

SAFETY DATA SHEET

Glufosinate-ammonium Technical

Revision: 01/01/2019

Section 1. Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product Identifiers

Product Name: Glufosinate-ammonium Technical
CAS No. 77182-82-2

1.2 Relevant Identified Uses of the Substance or Mixture and Uses advised against

Identified uses: Agricultural herbicide

1.3 Details of the Supplier of the Safety Data Sheet

Company Name: Ningxia Wynca Technology Co., Ltd.
Add: Taisha Industrial Park, Pingluo, Ningxia, 753401, China
Telephone: 86 952 3950099
Fax: 86 952 3910687

1.4 Emergency Telephone Number

Emergency contact: 86 952-3910698

Section 2. Hazards Identification

2.1 Classification of the Substance or Mixture

Classification according to Regulation (EC) No 1272/2008

Acute Toxicity: Inhalation, Category 4

Acute Toxicity: Oral, Category 4

Acute Toxicity: Skin, Category 4

Toxic To Reproduction, Category 1B

Target Organ Systemic Toxicity (repeated exposure), Category 2

2.2 Label Elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Danger

GHS Hazard Phrases

H332: Harmful if inhaled.

H302: Harmful if swallowed.

H312: Harmful in contact with skin.

H360: May damage fertility or the unborn child.

H373: May cause damage to organs through prolonged or repeated exposure.

GHS Precaution Phrases

P261: Avoid breathing(dust/fume/gas/mist/vapor/spray).

P264: Wash {hands} thoroughly after handling.

P280: Wear (protective gloves/protective clothing/eye protection/face protection).

P362+364: Take off contaminated clothing and wash it before reuse.

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P281: Use personal protective equipment as required.

P260: Do not breathe (dust/fume/gas/mist/vapor/spray).

GHS Response Phrases

P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312: Call a (POISON CENTER/doctor/...) if you feel unwell.

P301+312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P330: Rinse mouth.

P302+352: IF ON SKIN: Wash with plenty of soap and water.

P321: Specific treatment (see ... on this label).

P308+313: IF exposed or concerned: Get medical attention/advice.

P314: Get medical attention/advice if you feel unwell.

GHS Storage and Disposal Phrases:

Please refer to Section 7 for Storage and Section 13 for Disposal information.

2.3 Adverse Human Health Effects and Symptoms

Harmful if inhaled.

Harmful if swallowed.

Harmful in contact with skin.

Material may be irritating to the mucous membranes and upper respiratory tract.

May cause damage to organs through prolonged or repeated exposure.

May cause eye, skin, or respiratory system irritation.

May damage fertility or the unborn child.

To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Section 3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS-No	Concentration, %	GHS Classification
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Glufosinate-ammonium	77182-82-2	97% min	Acute Tox.(O) 4: H302 Acute Tox.(D) 4: H312 Acute Tox.(I) 4: H332 Toxic Repro. 1B: H360 TOST (RE) 2: H373
Other ingredient (non-hazardous)		Up to 100%	

Section 4. First Aid Measures

4.1 Description of First Aid Measures

- General advice:** If poisoning occurs, immediately contact a doctor or Poisons Information Centre, and follow the advice given. Show this Material Safety Data Sheet to the doctor.
- Inhalation:** Remove from exposure and move to fresh air immediately. Keep patient warm and at rest. If symptoms persist, call a physician.
- Skin:** Take off contaminated clothing and shoes immediately. Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.
- Eyes:** Wash off immediately with plenty of water for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.
- Ingestion:** Do NOT induce vomiting. Keep at rest. Rinse mouth. Call a physician or poison control center immediately.

4.2 Most Important Symptoms and Effects, both acute and delayed

Vomiting, Diarrhoea, Abdominal pain, Tremors, Hypotension, muscular weakness, Unconsciousness, Coma, Convulsions, Respiratory failure, Nausea, Tachycardia

4.3 Indication of any Immediate Medical Attention and Special Treatment needed

Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable.

Forced alkaline diuresis and hemodialysis may be considered.

There is no specific antidote.

In case of convulsions, a benzodiazepine (e.g. diazepam) should be given according to standard regimens.

Treatment:

If not effective, phenobarbital may be used.

Contraindication: atropine.

Oxygen or artificial respiration if needed.

Keep respiratory tract clear.

ECG - monitoring (Electrocardiogram).

EEG - monitoring (Electroencephalogram).

Monitor: respiratory, cardiac and central nervous system.

Keep under medical supervision for at least 48 hours.

Section 5. Fire Fighting Measures	
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5.1 Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable Extinguishing Media	A solid water stream may be inefficient.
5.2 Special Hazards arising from the Substance or Mixture	Ammonia Oxides of carbon Nitrogen oxides (NO _x) Oxides of phosphorus Sulphur oxide
5.3 Precautions for Fire-Fighting	In the event of fire, wear self-contained breathing apparatus. Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Whenever possible, contain fire-fighting water by diking area with sand or earth. Do not allow run-off from fire fighting to enter drains or water courses.

