

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/11/2024

Reviewed on 03/11/2024

## 1 Identification

- **Product identifier**
- **Trade name:** Hygromycin B
- **Article number:** 25965
- **CAS Number:**  
31282-04-9
- **EC number:**  
250-545-5
- **Application of the substance / the mixture:** Laboratory chemicals
- **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
- **Emergency telephone number:**  
Emergency medical information in case of poisoning  
Poison Information Center Mainz-Tel: +49 (0) 6131 19240  
(Advice in German and English)

**SERVA**  
■ serving scientists ■

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06

Acute Toxicity - Oral 2      H300 Fatal if swallowed.  
 Acute Toxicity - Dermal 2      H310 Fatal in contact with skin.  
 Acute Toxicity - Inhalation 1      H330 Fatal if inhaled.



GHS08

Sensitization - Respiratory 1      H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS05

Eye Damage 1      H318 Causes serious eye damage.

- **Label elements**
- **GHS label elements**  
The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:** GHS05, GHS06, GHS08
- **Signal word:** Danger
- **Hazard statements:**  
Fatal if swallowed, in contact with skin or if inhaled.  
Causes serious eye damage.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/11/2024

Reviewed on 03/11/2024

**Trade name: Hygromycin B**

(Contd. of page 1)

- **Precautionary statements**

Do not breathe dust.

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

If swallowed: Immediately call a poison center/doctor.

If on skin: Wash with plenty of soap and water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

- **Classification system:**

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



Health = 4

Fire = 0

Reactivity = 0

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



Health = \*4

Fire = 0

Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment:**

· **PBT:** PBT - Assessment not available.

· **vPvB:** vPvB - Assessment not available.

## 3 Composition/information on ingredients

- **Chemical characterization: Substances**

- **CAS No. Description:**

31282-04-9 hygromycin B

- **Identification number(s):**

· **EC number:** 250-545-5

- **Description:**

· **Empirical formula:**  $C_{20}H_{37}N_3O_{13}$

· **MW:** 527.53 g/mol

## 4 First-aid measures

- **Description of first aid measures**

- **General information:**

Take affected persons out into the fresh air.

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing have been completely removed.

· **After inhalation:** Supply fresh air or oxygen; call for doctor.

- **After skin contact:**

Wash off immediately with plenty of soap and water; rinse thoroughly; seek medical attention.

- **After eye contact:**

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

- **After swallowing:**

Rinse out mouth. Call a doctor immediately.

Do not induce vomiting; immediately call for medical help.

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 3)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 03/11/2024

Reviewed on 03/11/2024

**Trade name: Hygromycin B**

(Contd. of page 2)

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

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub> extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Carbon monoxide and carbon dioxide  
Nitrogen oxides (NO<sub>x</sub>)
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.  
Ensure adequate ventilation  
Avoid formation of dust.  
Avoid contact with eyes and skin.
- **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 section 13.  
Pick up mechanically.
- **Protective Action Criteria for Chemicals**
- **PAC-1:** Substance is not listed.
- **PAC-2:** Substance is not listed.
- **PAC-3:** Substance is not listed.
- **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

- **Precautions for safe handling:**  
Avoid contact with eyes and skin.  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store only in the original receptacle.  
Storage at +2 to +8 °C
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **Further information about storage conditions:** Store container tightly closed and dry.
- **Specific end use(s):** No further relevant information available.

US

(Contd. on page 4)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 03/11/2024

Reviewed on 03/11/2024

Trade name: Hygromycin B

(Contd. of page 3)

### 8 Exposure controls/personal protection

- **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**
- **Additional information about design of technical systems:** No further data; see section 7.
- **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
- **Protection of hands:**
  - 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:**
  - Neoprene gloves
  - PVC gloves
- **Eye protection:** Tightly sealed goggles
- **Body protection:** Protective work clothing

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information:**
- **Color:** off-white to light tan
- **Odor:** Odorless
- **Odor threshold:** Not determined.
- **Melting point/Melting range:** No information available
- **Boiling point/Boiling range:** No information available
- **Flammability (solid, gaseous):** No information available
- **Explosion limits:**
- **Lower:** No information available
- **Upper:** No information available
- **Flash point:** No information available
- **Decomposition temperature:** No information available
- **pH-value:** No information available
- **Viscosity:**
- **Kinematic viscosity:** No information available
- **Dynamic viscosity:** No information available

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/11/2024

Reviewed on 03/11/2024

Trade name: Hygromycin B

(Contd. of page 4)

- **Solubility in / Miscibility with:**
- **Water:** Soluble.
- **Partition coefficient (n-octanol/water):** No information available
- **Vapor pressure:** No information available
- **Vapor pressure:**
- **Density:** No information available
- **Relative density:** No information available
- **Other information**
- **Appearance:**
- **Form:** Powder
- **Important information on protection of health and environment, and on safety:**
- **Danger of explosion:** The product is not explosive, but the formation of explosive dust/air mixtures is possible.
- **Molecular weight** 527.54 g/mol

