

Section 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product Name: RIBER
Product Code: 033-02

Other means of identification

Unique Formula Identifier (UFI) 8PGG-3XUP-S00E-7YNW

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product Use: Herbicide

1.3 Details of the supplier of the safety data sheet

Company: Life Scientific Ltd,
Block 4,
Belfield Office Park,
Beech Hill Road,
Dublin 4
Ireland
Telephone: +353 (0) 1 2832024
Email: info@lifescientific.com
Web: www.lifescientific.com

1.4 Emergency contact information

In case of Emergency: Tel. NPIC +353 (01) 809 2166 (8.00 a.m. to 10.00 p.m. - Public)
Tel. NPIC +353 (01) 809 2566 (Healthcare Professionals)

Section 2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EU) No. 1272/2008

Acute toxicity	Category 4	H302
Skin sensitisation	Category 1	H317
Specific target organ toxicity	Category 2	H373
Repeated Exposure:		
Aquatic Acute	Category 1	H400
Aquatic Chronic	Category 1	H410

2.2 Label Elements

Labelling according to Regulation (EU) 1272/2008

Hazard Pictograms:



Signal Word:

Warning

Hazard Phrases:

H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H373 May cause damage to organs (Nervous system) through prolonged or repeated exposure if swallowed.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Phrases:

P102 Keep out of reach of children.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P308 + P311 If exposed or concerned: Call a POISON CENTER or doctor/ physician.
P391 Collect spillage.
P501 Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

Other Phrases:

EUH208 Contains flufenacet. May produce an allergic reaction.
EUH401 To avoid risks to human health and the environment, comply with the instructions for use.
SP 1 Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).

2.3 Other Hazards

This 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 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

No substances fulfil the criteria set out in Annex II, Part A of the REACH Regulation (EC) No 1907/2006.

3.2 Mixtures

Chemical Name	CAS No	EC No	Classification (Regulation(EC) No 1272/2008)	Concentration (% w/w)
Flufenacet*	142459-58-3	604-290-5	Acute Tox. 4, H302 STOT RE 2, H373 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	32.3
Diflufenican*	83164-33-4	617-446-2	Aquatic Chronic 3, H412	16.1
Glycerol*	56-81-5	200-289-5	Not classified	>1.00
2-methylisothiazol-3(2H)-one (2.5%), 1,2-benzisothiazol-3(2H)-one (2.5%)	2682-20-4 and 2634-33-5	220-239-6 and 220-120-9	Skin Sens 1, H317 Eye Dam.1, H318 Aquatic Chronic 3, H412	0.19

*Substance for which there are exposure limits in the workplace.

Section 4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice: Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.
Inhalation: Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.
Skin contact: Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, 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: Call a physician or poison control center immediately. Induce vomiting only, if: 1. patient is fully conscious, 2. medical aid is not readily available, 3. a significant amount (more than a mouthful) has been ingested and 4. time since ingestion is less than 1 hour. (Vomit should not get into the respiratory tract.) Rinse mouth.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: If large amounts are ingested, the following symptoms may occur: Headache, Nausea, Dizziness, Drowsiness, Tiredness, Breathing difficulties, tachycardia

Symptoms and hazards refer to effects observed after intake of significant amounts of the active ingredient(s).

The absorption of this product into the body may lead to the formation of methaemoglobine that, in sufficient concentration, causes cyanosis.

4.3 Indication of any immediate medical attention and special treatment needed

Risks: Danger of formation of methaemoglobin.

Treatment: Treat symptomatically. 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. In case of methaemoglobinemia, oxygen and specific antidotes (methylene blue/ toluidine blue) should be given.

Section 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

In the event of fire the following may be released: Hydrogen cyanide (hydrocyanic acid), Hydrogen fluoride, Carbon monoxide (CO), Nitrogen oxides (NOx), Sulphur oxides

5.3 Advice for firefighters

Special protective equipment for firefighters:
In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.

Further information
Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.

Section 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

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

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

6.4 Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

Section 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Ensure adequate ventilation.

Keep away from heat and sources of ignition.

Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash thoroughly with soap and water after handling. Wash hands before breaks and immediately after handling the product. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt).

7.2 Conditions for safe storage, including any incompatibilities

Store in a place accessible by authorized persons only. Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from frost. Keep away from direct sunlight.

7.3 Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

Section 8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control parameters

Component	Exposure Limit	Value Type	Source
Flufenacet	0.3 mg/m ³	TWA	Supplier
Diflufenican	5.5 mg/m ³	TWA	Supplier
Glycerol	10 mg/m ³	TWA	Supplier

8.2 Exposure controls

When using this product refer to the label for details. In all other cases, use the following Personal Protective Equipment:

Respiratory protection: Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.

Skin and body protection: Wear standard coveralls and Category 3 Type 4 suit. If there is a risk of significant exposure, consider a higher protective type suit. Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently. If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.

Eye protection: Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).

Engineering measures: Containment and/or segregation is 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 mists or vapours are 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.

