

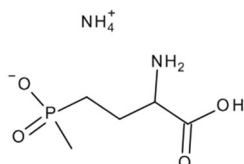
Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2016/1179
Date of issue: 03/06/2019 Version: 1.0

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

1.1. Product identifier

Product form : Substance
 Substance name : Glufosinate Ammonium Tech min 95%
 EC Index-No. : 015-155-00-X
 EC-No. : 278-636-5
 CAS-No. : 77182-82-2
 Type of product : Biocidal products (e.g. Disinfectants, pest control)
 Formula : C₅H₁₅N₂O₄P
 Chemical structure :



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

1.2.1. Relevant identified uses

Main use category : Industrial, Professional use
 Use of the substance/mixture : Herbicide

1.2.2. Uses advised against

No additional information available.

1.3. Details of the supplier of the safety data sheet

Simonis B.V.
 P.O. Box P.O. Box 620
 7000 AP Doetinchem - The Netherlands
 T +31 314 333 700 - F +31 314 344 167
agrochem@simonisbv.nl - <http://www.simonisbv.nl/>

1.4. Emergency telephone number

Emergency number : +31 314 333 700 (Working Hours Only)

Country	Official advisory body	Address	Emergency number	Remark
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA Belfast	0344 892 0111	Only for the purpose of informing medical personnel in cases of acute intoxications

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP] with its amendment Regulation (EU) 2016/1179

Acute toxicity (oral), Category 4 H302
 Acute toxicity (dermal), Category 4 H312
 Acute toxicity (inhalation:dust,mist) Category 4 H332
 Reproductive toxicity, Category 1B H360
 Specific target organ toxicity — Repeated exposure, Category 2 H373
 Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Harmful if inhaled. Harmful in contact with skin. Harmful if swallowed. May cause damage to organs through prolonged or repeated exposure. May damage fertility or the unborn child.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP] with its amendment Regulation (EU) 2016/1179

Hazard pictograms (CLP)



GHS07

GHS08

Signal word (CLP)

: Danger

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Hazard statements (CLP)	: H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled. H360 - May damage fertility or the unborn child. H373 - May cause damage to organs through prolonged or repeated exposure.
Precautionary statements (CLP)	: P201 - Obtain special instructions before use. P261 - Avoid breathing dust. P264 - Wash hands thoroughly after handling. P280 - Wear protective clothing, protective gloves, eye protection, respiratory protection. P308+P313 - IF exposed or concerned: Get medical advice. P312 - Call a POISON CENTER/doctor if you feel unwell.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	: Glufosinate Ammonium Tech min 95%
CAS-No.	: 77182-82-2
EC-No.	: 278-636-5
EC Index-No.	: 015-155-00-X

Name	Product identifier	Conc. (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP] with its amendment Regulation (EU) 2016/1179
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	>= 90	Repr. 1B, H360FD Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Oral), H302 STOT RE 2, H373

Full text of H-phrases: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	: Take off contaminated clothing. Wash skin with plenty of water. Get medical advice if skin irritation persists.
First-aid measures after eye contact	: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting without medical advice. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects	: gastrointestinal disturbance, tremors, convulsions, respiratory depression, cardiac arrhythmia, decreased blood pressure, drowsiness and/or loss of consciousness. These symptoms may be delayed by up to 48h after exposure.
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4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Presents no particular fire or explosion hazard.
Hazardous decomposition products in case of fire	: Carbon oxides (CO, CO ₂). Nitrogen oxides.

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel. Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe Dust.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Do not allow to enter drains or water courses. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Do not breathe Dust. Do not get in eyes, on skin, or on clothing. Wear personal protective equipment. Concerning personal protective equipment to use, see section 8.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool well ventilated place. Keep container closed when not in use. Store locked up.

Incompatible products : Strong bases. Strong acids. Strong oxidation agent.

Heat and ignition sources : Keep away from heat and direct sunlight.

7.3. Specific end use(s)

No additional information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available.

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:					
Wear suitable gloves resistant to chemical penetration. Chemical resistant gloves (according to European standard NF EN 374 or equivalent).					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Gloves	nitrile rubber (NBR), Polyvinylchloride (PVC)	6 (> 480 minutes)	>0.11		EN 374
Eye protection:					
Safety glasses. DIN EN 166					
Skin and body protection:					
Wear suitable protective clothing. CEN : EN 340; EN 369; EN 465					
Respiratory protection:					
In case of inadequate ventilation wear respiratory protection. EN 143					
Device	Filter type	Condition	Standard		
Dust mask	Type P2	Protection for Solid particles	EN 143		

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Environmental exposure controls:

Avoid release to the environment.