Section 6. Accidental Release Measures	
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6.1 Protective Precautions, Protective Equipment and Emergency Procedures	Avoid raising and breathing dust, and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
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6.2	Environmental Precautions	Do not allow to get into surface water, drains and ground water. If the product contaminates rivers and lakes or drains inform respective authorities.
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	Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

Section 7. Handling and Storage
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7.1	Precautions for Safe Handling:	Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid prolonged or repeated exposure. Hygiene measures: When using, do not eat, drink or smoke. Handle in accordance with good industrial hygiene and safety practice. Wash hands thoroughly with soap and water after handling and before eating, drinking, and chewing gum, using tobacco, using the toilet or applying cosmetics. Remove soiled clothing immediately and clean thoroughly before using again.
7.2	Conditions for Safe Storage, including any Incompatibilities	Requirements for storage areas and containers Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight. Protect from freezing. Advice on common storage Keep away from food, drink and animal feedstuffs.

Section 8. Exposure Controls/Personal Protection

8.1	Exposure Parameters	No data available
8.2	Exposure Controls	
8.2.1	Appropriate Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
8.2.2	Personal Protection 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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection:

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection:

Where risk assessment shows air-purifying respirators are appropriate use (EN 143) respirator cartridges as a backup to engineering controls. If full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Section 9. Physical and Chemical Properties
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9.1 Information on Basic Physical and Chemical Properties**Appearance:**

Form	Powder
Color	Grey to white
Odor	Odorless to mildly pungent
Melting point	There was an alteration of color at mean temperature of 190.6 °C. The test was continued and the test substance did not reach melting range until 250.0 °C.
Boiling point	Not measurable due to thermal decomposition in the range 245–305 °C (92/69/EEC EC A.2) a
Flash point	> 100 °C
Relative density	1.32 g/mL at 23 °C (92/69/EEC EC A.3) a 1.204 g/mL at 20 °C (92/69/EEC EC A.3) b
Vapor pressure	Estimated to be < 3.1×10^{-5} Pa at 50 °C (OECD 104 EC A.4) c
Henry's Law constant	KH = 4.48×10^{-9} (Pa m ³ /mole) (calculated)
Dissociation constant	pKa 4.83; Ka 1.49×10^{-5}
Oxidizing	No oxidizing
Partition coefficient	Pow -1.819 (pH=7.03) at 20 °C
Solubility	At 20 °C, 1280.326 g/L in water (pH=4.41), 0.083 g/L in acetone, 4.860 g/L in methanol

Explosive properties No data available
Auto-ignition temperature No data available

Section 10. Stability and Reactivity

10.1 Reactivity	No data available
10.2 Chemical stability	Stable under recommended storage conditions.
10.3 Conditions to avoid	Heat, flames and sparks.
10.4 Incompatibilities with other materials	Strong oxidizing agents Acids Bases Alkali metals
10.5 Hazardous decomposition products	Thermal decomposition can lead to release of: Ammonia Oxides of carbon Nitrogen oxides (NOx) Oxides of phosphorus Sulphur oxides

Section 11. Toxicological Information

11.1 Information on Toxicological Effects

Acute oral toxicity	LD50 (rat): 2000 mg/kg
Acute inhalation toxicity	LC50 (rat): great than 11.041 mg/l; Exposure time: 4 h; Category 5.
Acute dermal toxicity	LD50 (rat): great than 2000 mg/kg
Skin irritation	No irritation (rabbit)
Eye irritation	No irritation. (rabbit)
Sensitization	Non-sensitization. (guinea pig)
Mutagenicity	Glufosinate-ammonium was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
Carcinogenicity	Glufosinate-ammonium was not carcinogenic in lifetime feeding studies in rats and mice.
Reproductive toxicity	Presumed human reproductive toxicant(Glufosinate ammonium)

Section 12. Ecological Information

12.1 Toxicity	
Toxicity to fish	Rainbow trout LC50 (96 h)=710 mg/L
Toxicity to aquatic invertebrates	Daphnia magna LC50(48h)=668mg/L
Toxicity to aquatic plants	Algae EC50(96 h)= 46.5 mg/L

Toxicity to other organisms	Bobwhite Qual LD50 > 2000 mg/kg; Bees Acute contact LD50 (48 hours) > 345 µg/bee; Acute oral LD50 (48 hours) > 600 µg/bee; Earthworms LC50 (14d) >1000 mg/kg.
12.2 Persistence and Degradability	DT50=7.4d (Soil)
12.3 Bioaccumulative Potential	Readily biodegradable.
12.4 Mobility in Soil	Moderate to high mobile (Kf = 0.2 – 3.4)
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.

Section 13. Disposal Considerations
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13.1 Waste Disposal	Dispose in accordance with local, state, and federal regulations.
13.2 Container Disposal	
Metal drums and plastic containers	Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.
Refillable containers	If tamper evident seals are broken prior to initial use then the integrity of the contents cannot be assured. Empty container by pumping through dry-break connection system. Do not attempt to breach the valve system or the filling point, or contaminate the container with water or other products. Ensure that the coupler, pump, meter and hoses are disconnected, triple rinsed and drained after each use. When empty, or contents no longer required, return the container to the point of purchase.

Section 14. Transport Information
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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			

