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

1.1. Product identifier

Trade name: Hygromycin B for cell biology

Article number: 1358

CAS Number: 31282-04-9

EC number: 250-545-5

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:

- For lab use only. Not for drug, household or other uses.
- Laboratory chemical

1.3. Details of the supplier of the safety data sheet

Manufacturer/Supplier:

neoFroxx GmbH
Marie-Curie-Str. 3
D-64683 Einhausen
info@neofroxx.com

Further information obtainable from:

Dep. Quality Control

1.4. Emergency telephone number

+49 (6251) 989 24 - 0 (during normal business hours)

2. Hazards identification

2.1. Classification of the substance or mixture

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

Acute Tox. 2 H300 Fatal if swallowed.

Acute Tox. 2 H310 Fatal in contact with skin.

Acute Tox. 1 H330 Fatal if inhaled.

Eye Dam. 1 H318 Causes serious eye damage.

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

2.2. Label elements

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

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

Hazard pictograms:



GHS05

GHS06

GHS08

Signal word: Danger

Hazard-determining components of labelling:

Hygromycin B

Hazard statements:

H300+H310+H330 Fatal if swallowed, in contact with skin or if inhaled.

H318 Causes serious eye damage.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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Precautionary statements:

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

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P284 [In case of inadequate ventilation] wear respiratory protection.

P264 Wash thoroughly after handling.

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

P302+P350 IF ON SKIN: Gently wash with plenty of soap and water.

2.3. Other hazards

Results of PBT and vPvB assessment:

PBT: Not applicable.

vPvB: Not applicable.

3. Composition / information on ingredients

3.1. Chemical characterisation: Substances

CAS No. Description:

31282-04-9 hygromycin B

Identification number(s):

EC number: 250-545-5

4. First aid measures

4.1. Description of first aid measures

After inhalation:

Supply fresh air or oxygen; call for doctor.

If breathing stops: mouth-to-mouth respiration or mechanical ventilation, oxygen mask if necessary.

Immediately call a physician.

After skin contact:

Wash off with plenty of water.

Call a doctor immediately.

Immediately remove any clothing soiled by the product.

After eye contact:

Rinse opened eye for several minutes under running water.

Call a doctor immediately.

After swallowing: Do not induce vomiting; call for medical help immediately.

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.

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing agents:

CO₂, 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.

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In case of fire, the following can be released:

Nitrogen oxides (NO_x)

carbon oxides (CO, CO₂).

5.3. Advice for firefighters

Protective equipment: Wear self-contained respiratory protective device.

Additional information:

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid formation of dust.

Do not inhale dust.

Avoid substance contact.

Ensure adequate ventilation

6.2. Environmental precautions:

Do not allow to enter sewers/ surface or ground water.

6.3. Methods and material for containment and cleaning up:

Pick up mechanically.

Avoid generation of dusts.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Clean up affected area.

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.

7. Handling and storage

7.1. Precautions for safe handling

Thorough dedusting.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Any unavoidable deposit of dust must be regularly removed.

Information about fire - and explosion protection: Keep respiratory protective device available.

7.2. Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Not required.

Further information about storage conditions:

Keep container tightly sealed.

Accesible for authorised persons only.

Recommended storage temperature: +2 - +8 °C

Storage class: 6.1 B

7.3. Specific end use(s)

No further relevant information available.

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8. Exposure controls / personal protection

Additional information about design of technical facilities: No further data; see item 7.

8.1. Control parameters

Ingredients with limit values that require monitoring at the workplace: Not required.

Additional information: The lists valid during the making were used as basis.

