

SAFETY DATA SHEET

EMERGENCY CALL: 1-800-424-9300 (CHEMTREC)



1. IDENTIFICATION

PRODUCT NAME: Refer 280 SL
DESCRIPTION: A liquid herbicide.
EPA Reg. No.: 82534-4-88783

COMPANY IDENTIFICATION:
Summit Agro USA, LLC
240 Leigh Farm Road, Suite 415
Durham, NC 27707

2. HAZARD IDENTIFICATION

WARNING

Harmful if swallowed (H302)
May be harmful in contact with skin (H313)
Causes serious eye irritation (H319)
May cause an allergic skin reaction (H317)



HAZARD CLASSIFICATION

Health Hazards	Category	Physical Hazards	Category
Acute Toxicity – Oral	4	None	-
Acute Toxicity – Dermal	5		
Eye Damage / Irritation	2A	Environmental Hazards	Category
Sensitization – Skin	1	None	-

HAZARDS NOT REQUIRING CLASSIFICATION

None

PRECAUTIONARY STATEMENTS

Avoid breathing mist / spray. Wear eye protection and protective gloves. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. (P261+P280+P264+P270+P272)

Specific treatment: See Note to Physician in Section 4 of this SDS. (P321)

IF SWALLOWED: Call a poison control center or doctor if you feel unwell. Rinse mouth. (P301+P312+P330)

IF ON SKIN: Wash with plenty of water. Call a poison control center or doctor if you feel unwell. If skin irritation or rash occurs: Get medical advice / attention. Take off contaminated clothing and wash it before reuse. (P302+P352+P312+P333+P313+P362+P364)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice / attention. (P305+P351+P338+P337+P313)

Dispose of contents / container using instructions in the product label and in accordance with local / Federal regulations. (P501)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Common Name	Chemical Name	CAS #	Composition
Glufosinate-ammonium	2-amino-4-(hydroxymethylphosphinyl)-monoammonium salt	77182-82-2	24.5%
Ammonium Hydroxide	-	1336-21-6	< 1%

4. FIRST AID MEASURES

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact CHEMTREC at 1-800-424-9300 for emergency medical information.

IF ON SKIN OR CLOTHING: Wash with plenty of water. Call a poison control center or doctor if you feel unwell. Immediately take off all contaminated clothing and wash before reuse. If skin irritation or rash occurs: call a poison control center or doctor for treatment advice.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF SWALLOWED: Call a poison control center or doctor if you feel unwell. Rinse mouth out and have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

NOTE TO PHYSICIAN: If this product is ingested, endotracheal intubation and gastric lavage should be performed as soon as possible, followed by charcoal and sodium sulfate administration.

5. FIREFIGHTING MEASURES

Flash Point (PMCC): > 230°F (110°C)

Flammable Limits (LFL-UFL): Not Determined

Fire and Explosion Hazards: Thermal decomposition will release irritating gases and fumes (see Section 10).

Extinguishing Medium: Foam, CO₂, dry chemical or water mist. Do not use high-volume water jet.

Fire Fighting Equipment: Firefighters should be equipped with self-contained positive pressure breathing apparatus and full bunker gear.

Fire Fighting Instructions: Evacuate area of all unnecessary personnel and fight fire from a safe distance upwind. Contain contaminated water / firefighting water; do not allow to enter drains or waterways. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water runoff.

NFPA Ratings: Health – 2 / Flammability – 1 / Reactivity - 1

6. ACCIDENTAL RELEASE MEASURES

Clean up spills immediately observing the precautions in Section 8 of this SDS. Isolate the hazard area and keep unnecessary and unprotected personnel from entering. In case of spill on floor or paved surfaces, mop up and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to label. Prevent material from contaminating soil or from entering sewage and drainage systems and bodies of water. Dike and contain the spill with inert material such as sand, earth, etc. Transfer liquid to containers and solid diking material to separate containers for recovery and disposal.

7. HANDLING AND STORAGE

Keep out of reach of children and animals.

Handling: Do not get in eyes, on skin or clothing. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Wash contaminated clothing before re-use. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Storage: Do not use or store near heat or open flame. Keep the container tightly closed and dry in a cool, well-ventilated place. Storage temperature should not exceed 125° F. If storage temperature for bulk Glufosinate 280 SL is below 32° F, the material should not be pumped until its temperature exceeds 32° F. Protect against direct sunlight.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash station and a safety shower.

Protective Clothing: Coveralls worn over short-sleeved shirt and short pants. Chemical resistant gloves ≥ 14 mils (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride (PVC) or Viton). Chemical resistant footwear plus socks. Protective eyewear (goggles, face shield or safety glasses). A chemical resistant apron when mixing/loading and cleaning equipment.