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.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form:	Suspension
Colour:	White to beige
Odour:	Weak, characteristic
Odour Threshold:	No data available
Melting point/range:	No data available
Boiling Point:	No data available
Flammability:	No data available
Upper explosion limit:	No data available
Lower explosion limit:	No data available
Flash point:	> 100 °C
	No flash point - Determination conducted up to the boiling point.
Auto-ignition temperature:	445 °C
Self-accelerating decomposition temperature (SADT)	No data available
pH:	4.0 - 6.5 (100 %) (23 °C)
Viscosity, dynamic:	250 - 450 mPa.s (20 °C)
	Velocity gradient 20 /s
	100 - 300 mPa.s (20 °C)
	Velocity gradient 100 /s
Viscosity, kinematic:	No data available
Water solubility:	Dispersible
Partition coefficient:	Diflufenican: log Pow: 4.2
n-octanol/water	Flufenacet: log Pow: 3.2
Surface tension:	36 mN/m (25 °C)
Vapour pressure:	No data available
Density:	ca. 1.24 g/cm ³ (20 °C)
Relative density:	No data available
Relative vapour density:	No data available
Assessment nano particles	This substance/ mixture does not contain nanoforms
Particle size:	No data available

9.2 Other Information

9.2.1 Information with regard to physical hazard classes

Explosivity:	Not explosive
Oxidizing properties:	No oxidizing properties
Evaporation rate:	No data available

9.2.2 Other safety characteristics

None.

Section 10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical Stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions when stored and handled according to prescribed instructions.

10.4 Conditions to avoid

Extremes of temperature and direct sunlight.

10.5 Incompatible material

Store only in the original container.

10.6 Hazardous decomposition products

No decomposition products expected under normal conditions of use.

Section 11. TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

LD ₅₀ oral rat:	> 500 - < 2,000 mg/kg
LD ₅₀ dermal rat:	> 4000 mg/kg
LC ₅₀ inhalation rat:	> 2.078 mg/l (Exposure time 4h, highest attainable concentration. Form = respirable aerosol)
Eye irritation rabbit:	Non-irritant
Skin irritation rabbit:	Non-irritant
Sensitisation guinea pig:	Sensitising (OECD Test Guideline 406, Magnusson & Kligman test)
Long-term toxicity:	Flufenacet caused neurobehavioral effects and/or neuropathological changes in animal studies. Diflufenican did not cause specific target organ toxicity in experimental animal studies.
Mutagenicity:	Flufenacet was not mutagenic or genotoxic in a battery of in vitro and in vivo tests. Diflufenican was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
Carcinogenicity:	Flufenacet was not carcinogenic in lifetime feeding studies in rats and mice. Diflufenican was not carcinogenic in lifetime feeding studies in rats and mice.
Reproductive toxicity:	Flufenacet did not cause reproductive toxicity in a two-generation study in rats. Diflufenican did not cause reproductive toxicity in a two-generation study in rats.
Developmental toxicity:	Flufenacet caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Flufenacet are related to maternal toxicity. Diflufenican did not cause developmental toxicity in rats and rabbits.
Aspiration hazard:	Based on available data, the classification criteria are not met.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment: The mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Section 12. ECOLOGICAL INFORMATION

12.1 Toxicity

LC ₅₀ <i>Oncorhynchus mykiss</i> (96 h):	12.3 mg/L
LC ₅₀ <i>Daphnia magna</i> (Water flea) (48h)	>100 mg/L
ErC ₅₀ <i>Raphidocelis subcapitata</i> (freshwater green alga) (72h):	6,02 µg/L
ErC ₅₀ <i>Lemna gibba</i> (gibbous duckweed):	188 µg/l

12.2 Persistence and degradability

Diflufenican:	Not rapidly biodegradable
Flufenacet:	Not rapidly biodegradable
Koc	Diflufenican: Koc: 3417 Flufenacet: Koc: 202

12.3 Bioaccumulative potential

Diflufenican: Bioconcentration factor (BCF) 1,596
Does not bioaccumulate.

Flufenacet: Bioconcentration factor (BCF) 71
Does not bioaccumulate.

12.4 Mobility in soil

Diflufenican: Slightly mobile in soils
Flufenacet: Moderately mobile in soils

12.5 Results of PBT and vPvB assessment

This product is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

12.6 Endocrine disrupting properties

Product:
Assessment: The mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

None.

Section 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines.

Contaminated packaging

Small containers (< 10 l or < 10 kg) should be rinsed thoroughly using an integrated pressure rinsing device, or, by manually rinsing three times. Add washings to sprayer at time of filling. Dispose of empty and cleaned packaging safely. Follow advice on product label and/or leaflet.

Section 14. TRANSPORT INFORMATION

Transport the product in accordance with the provisions of ADR for road, RID for rail, IMDG for the sea, and ICAO / IATA for air transport

14.1 UN Number

3082

14.2 UN proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(FLUFENACET, DIFLUFENICAN SOLUTION)

14.3 Transport hazard class(es)

9

14.4 Packing group

III

14.5 Environmental hazards

Marine Pollutant.

14.6 Special precautions for user

None known.

14.7 Maritime transport in bulk according to IMO instruments

Not evaluated.

Section 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulation/legislation specific for the substance or mixture

None.

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out on this mixture by the supplier.

Section 16. OTHER INFORMATION

Full list of relevant hazard and precautionary statements that were not given in full in sections 2 and 3.

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage
H373	May cause damage to organs (nervous system) through prolonged or repeated exposure if swallowed.
H400	Very toxic to aquatic organisms.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

The information presented in this document is accurate to the best of our knowledge at the date of its publication. However, the information given is designed only as a guide for the methods of handling, storage, use, transportation and disposal of the product and is not considered a warranty or quality specification. Life Scientific Limited cannot be held responsible for any loss or damage resulting from the handling, storage, use or disposal of the product. The information contained in this document relates only to this specific product.

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