8.2. Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Vacuum clean contaminated clothing. Do not blow or brush off contamination.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Filter P3

Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. 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 gloves made of the following materials are suitable:

Nitrile rubber, NBR

Recommended thickness of the material: ³ 0.11 mm

Value for the permeation: Level ³ 480 min

As protection from splashes gloves made of the following materials are suitable:

Nitrile rubber, NBR

Recommended thickness of the material: ³ 0.11 mm

Value for the permeation: Level ³ 480 min

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Eye protection:



Tightly sealed goggles

Body protection:

Full head, face and neck protection

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Information:

Appearance:

Form: Solid

Colour: Whitish

Odour: Odourless

Odour threshold: Not determined.

pH-value: Not applicable.

Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

Flash point: Not applicable.

Flammability (solid, gaseous): Product is not flammable.

Ignition temperature:

Decomposition temperature: Not determined.

Self-igniting: Not determined.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:

Lower: Not determined.

Upper: Not determined.

Vapour pressure: Not applicable.

Density: Not determined.

Relative density: Not determined.

Vapour density: Not applicable.

Evaporation rate: Not applicable.

Solubility in / Miscibility with water: Soluble.

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

Dynamic: Not applicable.

Kinematic: Not applicable.

Solvent content:

Organic solvents: 0.0 %

VOC (EC) 0.00 %

9.2. Other information

No further relevant information available.

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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

No dangerous reactions known.

10.4. Conditions to avoid

No further relevant information available.

10.5. Incompatible materials:

strong oxidants

10.6. Hazardous decomposition products:

In the event of fire: See chapter 5

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity:

Fatal if swallowed, in contact with skin or if inhaled.

LD/LC50 values relevant for classification:

Components	Type	Value	Species
31282-04-9 hygromycin B			
Oral	LD50	13 mg/kg	(rat)
Dermal	LD50	55 mg/kg	(rabbit)
Inhalative	LC50/4 h	0.0022 mg/l	(rat)

Primary irritant effect:

Skin corrosion/irritation: Irritant effect

Serious eye damage/irritation:

Causes serious eye damage.

After inhalation: No data available

Respiratory or skin sensitisation:

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

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.

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12. Ecological information

12.1. Persistence and degradability

No further relevant information available.

12.2. Bioaccumulative potential

No further relevant information available.

12.3. Mobility in soil

No further relevant information available.

Additional ecological information:

General notes:

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

12.4. Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.5. Other adverse effects

No further relevant information available.

13. Disposal considerations

13.1. Waste treatment methods

Recommendation:

Chemicals must be disposed of in compliance with the respective national regulations.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Uncleaned packaging:

Recommendation:

Disposal must be made according to official regulations.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

14. Transport information

14.1. UN-Number

ADR, IMDG, IATA: UN3462

14.2. UN proper shipping name

ADR, IMDG, IATA: TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S. (hygromycin B)

14.3. Transport hazard class(es)

ADR



Class 6.1 (T2) Toxic substances.

Label 6.1

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IMDG, IATA



Class 6.1 Toxic substances.

Label 6.1

14.4. Packing group

ADR, IMDG, IATA: I

14.5. Environmental hazards:

Marine pollutant: No

14.6. Special precautions for user

Warning: Toxic substances.

EMS Number: F-A,S-A

Stowage Category B

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

Transport/Additional information:

ADR

Limited quantities (LQ): 0

Excepted quantities (EQ) Code: E5

Maximum net quantity per inner packaging: 1 g

Maximum net quantity per outer packaging: 300 g

IMDG

Limited quantities (LQ): 0

Excepted quantities (EQ) Code: E5

Maximum net quantity per inner packaging: 1 g

Maximum net quantity per outer packaging: 300 g

UN "Model Regulation": UN 3462 TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S. (HYGROMYCIN B), 6.1, I

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture Directive 2012/18/EU

Named dangerous substances - ANNEX I Substance is not listed.

Seveso category: H1 ACUTE TOXIC

Qualifying quantity (tonnes) for the application of lower-tier requirements: 5 t

Qualifying quantity (tonnes) for the application of upper-tier requirements: 20 t

15.2. Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

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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.

Abbreviations and acronyms:

ADR: Accord européen sur le transport 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