Other information:

Do not eat, drink or smoke during use. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder.
Colour	: Off-white.
Odour	: No data available.
Odour threshold	: No data available.
pH	: No data available.
Relative evaporation rate (butylacetate=1)	: No data available.
Melting point	: 215 °C
Freezing point	: No data available.
Boiling point	: No data available.
Flash point	: No data available.
Auto-ignition temperature	: No data available.
Decomposition temperature	: No data available.
Flammability (solid, gas)	: No data available.
Vapour pressure	: < 0.1 mPa (20°C)
Relative vapour density at 20 °C	: No data available.
Relative density	: No data available.
Density	: 1.4 g/cm ³ (20°C)
Solubility	: Water: 1370 g/l (22°C) Ethanol: 0.65 g/l (20°C) Acetone: 0.16 g/l (20°C)
Log Pow	: No data available.
Log Kow	: < 0.1 (pH 7; 22°C)
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 use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known.

10.4. Conditions to avoid

Keep away from heat and direct sunlight.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidation agent.

10.6. Hazardous decomposition products

No decomposition if stored normally.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Harmful in contact with skin.
Acute toxicity (inhalation)	: Harmful if inhaled.

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glufosinate ammonium (ISO); ammonium 2-amino-4-(hydroxymethylphosphinyl)butyrate (77182-82-2)	
LD50 oral rat	1620 mg/kg
LD50 dermal rat	1380 mg/kg
LC50 inhalation rat (mg/l)	1260 mg/m ³ (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 or 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

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

glufosinate ammonium (ISO); ammonium 2-amino-4-(hydroxymethylphosphinyl)butyrate (77182-82-2)	
LC50 fishes 1	710 mg/l (Oncorhynchus mykiss)
EC50 Daphnia 1	560 mg/l (Daphnia magna)

12.2. Persistence and degradability

No additional information available.

12.3. Bioaccumulative potential

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Log Kow	< 0.1 (pH 7; 22°C)
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12.4. Mobility in soil

No additional information available.

12.5. Results of PBT and vPvB assessment

Glufosinate Ammonium Tech min 95% (77182-82-2)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Additional information	: Empty containers should be taken for recycle, recovery or waste in accordance with local regulation.
Ecology - waste materials	: Avoid release to the environment.
European List of Waste (LoW) code	: 07 04 00 - wastes from the MFSU of organic plant protection products (except 02 01 08 and 02 01 09), wood preserving agents (except 03 02) and other biocides

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated

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14.3. Transport hazard class(es)

Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
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14.4. Packing group

Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
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14.5. Environmental hazards

Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
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No supplementary information available.

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail 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

Glufosinate Ammonium Tech min 95% is not on the REACH Candidate List

Glufosinate Ammonium Tech min 95% is not on the REACH Annex XIV List

Glufosinate Ammonium Tech min 95% is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Glufosinate Ammonium Tech min 95% is not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC

Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products

This product contains biocidal products

Type of product (Biocide) : Herbicide

Authorisation number :

15.1.2. National regulations

No additional information available.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

SDS	Safety Data Sheet
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
PBT	Persistent Bioaccumulative Toxic
vPvB	Very Persistent and Very Bioaccumulative
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods

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RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
LC50	Median lethal concentration
LD50	Median lethal dose
CAS	CAS (Chemical Abstracts Service) number
EG-nr	EINECS- en ELINCS-number
EINECS	European Inventory of Existing Commercial Substances
OEL	Occupational Exposure Limit

Data sources : according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2016/1179.

Other information : REACH Disclaimer:
This information is based on current knowledge. Consistency of data in the SDS with CSR is considered, as far as the information is available at the time of compilation (cfr Revision date and Version number).
DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

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 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Repr. 1B	Reproductive toxicity, Category 1B
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.
H360	May damage fertility or the unborn child.
H360FD	May damage fertility. May damage the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

Safety Data Sheet applicable for regions : GB - United Kingdom

This Safety Data Sheet is compiled by :
Trade Wind B.V. (info@twnl.nl)

SDS EU (REACH Annex II)

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.