

Safety Data Sheet: **Actinomycin D**

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

Product identifiers			
Product name	Actinomycin D	CAS #	50-76-0
Product Code	DAC	EC/ REACH Number	200-063-6
Formula	C ₆₂ H ₈₆ N ₁₂ O ₁₆		

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

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	Emergency Telephone number 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
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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.
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2. Hazards identification

Classification of the substance or mixture

GHS Classification:

Acute Toxicity, Oral (Category 2)

GHS Label elements, including precautionary statements



Pictogram: Signal word: {DANGER}

GHS Hazard Statements

H300 Fatal if swallowed.

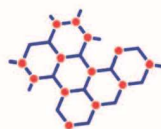
GHS Precautionary Statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood
P264	Wash face, hands and any exposed skin thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P301 + P310-	IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician
P308/P313	IF exposed or concerned: Get medical advice/attention.
P405	Store locked up

Unclassified Hazards/Hazards Not Otherwise Classified

No data available





3. Composition/information on ingredients

Substance

Molecular Formula:	C62H86N12O16	
Molecular Weight:	1255.42	
CAS Registry #:	50-76-0	
EC#:	200-063-6	
Synonyms	Actinomycin A IV; Actinomycin 7; Dilactone Actinomycindioic D Acid; Lyovac Cosmegem; Cosmogen; Meractinomycin;	
Concentration	>97%	

Mixture

Not mixture.

4. First Aid Measures

General advice	Consult a doctor, as medical attention may be required. Present this safety data sheet to the care giving physician.
Eye contact:	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
Skin Contact:	Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. Wash off immediately with plenty of water. If skin irritation persists, call a physician.
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:	Immediate medical attention is required. Remove to fresh air. If not breathing, give artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Artificial respiration and/or oxygen may be necessary. Call a physician. Move to fresh air in case of accidental inhalation of vapors. 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.
Most important symptoms:	No information available.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

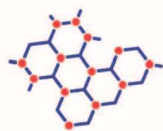
Carbon oxides, Nitrogen oxides.

Advice for firefighters

Wear self-contained breathing apparatus for fire fighting if necessary. Wear protective suit

Further information

No data available



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	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.

7. Handling and storage

Precautions for safe handling

Advice on safe handling:	Do not eat, drink or smoke when using this product. 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.
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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.
Incompatible materials:	None known based on information available.

8. Exposure Controls/Personal Protection

Control parameters

No occupational exposure limits are listed for this material.

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

Exposure controls

Appropriate engineering controls

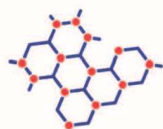
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Use fumehood for routine work.

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.

[PPE=Personal Protection Equipment]

PPE: Respiratory protection	Where risk assessment shows air-purifying respirators are appropriate, use a full-face 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).
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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
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)
PPE: Skin and Body Protection:	Handle with gloves. Wear protective clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place. When deemed needed according to the concentration and amount of this product, use a complete body suit

9. Physical and chemical properties

Physical / chemical properties

Physical State at room temperature	Solid / powder
Color	Red
Melting/freezing point	240-260°C

No further safety-relevant information is available

10. Stability and reactivity

Reactivity:	No information available.
Chemical stability:	Stable under normal conditions.
Conditions to avoid	Heat, flames and sparks, moisture, strong direct light.
Incompatible materials	Strong reducers and oxidizers, Strong acids, Strong bases.
Possibility of Hazardous Reactions	None under normal processing
Hazardous decomposition products:	Carbon monoxide CO, Carbon dioxide (CO ₂). Nitrogen oxides (NO _x)

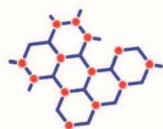
11. Toxicological information

Information on toxicological effects

Acute Toxicity	LD50 (oral - Rat) 7.2 mg/kg
Skin corrosion/irritation:	no data available
Serious eye damage/eye irritation:	no data available
Respiratory or skin sensitization:	no data available
Germ cell mutagenicity:	Limited laboratory results have shown mutagenicity in model systems.
Carcinogenicity:	Limited evidence of carcinogenicity. This compound has been designated by the IARC as Group 3-not classifiable as to its carcinogenicity in humans. carcinogenic to humans.
Reproductive toxicity / Teratogenicity:	Limited laboratory results have shown reproductive toxicity /teratogenicity in animal models.
STOT-SE – single exposure (GHS):	no data available
STOT-RE – repeated exposure (GHS):	no data available
Aspiration hazard:	no data available

Potential Health Effects

Inhalation:	May be harmful if inhaled. May cause respiratory tract irritation.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes:	May cause eye irritation
Ingestion	Fatal if swallowed
Signs and Symptoms of Exposure	no data available
Additional information:	RTECS: AU1575000



12. Ecological Information

Eco-Toxicity

No further relevant information available

Other adverse effects

No further relevant information available.

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

14. Transport information

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

	US DOT	US DOT	US DOT	US DOT
UN Number	UN 3462	UN 3462	UN 3462	UN 3462
UN proper shipping name	Toxins, extracted from living sources, solid, n.o.s. (Actinomycin D)	Toxins, extracted from living sources, solid, n.o.s. (Actinomycin D)	Toxins, extracted from living sources, solid, n.o.s. (Actinomycin D)	Toxins, extracted from living sources, solid, n.o.s. (Actinomycin D)
Hazard Class & Packing Group	Class 6.1 pg 2	Class 6.1 pg 2	Class 6.1 pg 2	Class 6.1 pg 2
Additional Transport Information	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.			

15. Regulatory information

Safety, health and environmental regulations/legislation

USA EPA / TSCA

This product is not listed on the USA EPA TSCA

CA: DSL/NDSL Status

This product is not listed on the Canadian DSL/NDSL

16. Other information

Date of revision: 01 dec 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; revision 16.7.2017 MGur