7355000 
CAS #	58-58-2	Molecular weight	544.5
EC Number #	<u>200-387-8</u> 	Substance? Mixture?	Substance
Synonyms	<ul style="list-style-type: none"> • Adenosine 3'-(alpha-amino-p-methoxyhydrocinnamamido)-3'-deoxy-N,N-dimethyl-, 2HCl • Puromycin dihydrochloride • Puromycin hydrochloride • Stylomycin hydrochloride 		
Source	<i>Streptomyces alboniger</i> (a microorganism)	Date of version	18 March, 2021

1.2. Intended uses of the substance or mixture and uses advised against

1.2.1. Intended use:	1.2.2. Uses advised against:
<ul style="list-style-type: none"> • Research and development. • Laboratory reagent. • To be used by professionals only 	<ul style="list-style-type: none"> • Not for drug, • Not to be used in humans or animals. • Not food additive

1.3. Details of the supplier of the SDS

1.4. 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		

1.5. Reach:

Number: 200-387-8	Registered: Annex III	Preregistration process
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2. Hazards identification

2.1. Classification of the substance

2.1.1. GHS Classification According to EU Reg. 1272/2008 and US OSHA 1910.1200)

Acute toxicity, Oral	(Category 4)	H302 harmful if swallowed
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2.2. GHS Label elements, including precautionary statements

2.2.1. Pictogram: {  }

2.2.2. Signal word {Danger}

2.2.3. GHS Hazard Statements

H302	Harmful if swallowed
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2.2.4. GHS Precautionary Statements

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.
P270	Do not eat, drink or smoke when using this product
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

2.2.5. GHS Response Phrases

P301+P312	If swallowed: call a poison center/doctor
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2.3. Other hazards

	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
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3. Composition/information on ingredients

Substance	
Substance name:	<i>Puromycin-DiHydrochloride</i>
Concentration	<i>100%</i>
CAS Registry#:	<i>58-58-2</i>
EC#:	<i>200-387-8</i>
Molecular Formula:	<i>C₂₂H₂₉N₇O₅-2HCl</i>
Molecular Weight:	<i>544.5</i>
Classification	<i>Acute toxicity, Oral (Category 4), H302</i>
Mixture?	<i>Substance.</i>



4. First Aid Measures

4.1. Description of First Aid Measures

4.1.1. General advice:	Consult a physician if necessary. Remove to fresh air. Show this safety data sheet to the doctor in attendance.
4.1.2. Inhalation:	If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
4.1.3. Ingestion:	Never give anything by mouth to an unconscious person. Clean mouth with water
4.1.4. Skin Contact:	If on skin: Wash skin with soap and water
4.1.5. Eye contact:	Rinse eyes with plenty of water. Remove contact lenses if any.

4.2. Most important symptoms and effects, both acute and delayed

4.2.1. Observations in mammals	TOXIC EFFECTS : Nutritional and Gross Metabolic - weight loss or decreased weight gain Lungs, Thorax, or Respiration - respiratory depression Gastrointestinal - hypermotility, diarrhea
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4.3. Indication of any immediate medical attention and special treatment needed

4.3.1. Note to physicians	Treat symptomatically
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5. Fire-fighting measures

5.1. Extinguishing media

5.1.1. Suitable extinguishing media	Use water foam Carbon dioxide (CO2) Dry powder
5.1.2. Unsuitable extinguishing media	None known

5.2. Other information

5.2.1. Hazardous combustion products	Carbon oxides; Nitrogen oxides
5.2.2. More information	Combustible.
5.2.3. Advice for firefighters	Wear self-contained breathing apparatus for fire fighting if necessary. Wear protective suit.

6. Accidental release measures

6.1. Personal precautions, protective equipment, and emergency procedures

Personal precautions	Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. 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 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

7.1.1. 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. Store at -20 °C. Some other manufacturers may advice storing temperature 2-8°C.
Suitable packaging	
Incompatible materials:	None known based on information available.

8. Exposure Controls/Personal Protection

8.1. Control parameters

8.1.1. Control parameters	Components with workplace control parameters
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8.2. Exposure controls

8.2.1. Appropriate 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.
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8.3. Personal protective equipment

[PPE=Personal Protection Equipment]



8.3.1. PPE: Respiratory protection	Where risk assessment shows air-purifying respirators are appropriate use a fullface 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).
8.3.2. PPE: Hand Protection:	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
8.3.3. PPE: Eye Protection:	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)
8.3.4. PPE: Skin and Body Protection:	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 must satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

9. Physical and chemical properties

9.1. Physical / chemical properties

9.1.1. Physical State at room temperature	Solid / powder
9.1.2. Color	Off White powder
Melting/freezing point	180-195°C
No further safety relevant data are available	

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	Nitrogen oxides. Carbon oxides.

