



SECTION 1 - PRODUCT & COMPANY IDENTIFICATION

ARYSTA LifeScience South Africa (Pty) Ltd
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Substance: Glufosinate-ammonium
Product Name: LIFELINE
Product Use: Herbicide
Creation Date: September 2019
Revision Date: September 2022

24 Hr Emergency Number:

In case of Poisoning:

Griffon Poison Information Centre: 082 4468946
Poisons Information Helpline: 0861 555 777

In case of Spillage:

Spill Tech: 086 100 0366 / 083 253 6618

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

Common Name: glufosinate-ammonium
Chemical Name: 2-amino-4-(hydroxy(methyl)phosphinyl)butanoic acid ammonium salt (1:1) (IUPAC)
CAS No.: [77182-82-2]
Chemical Family: phosphonic acid
Chemical Formula: C₅H₁₅N₂O₄P
Formulation: glufosinate-ammonium 280 g/l
Soluble concentrate

Use / Mode of Action: non-selective, partly systemic contact herbicide formulated as a water soluble concentrate, for the control of certain broadleaf weeds, grasses and sedges in crops as indicated as well as industrial sites and unplanted areas.

Hazardous ingredients of toxicological concern:

<u>Inert:</u>	<u>CAS Number:</u>	<u>Concentration:</u>
Glufosinate-ammonium	77182-82-2	28% w/w
Other ingredients		72% w/w

SECTION 3 - HAZARD IDENTIFICATION

Note: Please refer to section 11 for detailed toxicological information.

Emergency Overview : Cause substantial but temporary eye injury. Harmful if swallowed.

Immediate Effects

Eye : Cause substantial but temporary injury
Skin : Harmful if absorb through skin
Ingestion : Harmful if swallowed
Inhalation : Harmful if inhaled

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Sign and symptoms : Gastrointestinal disturbance, tremor, convulsion, respiratory depression, cardiac arrhythmia, decreased blood pressure, drowsiness and/or loss of consciousness. These symptoms may be delayed by up to 48 hours after exposure

SECTION 4 - FIRST AID MEASURES AND PRECAUTIONS

General advice : Have the product container, label or Material Safety Data Sheet with you when calling a Poison control center or physician, or going for treatment.

Inhalation : Remove to fresh air.
If breathing is irregular or stopped, administer artificial Respiration. Keep patient warm and at rest. Call a physician or Poison Control Center immediately.

SECTION 5 - FIRE-FIGHTING MEASURES

Suitable extinguishing media : Extinguishing media - small fires
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Extinguishing media - large fires alcohol-resistant foam water spray

Extinguishing media which must not be used for safety reasons: Do not use a solid water stream as it may scatter and spread fire.

Specific hazards during firefighting: As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10).
Exposure to decomposition products may be a hazard to health.

Special protective Equipment for Fire-fighters: In the event of fire, wear self-contained breathing apparatus.

Further information : Do not allow run-off from firefighting to enter drains or watercourses. Cool closed containers exposed to fire with water spray.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions : Refer to protective measures listed in sections 7 and 8.
Avoid dust formation.

Environmental

Precautions : Do not flush into surface water or sanitary sewer system.

Methods for cleaning up : Pick up and arrange disposal without creating dust.

Do not create a powder cloud by using a brush or compressed Air. Clean contaminated surface thoroughly.

Additional advice : If the product contaminates rivers and lakes or drains inform respective authorities.

SECTION 7 - HANDLING AND STORAGE REQUIREMENTS

HANDLING

Advice on safe handling : No special technical protective measures required.

No special handling advice required.

Avoid contact with skin and eyes.

When using, do not eat, drink or smoke.

For personal protection see section 8.

STORAGE

Requirements for storage

Areas and containers: No special storage conditions required.

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Keep containers tightly closed in a dry, cool and well-ventilated place.

Keep out of the reach of children.

Keep away from food, drink and animal feed.

Other data : Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION

ENGINEERING MEASURES

Containment and/or segregation are the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use. If airborne dust is generated, use local exhaust ventilation controls. Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit. Where necessary, seek additional occupational hygiene advice.

PERSONAL PROTECTIVE EQUIPMENT

Protective measures : The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice. Personal protective equipment should be certified to appropriate Standards.