## 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 further relevant information available.
- **Conditions to avoid:** Avoid high temperatures, flames, sparks
- **Incompatible materials:**  
Avoid contact with:  
Strong oxidizers  
Strong acids
- **Hazardous decomposition products:** In case of fire: see section 5

## 11 Toxicological information

- **Information on toxicological effects**
  - **Acute toxicity:** Fatal if swallowed, in contact with skin or if inhaled.
  - **LD/LC50 values that are relevant for classification:**
- |            |         |                       |
|------------|---------|-----------------------|
| Oral       | LD50    | 13 mg/kg (rat)        |
| Dermal     | LD50    | 55 mg/kg (guinea pig) |
| Inhalative | LC50/4h | 0.00222 mg/l (rat)    |
- **on the eye:** Causes serious eye damage.
  - **Sensitization:** May cause allergy or asthma symptoms or breathing difficulties if inhaled.
  - **Additional toxicological information:**
  - **Carcinogenic categories**
  - **IARC (International Agency for Research on Cancer)** Substance is not listed.
  - **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.
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/11/2024

Reviewed on 03/11/2024

Trade name: Hygromycin B



(Contd. of page 5)

- **Results of PBT and vPvB assessment:**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects:**
- **Additional ecological information:**
- **General notes:**
- Do not allow product to reach ground water, water course or sewage system.
- Water hazard class 2 (Self-assessment): hazardous for water

## 13 Disposal considerations

- **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.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

- |   |  |
|---|--|
| · <b>UN-Number</b>  | UN3462   |
| · <b>DOT, ADR, IMDG, IATA</b>   |  |
| · <b>UN proper shipping name</b>  | Toxins, extracted from living sources, solid, n.o.s.                     |
| · <b>DOT</b>  | (hygromycin B)   |
| · <b>ADR</b>  | 3462 TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S. (hygromycin B) |
| · <b>IMDG, IATA</b>   | TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S. (hygromycin B)      |
| · <b>Transport hazard class(es)</b>   |  |
| · <b>DOT</b>  |  |
|  |  |
| · <b>Class</b>  | 6.1 Toxic substances   |
| · <b>Label</b>  | 6.1  |
| · <b>ADR, IMDG, IATA</b>  |  |
|  |  |
| · <b>Class:</b>   | 6.1 Toxic substances   |
| · <b>Label:</b>   | 6.1  |
| · <b>Packing group</b>  |  |
| · <b>DOT, ADR, IMDG, IATA</b>   | I  |
| · <b>Environmental hazards</b>  | Not applicable.  |

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/11/2024

Reviewed on 03/11/2024

Trade name: Hygromycin B

(Contd. of page 6)

· <b>Special precautions for user</b>	Warning: Toxic substances
· <b>Hazard identification number (Kemler code):</b> 66	
· <b>EMS Number:</b>	F-A,S-A
· <b>Stowage Category</b>	B
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Excepted quantities (EQ)</b>	Code: E5 Maximum net quantity per inner packaging: 1 g Maximum net quantity per outer packaging: 300 g
· <b>Item:</b>	
· <b>UN "Model Regulation":</b>	UN 3462 TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S. (HYGROMYCIN B), 6.1, I

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
No further relevant information available.
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is not listed.
- **TSCA (Toxic Substances Control Act):** Substance is not listed.
- **Hazardous Air Pollutants** Substance is not listed.
- **Proposition 65** Substance is not listed.
- **Chemicals known to cause cancer:** Substance is not 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.
- **Carcinogenity categories**
- **EPA (Environmental Protection Agency)** Substance is not listed.
- **TLV (Threshold Limit Value)** Substance is not listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **GHS label elements**  
The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** GHS05, GHS06, GHS08
- **Signal word** Danger
- **Hazard statements**  
Fatal if swallowed, in contact with skin or if inhaled.  
Causes serious eye damage.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- **Precautionary statements**  
Do not breathe dust.  
Wear protective gloves/protective clothing/eye protection/face protection.  
If swallowed: Immediately call a poison center/doctor.  
If on skin: Wash with plenty of soap and water.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

 US  
(Contd. on page 8)



# Safety Data Sheet

## acc. to OSHA HCS

Printing date 03/11/2024

Reviewed on 03/11/2024

**Trade name: Hygromycin B**

(Contd. of page 7)

### 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 preparation / last revision** 03/11/2024

· **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)

PBT: persistent, bioaccumulative, toxic substance (REACH)

vPvB: very persistent, very bioaccumulative substance (REACH)

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

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

DOT: US Department of Transportation

IATA: International Air Transport Association

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)

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

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Toxicity - Oral 2: Acute toxicity – Category 2

Acute Toxicity - Inhalation 1: Acute toxicity – Category 1

Eye Damage 1: Serious eye damage/eye irritation – Category 1

Sensitization - Respiratory 1: Respiratory sensitisation – Category 1