

Order Number

Customer Number

1. Identification of the substance/preparation and of the company/undertaking

Product name : Hygromycin B, *Streptomyces* sp., Sterile Filtered Solution in PBS, Catalog # : 400052
Cell Culture Tested :
Supplier : EMD Biosciences, Inc.
 10394 Pacific Center Court
 San Diego, CA 92121
 (858)450-5558/(800)854-3417
 FAX: (858)453-3552

Chemical formula : C₂₀H₃₇N₃O₁₃

Synonym : Antihelmycin
 Hydromycin B
 Hygromix 2.4
 Hygromix-8
 Hygromycin B
 Hygrovetine

Emergency telephone number : Call Chemtrec®
 (800)424-9300 (within U.S.A.)
 (703)527-3887 (outside U.S.A.)

2. Composition / information on ingredients

Substance/Preparation : Substance

Chemical name*	CAS No.	EC Number	Symbol	R-Phrases
Antihelmycin Hydromycin B Hygromix 2.4 Hygromix-8 Hygromycin B Hygrovetine	31282-04-9	250-545-5	T	R23/24/25, R36, R42/43

3. Hazards identification

Physical/chemical hazards : Not applicable.

Human health hazards : DANGER!
 MAY BE FATAL IF ABSORBED THROUGH SKIN OR IF SWALLOWED.
 CAUSES EYE BURNS.
 BIRTH DEFECT HAZARD
 CONTAINS MATERIAL WHICH CAN CAUSE BIRTH DEFECT.
 HARMFUL IF INHALED.
 MAY CAUSE RESPIRATORY TRACT AND SKIN IRRITATION.
 MAY CAUSE ALLERGIC RESPIRATORY AND SKIN REACTION.
 MAY CAUSE DAMAGE TO THE FOLLOWING ORGANS: REPRODUCTIVE SYSTEM, EYES,
 EARS.

4. First-aid measures

First-Aid measures

Inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion : If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Skin Contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Eye Contact : Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Effects and symptoms

Inhalation : Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Over-exposure by inhalation may cause respiratory irritation. May be fatal if inhaled.

Ingestion : Extremely hazardous in case of ingestion. May be fatal if swallowed. May cause burns to mouth, throat and stomach.

Skin Contact : Extremely hazardous in case of skin contact (permeator). Hazardous in case of skin contact (irritant, sensitizer). Corrosive to skin on contact. Skin contact may produce burns. Severe over-exposure can result in death. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Eye Contact : Hazardous in case of eye contact (corrosive).

Aggravating conditions : Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

5. Fire-fighting measures

Flammability of the Product : May be combustible at high temperature.

Extinguishing Media

Suitable : SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Hazardous thermal (de)composition products : These products are carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂...).

Special fire-fighting procedures : Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Protection of fire-fighters : Be sure to use an approved/certified respirator or equivalent.

6. Accidental release measures

Personal precautions : Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Small Spill and Leak : Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill and Leak : Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

7. Handling and storage

Handling : Keep locked up. Keep container dry. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Never add water to this product. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

Storage : Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 4°C (39.2°F).

Packaging materials

Recommended use : Use original container.

8. Exposure controls/personal protection

Engineering measures : Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Hygiene measures : Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.

<u>Ingredient Name</u>	<u>Occupational Exposure Limits</u>
Hygromycin B, <i>Streptomyces</i> sp., Sterile Filtered Solution in PBS, Cell Culture Tested	Not available.

Personal protective equipment

Respiratory system : Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Skin and body : Full suit.

Hands : Gloves.

Eyes : Face shield.

Protective Clothing (Pictograms) : 

9. Physical and chemical properties

Physical state : Liquid. (Supplied as a sterile filtered solution in PBS.)

Color : Not available.

Molecular Weight : 527.5 g/mole

Solubility : Not available.

Flash point : Not available.

Explosive properties : Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

10. Stability and reactivity

- Stability** : The product is stable.
- Conditions to avoid** : Not available.
- Hazardous Decomposition Products** : These products are carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂...).

