

DL-Phosphinothricin

Safety Data Sheet

P0159

according to Regulation (EU) 2015/830

Version: 2.0

Date of issue: 26/11/2010 Revision date 21/02/2018

Supersedes 05/08/2011

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

1.1. Product identifier

Product form : Substance
 Trade name : DL-Phosphinothricin
 Chemical name : glufosinate ammonium (ISO), ammonium 2-amino-4-(hydroxymethylphosphinyl)butyrate
 EC Index-No. : 015-155-00-X
 EC-No. : 278-636-5
 CAS-No. : 77182-82-2
 Product code : P0159
 Formula : C5H15N2O4P
 Synonyms : Glufosinate ammonium (ISO).
 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]

Reproductive toxicity, Category 1B H360FD
 Acute toxicity (inhal.), Category 4 H332
 Acute toxicity (dermal), Category 4 H312

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Acute toxicity (oral), Category 4 H302
 Specific target organ toxicity — Repeated exposure, Category 2 H373
 Full text of 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) :



GHS08

GHS07

Signal word (CLP) : Danger

Hazard statements (CLP) : H302 - Harmful if swallowed.
 H312 - Harmful in contact with skin.
 H332 - Harmful if inhaled.
 H360Fd - May damage fertility. Suspected of damaging the unborn child.
 H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements (CLP) : P201 - Obtain special instructions before use.
 P280 - Wear protective clothing, eye protection, face protection, protective gloves.
 P308+P313 - IF exposed or concerned: Get medical advice/attention.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients**3.1. Substances**

Name : DL-Phosphinothricin
 CAS-No. : 77182-82-2
 EC-No. : 278-636-5
 EC Index-No. : 015-155-00-X

Name	Product identifier	%
glufosinate ammonium (ISO), ammonium 2-amino-4-(hydroxymethylphosphinyl)butyrate	(CAS-No.) 77182-82-2 (EC-No.) 278-636-5 (EC Index-No.) 015-155-00-X	> 95

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures**4.1. Description of first aid measures**

First-aid measures after inhalation : Get immediate medical advice/attention
 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 : Get immediate medical advice/attention.

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

No additional information available

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 : Alcohol resistant foam.
Dry chemical powder.
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
- CO_x
- NO_x.

5.3. Advice for firefighters

- Firefighting instructions : Avoid (reject) fire-fighting water to enter environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Evacuate area.

6.1.1. For non-emergency personnel

- Protective equipment : Spill should be handled by trained cleaning personnel properly equipped with respiratory and eye protection.
- Measures in case of dust release : Avoid dust formation.

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.
Sweep up dry powder and dispose properly.

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 : Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in dry, well-ventilated area
Store at ambient temperature.

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

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 (to European standard EN 166 or equivalent)

Skin and body protection:

Long sleeved protective clothing. Chemical resistant apron

Respiratory protection:

Wear approved mask. Filter type P3 (EN 143)

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Appearance : Crystals. Powder. Crystalline powder.
Molecular mass : 198,2 g/mol
Colour : White.

Odour : No data available
Odour threshold : No data available
pH : No data available
Relative evaporation rate (butylacetate=1) : No data available

Melting point : 205 - 215 °C
Freezing point : No data available
Boiling point : No data available
Flash point : > 100 °C
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : No data available

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Vapour pressure : No data available
Relative vapour density at 20 °C : No data available
Relative density : No data available
Solubility : Readily 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

No additional information available

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.

10.3. Possibility of hazardous reactions

Stable under normal conditions.

10.4. Conditions to avoid

Overheating.

10.5. Incompatible materials

Strong oxidizing agent

Strong acids.

10.6. Hazardous decomposition products

In the event of fire, may decompose :

- COx

- NOx.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

DL-Phosphinothricin (77182-82-2)	
LD50 oral rat	1620 mg/kg
LD50 oral	416 mg/kg (mouse)
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (mg/l)	12,6 mg/l/4h

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Reproductive toxicity	: May damage fertility. May damage the unborn child.
STOT-single exposure	: Not classified
STOT-repeated exposure	: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified
Other information	: See actual entry in RTECS for complete information: EK7713600.

SECTION 12: Ecological information

12.1. Toxicity

DL-Phosphinothricin (77182-82-2)	
LC50 fish 1	710 g/l <i>Oncorhynchus mykiss</i> (Rainbow trout)
EC50 <i>Daphnia</i> 1	560 mg/l

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

Additional information : Avoid release to the environment. Prevent entry to sewers and public waters

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		
Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name		
Not regulated	Not regulated	Not regulated
Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)		
Not regulated	Not regulated	Not regulated
Not regulated	Not regulated	Not regulated
14.4. Packing group		
Not regulated	Not regulated	Not regulated

ADR	IMDG	IATA
14.5. Environmental hazards		
Not regulated	Not regulated	Not regulated
No supplementary information available		

14.6. Special precautions for user**. Overland transport**

Not regulated

- Transport by sea

Not regulated

- Air transport

Not regulated

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**

No REACH Annex XVII restrictions

DL-Phosphinothricin is not on the REACH Candidate List

DL-Phosphinothricin is not on the REACH Annex XIV List

15.1.2. National regulations

Ensure all national/local regulations are observed.

Germany

Reference to AwSV

: Water hazard class (WGK) 1, low hazard to waters (Classification according to VwVwS, Annex 3; ID No. 2129)

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

: DL-Phosphinothricin is listed

SZW-lijst van mutagene stoffen

: The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding

: The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid

: DL-Phosphinothricin is listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling

: DL-Phosphinothricin is listed

Denmark

Recommendations 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

The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Indication of changes:

1.4	Emergency number	Modified	
8.2	Hand protection	Modified	Specified material, thickness, et cetera of gloves

Full text of H- and EUH-statements:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Repr. 1B	Reproductive toxicity, Category 1B
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H360FD	May damage fertility. May damage the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

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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