

SECTION 1: Identification of the substance/mixture and of the company/undertaking
1.1 Product identifier

· Trade name: Benfluralin 600 g/kg WG

· Article number: GF-2436

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

· Sector of Use Agriculture

· Application of the substance / the mixture Herbicide

1.3 Details of the supplier of the safety data sheet

· Manufacturer/Supplier:

Gowan Comércio Internacional e Serviços, Lda

Rua Ivens, no. 3-B, D.

Mécia Building, 6TH FLOOR

9000 – 046 Funchal

Madeira, Portugal

Telephone: +351 291 201 010

Fax: +351 291 220 600

· Further information obtainable from: sds@gowanco.com

· 1.4 Emergency telephone number: Chemtrec Emergency Telephone 24 - Hours: +1 703 527-3887

SECTION 2: Hazards identification
2.1 Classification of the substance or mixture

· Classification according to Regulation (EC) No 1272/2008



GHS09 environment

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

· Hazard pictograms



GHS07 GHS09

· Signal word Warning

· Hazard-determining components of labelling:

Benfluralin

· Hazard statements

H317 May cause an allergic skin reaction.

H410 Very toxic to aquatic life with long lasting effects.

· Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P363 Wash contaminated clothing before reuse.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

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P302+P352 *IF ON SKIN: Wash with plenty of water.*

P391 *Collect spillage.*

P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**



- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

1861-40-1	Benfluralin	60,0%
	 Aquatic Acute 1, H400; Aquatic Chronic 1, H410;  Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1B, H317	

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:**

Remove contaminated clothing and wash the skin with soap and water or a recognized cleaner.

Beware any remaining product between skin and clothing, watches, shoes, etc.

In case of allergic reaction, seek medical attention.

If the contaminated area is widespread and / or if damage to the skin, it is necessary to consult a doctor or have transferred to hospital.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**

Do not give anything by mouth.

Keep the person in a rest position. Do not induce vomiting.

Call a doctor for treatment advice.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.

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- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:**
 - Do not allow product to reach sewage system or any water course.
 - Inform respective authorities in case of seepage into water course or sewage system.
 - Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
 - Dispose contaminated material as waste according to item 13.
 - Ensure adequate ventilation.
- **6.4 Reference to other sections**
 - See Section 7 for information on safe handling.
 - See Section 8 for information on personal protection equipment.
 - See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
 - **Storage:**
 - **Requirements to be met by storerooms and receptacles:** No special requirements.
 - **Information about storage in one common storage facility:** Store this product away from food or feed.
 - **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
 - **Ingredients with limit values that require monitoring at the workplace:**
 - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
 - **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
 - **Personal protective equipment:**
 - **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the eyes and skin.
 - **Respiratory protection:**
 - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

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· **Protection of hands:**

Protective gloves

· **Material of gloves**

Protective creams may be used for exposed skin, they should however not be applied after contact with the product.

Use suitable protective gloves resistant to chemical agents in accordance with standard NF EN374. Gloves selection must be made according to the application and duration of use. Gloves must be chosen according to the workplace: other chemicals which may be handled, necessary physical protections (cutting, puncture, heat) demandée. Type dexterity recommended glove:

- PVA (Polyvinyl Alcohol)
- Impervious gloves in accordance with standard EN374

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

In case of contact with hands extended or repeated use of suitable gloves resistant to chemical agents in accordance with standard EN374.

· **Eye protection:** Avoid contact with eyes.· **Body protection:**

Avoid contact with the skin.

Personnel shall wear regularly laundered overalls.

After contact with the product, all parts of the body should be washed.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**· **General Information**· **Appearance:**

- | | |
|---------------------------|-----------------|
| · Form: | Granulate |
| · Colour: | Yellow |
| · Odour: | Characteristic |
| · Odour threshold: | Not determined. |

· pH-value at 20 °C:	7,2
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· **Change in condition**

- | | |
|---------------------------------------|---------------|
| · Melting point/Melting range: | Undetermined. |
| · Boiling point/Boiling range: | Undetermined. |

· Flash point:	Not applicable.
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· Flammability (solid, gaseous):	Flammable.
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· **Ignition temperature:**

· Decomposition temperature:	Not determined.
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· Self-igniting:	255 °C
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· Danger of explosion:	Product does not present an explosion hazard.
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· **Explosion limits:**

- | | |
|-----------------|-----------------|
| · Lower: | Not determined. |
| · Upper: | Not determined. |

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· Vapour pressure:	Not applicable.
· Density:	Not determined.
· Vapour density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with	
· water:	Dispersible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
· Dynamic:	Not applicable.
· Kinematic:	Not applicable.
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
 - **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
 - **Acute toxicity** Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:		
Oral	LD50	>5000 mg/kg (rat)
Dermal	LD50	>5000 mg/kg (rat)

- **Primary irritant effect:**
 - **Skin corrosion/irritation** Slightly irritating
 - **Serious eye damage/irritation** Slight irritation
- **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
 - **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
 - **Carcinogenicity** Based on available data, the classification criteria are not met.
 - **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
LC50 fish (96h) = 6.38 mg / L; NOEC <0.43 mg / L.
EC50 daphnia (48h) > 82.8 mg / L; NOEC = 15.2 mg / L.
ErC50 algae (72h) > 2.08 mg / L; NOEC = 0.0062 mg / L.

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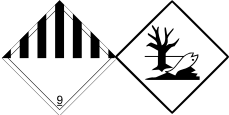
- LD50 bee, Oral (48) > 212.4 mg / bee.
LD50 bee, contact (48) > 200 ug / bee.
- **Aquatic toxicity:** No further relevant information available.
 - **12.2 Persistence and degradability** No further relevant information available.
 - **12.3 Bioaccumulative potential** No further relevant information available.
 - **12.4 Mobility in soil** No further relevant information available.
 - **Ecotoxicological effects:**
 - **Remark:** Very toxic for fish
 - **Additional ecological information:**
 - **General notes:**
 - Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
 - Do not allow product to reach ground water, water course or sewage system.
 - Danger to drinking water if even small quantities leak into the ground.
 - Also poisonous for fish and plankton in water bodies.
 - Very toxic for aquatic organisms
 - **12.5 Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.
 - **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
 - **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
 - **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**
 - **ADR, IMDG, IATA** UN3077
- **14.2 UN proper shipping name**
 - **ADR** 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Benfluralin)
 - **IMDG** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Benfluralin), MARINE POLLUTANT
 - **IATA** Environmentally hazardous substance, solid, n.o.s. (Benfluralin)
- **14.3 Transport hazard class(es)**
 - **ADR, IMDG, IATA**



 - **Class** 9 Miscellaneous dangerous substances and articles.
 - **Label** 9

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· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards:	Product contains environmentally hazardous substances: Benfluralin
· Marine pollutant:	Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· Special marking (IATA):	Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Miscellaneous dangerous substances and articles.
· Danger code (Kemler):	90
· EMS Number:	F-A,S-F
· Stowage Category	A
· Stowage Code	SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· Transport category	3
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· UN "Model Regulation":	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (BENFLURALIN), 9, III

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
 - Directive 2012/18/EU
 - Named dangerous substances - ANNEX I None of the ingredients is listed.
 - Seveso category E1 Hazardous to the Aquatic Environment
 - Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t
 - Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Relevant phrases
H315 Causes skin irritation.

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H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Supply Chain

· **Contact:** sds@gowanco.com

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

Skin Sens. 1B: Skin sensitisation – Category 1B

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· *** Data compared to the previous version altered.**

EU