

Safety data sheet
according to Regulation (EC) No 1907/2006, Article 31

Printing date 24.09.2024

Version number 3

Revision: 24.09.2024

SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Trade name:** Actinomycin D



· **Article number:** 10710

· **CAS Number:**

50-76-0

· **EC number:**

200-063-6

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

· **Application of the substance / the mixture:** Laboratory chemicals

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

SERVA Electrophoresis GmbH

Carl-Benz-Str. 7

D-69115 Heidelberg

Tel.: +49 6221 13840-0

FAX: +49 6221 13840-10

msds.info@serva.de

· **Information department:** Product Safety Department Tel.: +49 6221 13840-35

· **1.4 Emergency telephone number:**

Emergency medical information in case of poisoning

Poison Information Centre Mainz-Tel: +49 (0) 6131 19240

(Counselling in German and English)

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008:**



GHS06

Acute Tox. 2 H300 Fatal if swallowed.



GHS08

Carc. 2 H351 Suspected of causing cancer.

Repr. 1A H360 May damage fertility or the unborn child.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008:**

The substance is classified and labelled according to the GB CLP regulation.

· **Hazard pictograms:** GHS06, GHS08

· **Signal word:** Danger

· **Hazard statements:**

H300 Fatal if swallowed.

H351 Suspected of causing cancer.

H360 May damage fertility or the unborn child.

· **Precautionary statements**

P201 Obtain special instructions before use.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

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P330 Rinse mouth.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

· **Labelling of packages where the contents do not exceed 125 ml**· **Hazard pictograms** GHS06, GHS08· **Signal word** Danger· **Hazard statements**

H300 Fatal if swallowed.

· **Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P330 Rinse mouth.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

· **2.3 Other hazards**· **Results of PBT and vPvB assessment:**· **PBT:** PBT - Assessment not available.· **vPvB:** vPvB - Assessment not available.· **Determination of endocrine-disrupting properties** No further relevant information available.**SECTION 3: Composition/information on ingredients**· **3.1 Substances**· **CAS No. Description:**

50-76-0 Dactinomycin

· **Identification number(s):**· **EC number:** 200-063-6· **Description:**· **Empirical formula:** $C_{62}H_{86}N_{12}O_{16}$ · **MW:** 1255.5**SECTION 4: First aid measures**· **4.1 Description of first aid measures**· **General information:**

Remove contaminated clothing.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.· **After skin contact:**

Wash off immediately with soap and water and rinse thoroughly. In case of complaints, consult a doctor.

· **After eye contact:**

Rinse opened eye for several minutes with running water. Remove contact lenses if possible and continue rinsing. Consult an ophthalmologist immediately.

· **After swallowing:**

Rinse out mouth immediately. Drink plenty of water and provide fresh air. Call a doctor immediately.

Do not induce vomiting!

· **4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

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SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture:**
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be formed, but not limited to:
Nitrogen oxides (NO_x)
Carbon monoxide and carbon dioxide
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.
- **Additional information**
Collect contaminated fire fighting water separately. It must not enter the sewage system.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Ensure adequate ventilation
Avoid formation of dust.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up**
Dispose contaminated material as waste according to section 13.
Pick up mechanically.
- **6.4 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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Storage at +2 to +8 °C
- **Information about storage in one common storage facility:** Store away from oxidising agents.
- **Further information about storage conditions:**
Store under lock and key and with access restricted to technical experts or their assistants only.
Protect from exposure to the light.
Store containers tightly closed and dry.
- **7.3 Specific end use(s):** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 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.
- **8.2 Exposure controls**
- **Appropriate engineering controls:** No further data; see section 7.

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- **Individual protection measures, such as personal protective equipment:**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Store protective clothing separately.
 - Immediately remove all soiled and contaminated clothing
 - Avoid contact with the eyes and skin.
 - Wash hands before breaks and at the end of work.
- **Breathing equipment:**
 - Short term filter device:
 - Filter P3.
- **Hand protection:**
 - Neoprene 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.
- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
 - Nitrile rubber, NBR
 - Chloroprene rubber, CR
 - Natural rubber, NR
- **Eye/face protection:** Safety glasses
- **Body protection:** Protective work clothing.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information:**
- **Physical state:** Solid.
- **Colour:** red to orange
- **Odour:** Recognisable
- **Odour threshold:** Not determined.
- **Melting point/freezing point:** No information available
- **Boiling point or initial boiling point and boiling range:** No information available
- **Flammability:** No information available
- **Lower and upper explosion limit:**
- **Lower:** No information available
- **Upper:** No information available
- **Flash point:** No information available
- **Auto-ignition temperature:** no information available
- **Decomposition temperature:** No information available
- **pH:** No information available
- **Viscosity:**
- **Kinematic viscosity:** No information available
- **Dynamic viscosity:** No information available
- **Solubility:**
- **Water:** Slightly soluble
- **Partition coefficient n-octanol/water (log value):** No information available