Respiratory protection : No personal respiratory protective equipment normally required.
A particulate filter respirator may be necessary until effective technical measures are installed.

Hand protection : Chemical resistant gloves (Neoprene, Nitrile, PVC) and other protective clothing to avoid skin contact.
Select gloves based on the physical job requirements.

Eye protection : Eye protection is not usually required.
Follow any site specific eye protection policies.
Eye/face protection should be certified to EN 166.

Skin and body protection : No special protective equipment required.
Select skin and body protection based on the physical job requirements.

SECTION 9: - PHYSICAL AND CHEMICAL PROPERTIES

Form :	Liquid
Colour :	Reddish magenta
pH :	6 - 7.5
Oxidizing properties :	not oxidizing
Explosive properties :	Not explosive
Density :	1.15 g/cm ³ at 20 °C
Water solubility :	Soluble
Flash Point :	68 - 70 ° C

SECTION 10 - STABILITY AND REACTIVITY

Hazardous decomposition

Products : None known

Hazardous reactions : None known. Hazardous polymerization does not occur.
Stable under normal conditions.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute oral toxicity :	LD50 Rat: 300mg/kg
Acute dermal toxicity :	LD50 Rabbit: 850mg/kg
Acute inhalation toxicity :	LC50 Rat: 3.8mg/L
Skin irritation :	Rabbit: Slightly irritating

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Eye irritation : Rabbit: Severely irritating
Sensitization : Guinea pig: Sensitizing

Long term toxicity: No developmental toxicity was noted in rabbits. Did not show reproductive toxicity effects in animal experiments. Animal testing did not show any effects on foetal development. Did not show neurotoxicity in animal experiments. This information refers to Glufosinate ammonium. No adverse effects in humans are expected at levels below the occupational exposure limit and when the product is handled and used according to the label.

SECTION 12 - ECOLOGICAL INFORMATION

ELIMINATION INFORMATION (PERSISTENCE AND DEGRADABILITY)

Bioaccumulation : Glufosinate ammonium, the active ingredient has no potential for bioaccumulation.
Stability in water : Glufosinate ammonium, the active ingredient Hydrolytic Half-Life: > 300d
Stability in soil : Glufosinate ammonium, the active ingredient
Soil Half-Life: 6-23 days in field dissipation studies
Mobility : Glufosinate ammonium has low mobility in soil depending upon the soil type.

Environmental Precautions : Do not apply directly to water, to areas where surface water is present. Do not contaminate surface water or ground water by cleaning equipment's or disposal of wastes, including equipment wash water.
Do not allow to get into surface water, drains and ground water. Drift or run-off from treated areas may adversely affect non-target plants.
Apply this product as specified on the label. Do not apply when weather conditions favor drift or run-off.

SECTION 13 - DISPOSAL CONSIDERATION

Product : Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer.
Where possible recycling is preferred to disposal or incineration.
If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging : Empty remaining contents. Triple rinse containers.
Empty containers should be taken for local recycling or waste disposal.
Do not re-use empty containers.

SECTION 14 - TRANSPORT INFORMATION

DOT Not regulated
ICAO Not regulated
IAT Not regulated
IMDG/IMO Not regulated
TDG Not regulated

SECTION 15 - REGULATORY INFORMATION

Labeling according to EC Directives

Symbol(s) : N Dangerous for the environment
R-phrases) : R50/53 Very toxic to aquatic organisms, may cause Long-term adverse effects in the aquatic environment.
S-phrases) : S 2 Keep out of the reach of children. S13 Keep away from food, drink and animal feeding stuffs.
S20/21 When using do not eat, drink or smoke.
S35 this material and its container must be disposed of in a safe way. S57 Use appropriate container to avoid environmental contamination.

Note : The preparation is classified as dangerous in accordance with Directive 1999/45/EC.

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SECTION 16 - OTHER INFORMATION

Further information	Text of R phrases mentioned in Section 2:
R22	Harmful if swallowed.
R36	Irritating to eyes.
R50/53	Very toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.
R52/53	Harmful to aquatic organisms may cause long-term adverse effects in the aquatic environment.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. A vertical bar in the left margin indicates an amendment from the previous version.

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