

Hygromycin B

Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 15/10/2010 Revision date: 22/09/2017
Supersedes 03/08/2011

H0192

Version: 2.0

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

1.1. Product identifier

Product form : Mixture
Trade name : Hygromycin B
EC-No. : 250-545-5
CAS-No. : 31282-04-9
Product code : H0192
Formula : C₂₀H₃₇N₃O₁₃
Synonyms : O-6-Amino-6-deoxy-L-glycero-D-galacto-heptopyranosylidene-(1-2-3)-O-β-D-talopyranosyl(1-5)-2-deoxy-N³-methyl-D-streptamine
Product group : Raw material

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

1.2.1. Relevant identified uses

Main use category : Professional use
Industrial/Professional use spec : For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

Duchefa Biochemie B.V.
A. Hofmanweg 71
2031 BH Haarlem - The Netherlands
T +31(0)23-5319093 - F +31(0)23-5318027
info@duchefa.nl

1.4. Emergency telephone number

Emergency number : Supplier contact information:
+31(0)23-5319093 (M-F 09:00-17:00)
+31(0)6-30109355 (outside office hours)

Organisation/Company	Address	Comment
World Health Organization world directory of poison centres	http://apps.who.int/poisoncentres/	Consult website for a local poison centre

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 1 H300
Acute toxicity (dermal), Category 1 H310
Acute toxicity (inhal.), Category 2 H330
Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 1 H318
Specific target organ toxicity — Single exposure, Category 3, H335

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Respiratory tract irritation

Full text of hazard classes and H-statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

GHS06

Signal word (CLP) :

Danger

Hazardous ingredients :

Hygromycin B

Hazard statements (CLP) :

H300+H310+H330 - Fatal if swallowed, in contact with skin or if inhaled
H315 - Causes skin irritation.
H318 - Causes serious eye damage.
H335 - May cause respiratory irritation.

Precautionary statements (CLP) :

P280 - Wear protective gloves, protective clothing, eye protection, face shield
P260 - Do not breathe dust, fume, gas, mist, spray, vapours
P308+P310 - IF exposed or concerned: Immediately call a POISON CENTER or doctor/physician
P235 - Keep cool

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Comments :

1 vial = 1 x 10⁶ units preparation.

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hygromycin B	(CAS-No.) 31282-04-9 (EC-No.) 250-545-5	< 25	Acute Tox. 1 (Oral), H300 Acute Tox. 2 (Inhalation), H330 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335
Water	(CAS-No.) 7732-18-5 (EC-No.) 231-791-2	> 25	Not classified

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Immediately call a POISON CENTER or doctor/physician. Remove victim to fresh air.
- First-aid measures after skin contact : Get immediate medical advice/attention. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Get immediate medical advice/attention. Rinse immediately with plenty of water.
- First-aid measures after ingestion : Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/effects : Nausea. Headache. Unconsciousness.
- Symptoms/effects after inhalation : Cough.
- Symptoms/effects after ingestion : Ingestion may cause nausea, vomiting and diarrhea.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂). Water spray.

5.2. Special hazards arising from the substance or mixture

- Hazardous decomposition products in case of fire : Under fire conditions, hazardous fumes will be present.

5.3. Advice for firefighters

- Precautionary measures fire : Do not enter fire area without proper protective equipment, including respiratory protection. Wear proper protective equipment.
- Firefighting instructions : Prevent fire fighting water from entering the environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Spill should be handled by trained cleaning personnel properly equipped with respiratory and eye protection.

6.1.1. For non-emergency personnel

- Measures in case of dust release : Use good housekeeping practices to avoid rendering dust airborne.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Dispose in a safe manner in accordance with local/national regulations. Take up liquid spill into absorbent material.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Open only in well ventilated area.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in dry, cool, well-ventilated area.

Storage temperature : 2 - 8 °C

7.3. Specific end use(s)

For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Additional information : Provide local exhaust or general room ventilation. Contaminated clothing can not be washed and should not be re-used for any purpose

8.2. Exposure controls

Hand protection:

Type	Material	Permeation	Thickness (mm)	Standard
Gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0,11	EN 374

Eye protection:

Safety glasses

Skin and body protection:

Long sleeved protective clothing

Respiratory protection:

Wear appropriate mask. filter type P3 (EN 143)

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Molecular mass	: 527,5 g/mol
Colour	: Dark brown.
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: ≈ 100 °C

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Flash point : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : No data available
Vapour pressure : No data available
Relative vapour density at 20 °C : No data available
Relative density : No data available
Density : 1,147 g/l
Solubility : Soluble in water.

