

Material Safety Data Sheet

GLUFOCINATE AMMONIUM 200G/L SL

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1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

Product Name	: GLUFOCINATE AMMONIUM 200
Product Type	: Herbicide
Company Name	: ANGLO GULF LIMITED
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	DUBAI, United Arab Emirates
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Recommended Use for the control of emerged broadleaf weeds prior to sowing crops and pastures in conservation tillage situations and for selective weed control in the crops and situations as per the directions for use.

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: Blue colour liquid

IMMEDIATE CONCERNS: Causes eye irritation

Avoid contact with eyes or clothing, wash thoroughly with soap and water after handling, keep out of reach of children, potential health effects

EYES: Eye contact may cause discomfort, tearing, swelling, redness, and blurred vision.

SKIN: This substance is not expected to cause prolonged or significant skin irritation. If absorbed through the skin, this substance is considered practically non-toxic to internal organs. This product is not expected to cause allergic skin reaction.

INGESTION: Ingestion may produce irritation of the digestive tract as demonstrated by signs and symptoms of mouth membrane irritation, nausea, vomiting and diarrhea.

INHALATION: Overexposure to spray mist may result in minor irritation of the upper respiratory tract.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS Number	Proportion (w/v)
Glufosinate ammonium	77182-82-2	200
1-Methoxy-2-propanol	107-98-2	100
Other non hazards ingredient		300
Water		Q.S



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4. FIRST AID MEASURES

Inhalation

Remove affected person to fresh air until recovered.

Skin Contact

Wash affected areas thoroughly with soap and water. If irritation persists, seek medical advice.

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Eye Contact

If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes.

Seek medical advice immediately.

Ingestion

If swallowed, do NOT induce vomiting; seek medical advice immediately and show this container or label or contact the Poisons Information Centre. Make every effort to prevent vomit from entering the lungs by careful placement of the patient.

Notes to

5. FIRE FIGHTING MEASURES

Fire and explosion hazards

In the event of the following can be released: carbon monoxide, nitrogen oxides, sulphur oxides, phosphorus fluoride, under certain condition of combustion traces of other toxic substances. Such as hydrocyanic acid, cannot be excluded.

May emit toxic fumes of hydrogen chloride or phosgene if involved in fires or exposed to extreme heat.

Special Protective Equipment for Fire Fighters

Breathable air apparatus must be worn when fighting a fire in which this product is involved.

6. ACCIDENTAL RELEASE MEASURES

Spills and Disposal

Contain spill and absorb with clay, sand, soil or proprietary absorbent (such as vermiculite). Collect spilled material and waste in sealable open-top type containers for disposal. Dispose of at landfill in accordance with local regulations.

Environmental Precautions

Prevent from entering drains, waterways or sewers.

Personal Precautions

Evacuate personnel to safe areas. Use personal protective equipment.

7. HANDLING AND STORAGE

Handling

For personal protective equipment (PPE) and hygiene advice, refer Section 8.

Do not get in eyes, on skin, or on clothing. Do not use near heat or open flame.

Storage

Store in the closed original container in a cool, well-ventilated area out of direct sunlight. Keep container tightly sealed and do not store with seed, fertilizers or foodstuffs.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

General protection

Educate and train employee in safe use of the product. Follow all label instructions.

Follow manufacturer's instruction for cleaning/maintaining PPE. If no such instructions for washables. Use detergent and hot water. Keep and wash PPE separately from other laundry.

National Exposure Standards

No exposure standard has been established for this product. However, an exposure standard has been set for product at 10 mg/m3.

Engineering Controls

Natural ventilation is sufficient when handling concentrate and preparing spray solution.

Personal Protective Equipment

When preparing product for use, wear elbow-length PVC gloves and face shield or goggles.

When using controlled droplet applicator, wear protective waterproof clothing and impervious footwear.