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· Vapour pressure:	No information available
· Density and/or relative density:	
· Density:	No information available
· Relative density:	No information available
· Particle characteristics	No information available
· 9.2 Other information	Further physico-chemical data are not available.
· Appearance:	
· Form:	Powder
· Important information on protection of health and environment, and on safety:	
· Explosive properties:	The product is not explosive, but the formation of explosive dust/air mixtures is possible.
· Molecular weight	1,255.5 g/mol

SECTION 10: Stability and reactivity

- **10.1 Reactivity:** No further relevant information available.
- **10.2 Chemical stability:**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions:**
As the product is supplied it is not capable of dust explosion; however enrichment with fine dust causes risk of dust explosion
- **10.4 Conditions to avoid:**
Exposure to light
Humidity
- **10.5 Incompatible materials:** Avoid contact with strong oxidising agents, strong acids, strong alkalis.
- **10.6 Hazardous decomposition products:** In case of fire: see section 5

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:**

- **Acute toxicity:** Fatal if swallowed.

- **LD/LC50 values that are relevant for classification:**

Oral	LD50	7.2 mg/kg (rat)
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- **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation:** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Suspected of causing cancer.
- **Reproductive toxicity:** May damage fertility or the unborn child.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards:**
- **Endocrine disrupting properties:** No relevant information available

SECTION 12: Ecological information

- **12.1 Toxicity:**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability:** No further relevant information available.
- **12.3 Bioaccumulative potential:** No further relevant information available.
- **12.4 Mobility in soil:** No further relevant information available.

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- **12.5 Results of PBT and vPvB assessment:**
 - **PBT:** PBT - assessment not available.
 - **vPvB:** vPvB - assessment not available.
 - **12.6 Endocrine disrupting properties:** For information on endocrine disrupting properties see section 11.
 - **12.7 Other adverse effects:**
 - **Additional ecological information:**
 - **General notes:**
- Do not allow product to reach ground water, water course or sewage system.
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.
Water danger class 3 (German Regulation) (Assessment by list): extremely hazardous for water.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
 - **Recommendation**
- Dispose of in accordance with official regulations.
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
 - **Recommendation:**
- Uncleaned packaging must be disposed of in the same way as the product in accordance with official regulations.

SECTION 14: Transport information

- | | |
|--|--|
| <ul style="list-style-type: none"> · 14.1 UN number or ID number · ADR, IMDG, IATA | UN2811 |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR · IMDG, IATA | 2811 TOXIC SOLID, ORGANIC, N.O.S.
(Dactinomycin)
TOXIC SOLID, ORGANIC, N.O.S. (Dactinomycin) |
| <ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR, IMDG, IATA <div style="text-align: center; margin: 10px 0;">  </div> <ul style="list-style-type: none"> · Class: · Label: | 6.1 Toxic substances.
6.1 |
| <ul style="list-style-type: none"> · 14.4 Packing group · ADR, IMDG, IATA | II |
| <ul style="list-style-type: none"> · 14.5 Environmental hazards | Not applicable. |
| <ul style="list-style-type: none"> · 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category | Warning: Toxic substances.
60
F-A,S-A
B |
| <ul style="list-style-type: none"> · 14.7 Maritime transport in bulk according to IMO instruments | Not applicable. |

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· Transport/Additional information:**· ADR**

- **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
- **Transport category** 2
- **Tunnel restriction code** E

· 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 SOLID, ORGANIC, N.O.S. (DACTINOMYCIN), 6.1, II

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Poisons Act**
- **Regulated explosives precursors** Substance is not listed.
- **Regulated poisons** Substance is not listed.
- **Reportable explosives precursors** Substance is not listed.
- **Reportable poisons** Substance is not listed.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **Seveso category H2 ACUTE TOXIC**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
Substance is not listed.
- **REGULATION (EU) 2019/1148**
- **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**
Substance is not listed.
- **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is not listed.
- **Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.
- **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**
Substance is not listed.

· National regulations:**· Technical instructions (air):**

Class	Share in %
I	80-100

- **Water hazard class:** Water danger class 3 (Assessment by list): extremely hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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SECTION 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 SDS:** Product Safety Department

· **Contact:** +49 6221 13840-35

· **Date of previous version:** 21.02.2018

· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

PBT: persistent, bioaccumulative, toxic substance (UK REACH)

vPvB: very persistent, very bioaccumulative substance (UK REACH)

UK REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

GB CLP: Regulation on classification, labelling and packaging of substances and mixtures

bw: body weight

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 2: Acute toxicity – Category 2

Carc. 2: Carcinogenicity – Category 2

Repr. 1A: Reproductive toxicity – Category 1A

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