Log Pow : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidising properties : No data available
Explosive limits : No data available

9.2. Other information

Other properties : Contains approximately 500 mg Hygromycin B/ml - 510 000 units/ml.

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions of storage, handling and use.

10.2. Chemical stability

Stable under normal conditions of storage, handling and use.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

When heated to decomposition, emits dangerous fumes. COx. NOx.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Fatal if swallowed. Dermal: Fatal in contact with skin. Inhalation: Fatal if inhaled.

Hygromycin B (31282-04-9)	
LD50 oral	46000 (mouse, units/kg)
LC50 inhalation rat (mg/l)	2220 µg/m ³ (4h)
ATE CLP (dermal)	5 mg/kg bodyweight
ATE CLP (vapours)	0,5 mg/l/4h
ATE CLP (dust,mist)	0,05 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Other information	: See actual entry in RTECS for complete information: . WK2130000.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose in a safe manner in accordance with local/national regulations.
Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IATA / IMDG




ADR	IMDG	IATA
14.1. UN number		
2810	2810	2810
14.2. UN proper shipping name		
TOXIC LIQUID, ORGANIC, N.O.S.	TOXIC LIQUID, ORGANIC, N.O.S.	Toxic liquid, organic, n.o.s.
Transport document description		
UN 2810 TOXIC LIQUID, ORGANIC, N.O.S., 6.1, II, (D/E)	UN 2810 TOXIC LIQUID, ORGANIC, N.O.S., 6.1, II	UN 2810 Toxic liquid, organic, n.o.s., 6.1, II
14.3. Transport hazard class(es)		
6.1	6.1	6.1

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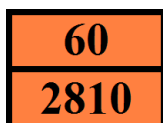
according to Regulation (EU) 2015/830

ADR	IMDG	IATA
		
14.4. Packing group		
II	II	II
14.5. Environmental hazards		
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No
Clean up even minor leaks or spills if possible without unnecessary risk		

14.6. Special precautions for user

Overland transport

Classification code (ADR) : T1
Special provisions (ADR) : 274, 614
Limited quantities (ADR) : 100ml
Excepted quantities (ADR) : E4
Transport category (ADR) : 2
Special provisions for carriage -
Operation (ADR) : S9, S19
Hazard identification number (Kemler
No.) : 60
Orange plates :



Tunnel restriction code (ADR) : D/E
EAC code : 2X
APP code : B

- Transport by sea

Special provisions (IMDG) : 274
Limited quantities (IMDG) : 100 ml
Excepted quantities (IMDG) : E4
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-A
Stowage category (IMDG) : B
Stowage and handling (IMDG) : SW2
Properties and observations (IMDG) : Toxic if swallowed, by skin contact or by inhalation.
MFAG-No : 153

- Air transport

PCA Excepted quantities (IATA) : E4
PCA Limited quantities (IATA) : Y641
PCA limited quantity max net quantity
(IATA) : 1L
PCA packing instructions (IATA) : 654
PCA max net quantity (IATA) : 5L
CAO packing instructions (IATA) : 662
CAO max net quantity (IATA) : 60L
Special provisions (IATA) : A3, A4, A137

ERG code (IATA) : 6L

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

Not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****15.1.1. EU-Regulations**

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

Ensure all national/local regulations are observed.

Germany

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

DenmarkRecommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product**15.2. Chemical safety assessment**

No additional information available

SECTION 16: Other information

Indication of changes:

1.4	Emergency number	Modified	
2	Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]	Removed	Obsolete
8.2	Hand protection	Modified	Specified material, thickness, et cetera of gloves
9.2	Other properties	Modified	

Abbreviations and acronyms:

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ATE	Acute Toxicity Estimate
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DPD	Dangerous Preparations Directive 1999/45/EC
DSD	Dangerous Substances Directive 67/548/EEC
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
PBT	Persistent Bioaccumulative Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
SDS	Safety Data Sheet

Data sources : Supplier. REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Full text of H- and EUH-statements:

Acute Tox. 1 (Dermal)	Acute toxicity (dermal), Category 1
Acute Tox. 1 (Oral)	Acute toxicity (oral), Category 1
Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H300	Fatal if swallowed.
H310	Fatal in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage
H330	Fatal if inhaled.
H335	May cause respiratory irritation.

SDS Biochemicals version 2017

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product