

**MATERIAL SAFETY DATA SHEET****MATERIAL SAFETY DATA SHEET**

PRODUCT : Glufosinate-ammonium 13.5% SL

PRODUCT DESIGNATION : Herbicide

Section 1. Product & Company Identification

Common Name : Glufosinate-ammonium

Grade : Formulation

Active Ingredient : Glufosinate-ammonium

Chemical Name of Active : ammonium 4-[hydroxy(methyl)phosphinoyl]-DL-
Ingredient (IUPAC) homoalaninate

Chemical Family of A. I. : Herbicide

Molecular Formula of A. I. : C₅H₁₅N₂O₄P

Molecular Mass of A. I. : 198.16 g/mol

Manufacturer & Supplier : **M/s Solas CropTech Private Limited**
Head office: 36, Strand Road, 4th Floor, Room No-01,
Kolkata-700001

Telephone Number : (033) 2231-3306

Section 2. Composition / Information on Ingredients

<u>Name of Components</u>	<u>Concentration% w/w</u>
Glufosinate-ammonium	13.50%w/w
Inert Ingredients	86.50%w/w
<u>TOTAL</u>	<u>100.00% w/w</u>



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Section 3. Hazards Identification

CANCER INFORMATION: For the components tested, did not cause cancer in laboratory animals.

REPRODUCTIVE EFFECTS: For the components tested, in animal studies, has been shown not to interfere with reproduction.

Section 4. First Aid Measures

General advice : If poisoning occurs, contact a doctor or Poisons Information Centre.

Inhalation : No specific intervention is indicated as the compound is not likely to be hazardous. Consult a physician if necessary.

Skin contact : Take off all contaminated clothing immediately. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

Eye contact : Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

Ingestion : Have person sip a glass of water if able to swallow. DO NOT induce vomiting unless directed to do so by a physician or poison control centre. Never give anything by mouth to an unconscious person. Call a poison control centre or doctor for treatment advice.

Notes to physician

Treatment : Treat symptomatically

Section 5. Fire Fighting Measures

Suitable extinguishing media : Water fog, fine water spray, foam, dry chemical, carbon dioxide..

Hazards from combustion products: In a fire, irritant and toxic fumes containing oxides of carbon, nitrogen, phosphorus and sulphur, and other toxic substances may be generated.

Hazardous Combustion Products: In the event of fire, the following may be released: Carbon monoxide, nitrogen oxides, sulfur oxides and hydrogen chloride.

Precautions for fire fighters: Fire fighters should wear full protective gear, including self-contained breathing apparatus. Keep unnecessary people away. If it can be done safely, remove intact containers from the fire. Otherwise, use water spray to cool them. Bund area



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with sand or earth to prevent contamination of drains or waterways. Dispose of fire control water or other extinguishing agent and spillage safely later.

Section 6. Accidental Release Measures

Use appropriate protective equipment. Clear area of unnecessary personnel.

Spills may be slippery and should be cleaned up immediately.

Large spill: Dike and pump as much as possible to a salvage container. Absorb the remaining liquid and any small spills with clay granules, sand or other absorbent material and sweep to a waste container. Cover the spill area with water and absorb. Minimise runoff into waterways or drains.

Section 7. Handling & Storage

Harmful - Keep out of reach of children. Store in original container, tightly closed away from foodstuffs. Use spray solutions the same day.

Flammability: Not flammable under conditions of use. Not classified as a combustible liquid, as the boiling point (96°C) is less than the fire point (> 96°C). The product does not sustain combustion

Section 8. Exposure Control, Personal Protection

General Protection: Do not eat, drink or smoke when handling this product, wash your hands before eating, drinking, smoking or before touching anyone or anything.

Exposure Limit: 0.9mg/cm³

Section 9. Physical and Chemical Properties

Appearance / state	: blue to blue green/liquid
Colour	: Pale yellow
Odour	: Slight pungent odour
Flash point	: Not applicable
Boiling Point	: 97° C
Density	: 1.08g/cm ³ at 20 °C



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Section 10. Stability & Reactivity

Flash Point: Not applicable

Autoignition Temperature: Not applicable

Explosion Limit: Not explosive

Stability and Reactivity: Stable under normal conditions

Hazardous Polymerization: Not data available

Incompatibility: Compatible to almost all pesticides

Storage Stability: Stable for 3 years if stored in a cool, dark and dry place.

Chemical stability Stable under normal conditions of use.

Conditions to avoid : Avoid sources of ignition and extreme heat.

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

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

Section 11. Toxicological Information

Acute Oral Toxicity LD₅₀ for rats : >1,730 mg/kg

Acute Dermal Toxicity LD₅₀ Rabbit : >593 mg /kg

Acute Inhalation LC₅₀ (4h) for male and female rats : >2.97 mg/l

Eye Irritation Rabbit : Severe eye irritation

Skin Irritant Rabbit : Slightly irritant

Skin sensitization Guinea pig : Not a skin sensitizer

Section 12. Ecological Information

Toxicity to fish : LC₅₀(96 h)Rainbow trout: > 13.4 mg/l

Daphnia magna : EC₅₀ (48h) : 17.8 mg/l

Toxicity to aquatic plants : EC₅₀ (72 h) Selenastrum capricornutum : 71,3 mg/l

Section 13. Disposal Consideration

Product

Do not dispose of waste into sewer.



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In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.

Contaminated packaging

Triple rinse containers.

Rinsed packaging may be acceptable for landfill, otherwise incineration will be required in accordance with local regulations.

Not completely emptied packagings should be disposed of as hazardous waste. Do not use containers for other products.

Section 14. Transport Information

IMDG Classification

Shipping name : PESTICIDE, LIQUID, TOXIC, N.O.S. (GLUFOSINATE-AMMONIUM SOLUTION)

Class : 6.1

Packing group : III

UN number : 2902

Marine pollutant : Yes

Section 15. Regulatory Information

R-phrases

R10 Flammable.

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R38 Irritating to skin.

R41 Risk of serious damage to eyes.

R48/20/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

R60 May impair fertility.

R63 Possible risk of harm to the unborn child.

R67 Vapours may cause drowsiness and dizziness



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Section 16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the PRODUCT AS SUCH. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulations(s) containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.

Safety Division : SOLAS CROPTECH PRIVATE LIMITED