11. Toxicological information

11.1. Information on toxicological effects

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

11.1.1. Acute Toxicity	
Oral	LD50 Oral – (Rodent, Mouse) –720 mg/kg;
11.1.2. Information on likely routes of exposure	
Inhalation	No data available
Skin corrosion/irritation:	No data available
Serious eye damage/eye irritation:	Irritating effect
Respiratory or skin sensitization/corrosion:	No data available




11.1.3. **CMR hazards** (Carcinogenic, mutagenic, reprotoxic)

Mutagenicity	Causes mutations in rodents in vivo
Germ cell mutagenicity:	No data available
Carcinogenicity:	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity / Teratogenicity:	No data available
STOT-SE – single exposure (GHS):	No data available
STOT-SE – repeated exposure (GHS):	No data available
Aspiration hazard:	No data available

11.1.4. **Potential Health Effects and Routes of Exposure**

If Inhaled	No data available
If swallowed	No data available
If on skin	No data available
If in Eyes	No data available

11.2. Additional information

	See section 4
RTECS number	AU7355000 

12. Ecological Information

Persistence and degradability	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Other adverse effects	No further relevant information available.

13. Disposal Considerations

13.1. Waste treatment methods

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

14. Transport information

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

	US DOT	IATA	IMDG	ADR/RID
UN Number UN proper shipping name	Not dangerous for transport and/or not regulated.	Not dangerous for transport and/or not regulated.	Not dangerous for transport and/or not regulated.	Not dangerous for transport and/or not regulated.
Transport Hazard Class & Packing Group	Not dangerous for transport and/or not regulated.	Not dangerous for transport and/or not regulated.	Not dangerous for transport and/or not regulated.	Not dangerous for transport and/or not regulated.
			Not marine pollutant	

14.2. Additional information

Excepted quantities (EQ)	Not applicable
De Minimis exemption	Not applicable



15. Regulatory information

15.1. Product-specific safety, health, and environmental regulations/legislation

USA EPA / TSCA	This product is not listed on the USA EPA TSCA (it is for research)
California proposit. 65	This product is not listed on California proposit. 65 as on Jan 3, 2020
EU ECHA Status	This product is registered with the EU ECHA, Number 200-387-8 REACH: pre registered ; ANNEX III: Listed
Canada	This product is not listed on the Canadian DSL/NDSL

16. Other information

16.1. Date of revision:

- Thursday, 18 March, 2021 13:03

16.2. Department issuing this SDS

- Quality systems and regulatory affairs

16.3. General Disclaimer

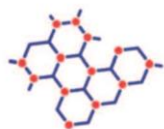
- The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication.
- The information given here is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to 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.

16.4. 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.

16.5. Comments:

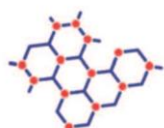
- Deprecated CAS Registry numbers: **none**







16.6. Abbreviations and acronyms:

- a. *Acute Tox.:* Acute toxicity
- b. *CAS:* Chemical Abstracts Service (division of the American Chemical Society)
- c. *DOT:* US Department of Transportation
- d. *EINECS:* European Inventory of Existing Commercial Chemical Substances
- e. *Eye Dam.:* Serious eye damage/eye irritation
- f. *HMIS:* Hazardous Materials Identification System (USA)
- g. *IATA:* International Air Transport Association
- h. *IMDG:* International Maritime Code for Dangerous Goods
- i. *LC50:* Lethal concentration, Median
- j. *LD50:* Lethal dose, Median
- k. *NFPA:* National Fire Protection Association (USA)
- l. *NIOSH:* National Institute for Occupational Safety
- m. *OSHA:* Occupational Safety & Health
- n. *PBT:* Persistent, Bioaccumulative and Toxic
- o. *PEL:* Permissible Exposure Limit
- p. *REL:* Recommended Exposure Limit
- q. *Repr.:* Reproductive toxicity
- r. *Skin Irrit:* Skin corrosion/irritation
- s. *STOT RE:* Specific target organ toxicity (repeated exposure)
- t. *TLV:* Threshold Limit Value
- u. *vPvB:* very Persistent and very Bioaccumulative

16.7. End of SDS



Source: <https://www.babelplex.com/a-guide-to-ghs-pictograms/>

<p>Toxic Acute toxicity (oral, dermal, inhalation) (cat. 1, 2, 3)</p> 	<p>Health Hazard Respiratory sensitization (cat. 1) Germ cell mutagenicity (cat. 1A, 1B, 2) Carcinogenicity (cat. 1A, 1B, 2) Reproductive toxicity (cat. 1A, 1B, 2) Specific target organ toxicity following single exposure (cat. 1, 2) Specific target organ toxicity following repeated exposure (cat. 1A, 1B, 2) Aspiration hazard (cat. 1, 2)</p> 	<p>Irritant Acute toxicity (oral, dermal, inhalation) (cat. 4) Skin irritation (cat. 2, 3) Eye irritation (cat. 2A) Skin sensitization (cat. 1) Specific target organ toxicity following single exposure (cat. 3) Respiratory tract irritation Narcotic effects</p> 
<p>Corrosive Corrosive to metals (cat. 1) Skin corrosion (cat. 1A, 1B, 1C) Serious eye damage (cat. 1)</p> 	<p>Environmentally Damaging Acute hazards to the aquatic environment (cat.1) Chronic hazards to the aquatic environment (cat. 1, 2)</p> 