

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

1.1 Glufosinate-ammonium

Product Name **Glufosinate-ammonium 150g/L SL**

CAS No. 77182-82-2

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

1.2.1 Relevant identified uses Laboratory chemicals, Manufacture of substances

1.3 Details of the formulator of the safety data sheet

Company	Lier Cropscience Co., Ltd.
Address	No.329 South Mianzhou Avenue, Mianyang, Sichuan, P. R. China 621000
Telephone	+86-816-2841584
Mail ID	liercrop@lierchem.com
Website	www.liercrop.com
Fax	+86-816-2544956

1.4 Emergency telephone number

+86-816-2845441

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute toxicity, Dermal (Category 4), H312

Specific target organ toxicity - repeated exposure (Category 2), H373

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Warning

Hazard statement(s)

- H312: Harmful in contact with skin.
- H373: May cause damage to organs through prolonged or repeated exposure
- Precautionary statement(s)
- P264: Wash contacted areas thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P280: Wear protective gloves, protective clothing and eye or face protection.
- P362: Take off contaminated clothing and wash before reuse.
- P302+P352: IF ON SKIN: Wash with plenty of soap and water.
- P301+P312: IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bio-accumulative and toxic (PBT), or very persistent and very bio-accumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Hazardous ingredients according to Regulation (EC) No 1272/2008

Hazardous Components:		
CAS No.	Common name	% w/w
77182-82-2	Glufosinate-ammonium Toxic To Reproduction 1A, H360; STOT RE 2, H373; Acute Toxicity (Oral) 4, H302; Acute Toxicity (Dermal) 4, H312; Acute Toxicity (Inhalation) 4, H332	≥14.15%
	Other ingredients including water	Up to 100%

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled



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Remove patient to fresh air. If not breathing, give mouth to mouth resuscitation and call a physician immediately.

In case of skin contact

Remove contaminated clothing and wash skin with soap and water.

If irritation persists, call a physician. Launder contaminated clothing before re-use.

In case of eye contact

Flush with water for at least 15 minutes. Call a physician immediately.

If swallowed

Call a physician or Poison Control Center immediately. Do not induce vomiting.

Drink two glasses of water. Never induce vomiting or give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

No data available

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.



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Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Harmful - Keep out of reach of children.

Store in original container, tightly closed away from foodstuffs. Use spray solutions the same day

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

No data available

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection



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Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	Stable homogeneous blue liquid
b) Odour	Slight pungent odour
c) Odour Threshold	No data available
d) pH	7.17 at 25°C
e) Melting /freezing point	No data available
f) Initial boiling point and boiling range	No data available
g) Flash point	60.7 °C
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	Non-explosive
k) Vapour pressure	Low
l) Vapour density	No data available
m) Relative density	1.0709 g/ml at 20°C
n) Water solubility	Soluble
o) Partition coefficient: noctanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	540.2 mPa/s for 20°C; 510.6 mPa.s for 25°C



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s) Explosive properties

Non- explosive

t) Oxidizing properties

No data available

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under normal conditions

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Avoid sources of ignition and extreme heat

10.5 Incompatible materials

Avoid contact with strong oxidising agents, acids or bases. Ammonia may be evolved in the presence of alkalis.

10.6 Hazardous decomposition products

Ammonia. In a fire, oxides of carbon, nitrogen, phosphorus and sulphur may be emitted.

Other decomposition products - No data available

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Oral: Acute oral LD₅₀ for rats > 2000mg/kg (both for male and female)

Dermal: Acute dermal LD₅₀ for rats > 2000mg/kg (both for male and female)

Inhalation: LC₅₀ (4 h) for rats >2.24 mg/l.

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation.

Eye damage/eye irritation

Eye - Rabbit

No eye irritation

Respiratory or skin sensitisation



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Not a skin sensitiser (guinea pigs).

Germ cell mutagenicity

Non-mutagenic

Carcinogenicity

Glufosinate-ammonium was not carcinogenic in lifetime feeding studies in rats and mice.

Reproductive toxicity

Glufosinate-ammonium was not a primary reproductive toxicant in rats. There was a decrease in the number of viable pups at the high dose in conjunction with maternal toxicity

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure

Aspiration hazard

No data available

Additional Information

No data available

SECTION 12: Ecological information

12.1 Toxicity

Birds: Dietary LC50 (8 d) for Japanese quail >5000 mg/kg.

Fish: LC50 (96 h) for rainbow trout 710, carp, bluegill sunfish, golden orfe >1000 mg/l.

Daphnia: LC50 (48 h) 560–1000 mg/l.

Algae: LD50 for *Scenedesmus subspicatus* ≥ 1000 , *Selenastrum capricornutum* LD50: 37 mg/l.

Bees: Not hazardous to bees; LD50 >100 µg/bee.

Worms: LD50 for earthworms >1000 mg/kg soil.

Other beneficial spp.: Not toxic to beneficial arthropods.

12.2 Persistence and degradability

No data available

12.3 Bio-accumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher

12.6 Other adverse effects Harmful to aquatic life.

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.
Contact a licensed professional waste disposal service to dispose of this material.
Dissolve or mix the material with a combustible solvent and burn in a chem scrubber.

Contaminated packaging

Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying..

SECTION 14: Transport information

14.1 UN number

ADR/RID: - IMDG:- IATA:-

14.2 UN proper shipping name

ADR/RID: Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

14.3 Transport hazard class(es)

ADR/RID:- IMDG:- IATA:-

14.4 Packaging group

ADR/RID: - IMDG: - IATA:-

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

No data available

SECTION 15: Regulatory information

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Authorisations and/or restrictions on use

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!