11. Toxicological information

RTECS # : WK2130000

Local effects

- Skin irritation** : Hazardous in case of skin contact (irritant).
- Sensitization** : Hazardous in case of skin contact (sensitizer), of inhalation (lung sensitizer).
- Acute toxicity** : LD50: Not available.
LC50: Not available.
- Chronic toxicity** : Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.
- Other Toxic Effects on Humans** : Toxic for humans or animal life.
Extremely hazardous in case of skin contact (permeator), of ingestion.
Hazardous in case of skin contact (irritant, sensitizer), of eye contact (corrosive), of inhalation (lung irritant, lung sensitizer).
Not available.
- Direct contact with the eyes can cause irreversible damage including blindness. Material is irritating to mucous membranes and upper respiratory tract.

Specific effects

- Carcinogenic effects** : Not available.
- Mutagenic effects** : Not available.
- Reproduction toxicity** : Classified Reproductive system/toxin/female, Reproductive system/toxin/male [SUSPECTED].
- Teratogenic effects** : Not available.

12. Ecological information

- Ecotoxicity** : Not available.
- Toxicity of the Products of Biodegradation** : The products of degradation are less toxic than the product itself.

13. Disposal considerations

- Methods of disposal; Waste of residues; Contaminated packaging** : Waste must be disposed of in accordance with federal, state and local environmental control regulations.

14. Transport information

International transport regulations

- UN number** : UN3172
- Land - Road/Railway**
- Proper shipping name** : Toxins, extracted from living sources, liquid, n.o.s.*
- ADR/RID Class** : CLASS 6.1: Toxic substance.
- Packing Group** : I
- ADR/RID label** :



Sea

- Proper shipping name** : Toxins, extracted from living sources, liquid, n.o.s.*
- IMDG Class** : CLASS 6.1: Toxic substance.
- Packing Group** : I
- IMDG label** :



Proper shipping name : Toxins, extracted from living sources, liquid, n.o.s.*
UN/ID Number : UN3172
IATA-DGR Class : CLASS 6.1: Toxic substance.
Packing Group : I
IATA label :



Special Provisions for Transport : Not available.

15. Regulatory information

EU Regulations

Hazard symbol(s) :



Classification :

Toxic

Risk Phrases :

R23/24/25- Toxic by inhalation, in contact with skin and if swallowed.
 R36- Irritating to eyes.
 R42/43- May cause sensitization by inhalation and skin contact.

Safety Phrases :

S1/2- Keep locked up and out of the reach of children.
 S23- Do not breathe vapor.
 S36/37- Wear suitable protective clothing and gloves.
 S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
 S63- In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Contains :

- Hygromycin B, *Streptomyces* sp., Sterile Filtered Solution in PBS, Cell Culture Tested

U.S. Federal Regulations

TSCA: No products were found.

SARA 302/304/311/312 extremely hazardous substances: No products were found.
 SARA 302/304 emergency planning and notification: No products were found.
 SARA 302/304/311/312 hazardous chemicals: No products were found.
 SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.
 SARA 313 toxic chemical notification and release reporting: No products were found.
 Clean Water Act (CWA) 307: No products were found.
 Clean Water Act (CWA) 311: No products were found.
 Clean air act (CAA) 112 accidental release prevention: No products were found.
 Clean air act (CAA) 112 regulated flammable substances: No products were found.
 Clean air act (CAA) 112 regulated toxic substances: No products were found.

HCS Classification :

CLASS: Highly toxic.

State Regulations :

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Hygromycin B, *Streptomyces* sp., Sterile Filtered Solution in PBS, Cell Culture Tested

WHMIS (Canada)

CLASS D-2A: Material causing other toxic effects (VERY TOXIC).
 CLASS E: Corrosive liquid.

No products were found.

16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	3
Fire Hazard		0
Reactivity		0
Personal Protection		

National Fire Protection Association (U.S.A.)



Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. **This product is intended for research use only.**

Catalog # 400052

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