Hygiene Measures

After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash contaminated clothing and safety equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Clear blue colour liquid
Odor	: Weekly pungent
Density	: 1.10 \pm 0.05 g/ml at 20 $^{\circ}\text{C}$
рН	: 6 – 8
Boiling point	: > 90°C
Decomposition temperature	e : 400°C
Solubility in Water	: Soluble
Flammability	: Non flammable
Flash Point	: N.A
Oxidizing properties	: Not oxidizing
Partition coefficient	: log Pow: -4.01 at pH 7
(N-octanol/water)	

10. STABILITY AND REACTIVITY

Chemical Stability

Stable under recommended condition of warehouse storage. **Incompatible Material** Strong acids, strong bases and strong oxidising agents Incompatibility None known **Hazardous Reactions**

Reaction of concentrate or spray mix with acids will precipitate soild product and largely de-active the product and cause blockages in spray equipment. The addition of strong alkali such as caustic soda will cause release of dimethylamine vapour.

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Hazardous Polymerization Hazardous polymerization is not possible

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	: male rat: LD50: 2,170 mg/kg
	Female rat: LD50: 1,910 mg/kg
Acute Dermal	: male rat: LD50: 1400 mg/kg
	Female rat: LD50: 1380 mg/kg
Acute inhalation toxicity	: male rat LC50: 3.22 mg/l
	Exposure time: 4h
	Determine in the form of liquid aerosol.
	Male rat: LC50 12.88 mg/l
	Exposure time: 1h
	Determine in the form of liquid aerosol.
	Extrapolated from the 4h LC50
Skin irritation	: rabbit sight irritant effect does not require labeling
Eye irritation	: rabbit moderately irritant
Sensitization	: guinea pig none sensitizing
Subchronic toxicity	: Glufosinate ammonium caused general toxicity in a subchronic study in mice.
Chronic toxicity	: the principal effects from long term exposure to high dose levels of Glufosinate
	ammonium in rat, mice and dogs included kidney effects and/or mortality.
Neurotoxicity	: Glufosinate ammonium was not a neurotoxicant in acute and sub acute
	neurotoxicity screening studies in rats.

12. ECOLOGICAL INFORMATION

Environment Protection

Do not apply directly to water to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes. Including wash water. Spray drift can cause damage, read the label for more information.

Acute Toxicity-Fish	: bluegill sunfish LC50 (96h): 56-75 mg/l,
	Rainbow trout LC50 (96 h): 26.7 mg/L
Acute Toxicity-Daphnia	: Daphnia EC50 (48 h): 15-27 mg/L
	Mysidopsis Bahia LC50 (96 h) 43.2 mg/l
	Oyster shell deposition EC50 (48 h) 2.65 mg/l
Acute Toxicity-Bird	: Not toxic to birds
LD50 Japanese quail	: >2000 mg/kg
Acute Toxicity-Bees	: Not toxic to bees
Earthworm	: LC50 (14 d): > 1000 ppm

13. DISPOSAL CONSIDERATIONS

Product Disposal

On site disposal of the concentrated product is not acceptable. Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals.

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Container Disposal

Do not use this container for any other purpose. Triple rinse containers; add rinsate to the spray tank, then offer the container for recycling/reconditioning, or puncture top, sides and bottom and dispose of in landfill in accordance with local regulations. Returnable containers: empty contents fully into application equipment. Replace cap, close all valves and return to the point of supply for the refill or storage. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree root. Empty containers and product should not be burnt.

14. TRANSPORT INFORMATION

DOT classification: Non bulk not regulated for domestic surface transportation Bulk combustible liquid, N.O.S Freight classification: compounds, tree or weed killing, N.O.I, other than poison, having a density of 20 LBS or greater per cubic foot.

Considered non-dangerous for the Transport of Dangerous Goods by Road and Rail.

15. REGULATORY INFORMATION

Packaging and Labelling CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING

16. OTHER INFORMATION

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user must review this information in the specific context of the intended application. ANGLO GULF LIMITED will not be responsible for damages of any nature resulting from use of or reliance upon this information.

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