General: Some materials that are chemical resistant to this product are made of any waterproof material. If you want more options, follow the instructions for Category C on an EPA chemical resistance category selection chart.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Amber Liquid

Odor: Mild

Flash Point: $>230^{\circ}\text{F}$

pH: 4.5 – 5.0

Density: 1.125 g/cm^3 (9.39 lbs/gal) @ 25°C

Viscosity: 85.9 centipoise @ 25°C , 46.0 centipoise @ 38°C

Solubility: Soluble in water

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Do not allow to freeze.

CHEMICAL STABILITY: Stable under normal use and storage conditions.

HAZARDOUS DECOMPOSITION PRODUCTS: None when stored and handled as prescribed. Thermal decomposition may release oxides of carbon and sulfur oxides.

INCOMPATIBILITY WITH OTHER MATERIALS: Strong acids, bases and strong oxidizing agents.

POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

ACUTE ORAL TOXICITY: Oral LD_{50} (rat): $> 300\text{ mg/kg}$ and $< 2,000\text{ mg/kg}$

ACUTE DERMAL TOXICITY: Dermal LD_{50} (rat): $2,088\text{ mg/kg}$

ACUTE INHALATION TOXICITY: Inhalation LC_{50} (rat): 2.1 mg/L (4-hour)

EYE IRRITANT: Severe eye irritation

SKIN IRRITATION: Slight irritation, may be absorbed through the skin

SENSITIZATION: Sensitizing

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

CARCINOGENICITY:

ACGIH: Not listed

IARC: Not listed

NTP: Not listed

OSHA: Not listed

MUTAGENIC DATA: No evidence of mutagenic effects during *in vivo* and *in vitro* assays.

ADDITIONAL DATA: Not known to cause reproductive or birth defects at normal exposure levels.

12. ECOLOGICAL INFORMATION

Do not contaminate water by cleaning of equipment or disposal of equipment wash waters. This pesticide is toxic to vascular plants and should be used strictly in accordance with the drift and run-off precautions on the label in order to minimize off-site exposures. Under some conditions, this product may have a potential to run-off to surface water or adjacent land.

13. DISPOSAL CONSIDERATIONS

Do not contaminate water, food or feed by disposal.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on-site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Nonrefillable container, do not reuse or refill this container. Refer to the product label for specific instructions.

14. TRANSPORT INFORMATION

Freight Classification:	Compounds, Tree or Weed Killing, N.O.I., other than poison, having a density of 20 lbs. or greater per cubic foot (NMC Class 60).
UN Number:	Not classified as a hazardous substance
Proper Shipping Name:	-
Transport Hazard Class:	-
Packing Group:	-
Hazard Zone:	-
Marine Pollutant:	No
Hazardous Substance RQ:	None
Labels / Placards:	US-DOT: Not Regulated IMDG, IATA: Not Regulated
Emergency Guide:	-

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

FIFRA –

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. The following is the hazard information as required on the pesticide label:

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING. Causes substantial but temporary eye injury. Harmful if absorbed through skin. Harmful if swallowed. Do not get in eyes. Avoid contact with skin or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

ENVIRONMENTAL HAZARDS

Do not apply directly to water or to areas where surface water is present. Do not apply to intertidal areas below the mean high-water mark. Do not contaminate water by cleaning of equipment or disposal of equipment wash waters or rinsate.

This pesticide is toxic to vascular plants and should be used strictly in accordance with the drift and run-off precautions on this label in order to minimize off-site exposures.

Under some conditions, this product may have a potential to run-off to surface water or adjacent land. Where possible, use methods which reduce soil erosion, such as no till, limited till and contour plowing; these methods also reduce pesticide run-off. Use of vegetation filter strips along rivers, creeks, streams, wetlands, etc. or on the downhill side of fields where run-off could occur to minimize water runoff is recommended.

15. REGULATORY INFORMATION (cont.)

All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act. The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide.

SARA Title III – Section 302 Extremely Hazardous Substances

Not Listed

SARA Title III – Section 311/312 Hazard Categories

Immediate, Delayed

SARA Title III – Section 312 Threshold Planning Quantity

N/A

SARA Title III – Section 313 Reportable Ingredients

Ammonium Hydroxide [CAS No. 1336-21-6]

CERCLA –

Ammonium Hydroxide [CAS No. 1336-21-6]: 1000 lbs. (188 gallons of this product)

CALIFORNIA PROP 65 STATUS –

This product does not contain any chemicals known to the state of California to cause cancer or reproductive harm.

CANADA –

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

16. OTHER INFORMATION

REFER TO THE PRODUCT LABEL FOR TERMS AND CONDITIONS OF USE

Warranty Disclaimer

To the extent consistent with applicable law, all such risks shall be assumed by the buyer. Summit Agro North America Holding Corp. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use, subject to the inherent risks referred to above. SUMMIT AGRO NORTH AMERICA HOLDING CORP. MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, SUMMIT AGRO NORTH AMERICA HOLDING CORP. AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

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SDS Version: 3.0

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