

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 22.07.2019

Version number 2

Revision: 22.07.2019

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

- **1.1 Product identifier**
 - **Trade name:** **GWN-10235**
- **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 Crop Protection Limited
Highlands House Basingstoke Road
Spencers Wood
Reading
Berkshire
England
RG7 1NT
Tel +44 0 1582 280390
 - **Further information obtainable from:** sds@gowanco.com
- **1.4 Emergency telephone number:**
Chemtrec Emergency Telephone 24 - Hours: (London) +44 870 820 0418
Outside london: +1 703 527-3887

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
 - **Classification according to Regulation (EC) No 1272/2008**

Aquatic Acute 1 H400 Very toxic to aquatic life.

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

- **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**



GHS09

- **Signal word** Warning
- **Hazard-determining components of labelling:** Benzobicyclon
- **Hazard statements**
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.

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*P391 Collect spillage.**P501 Dispose of contents/container in accordance with local/regional/national/international regulations.***· Additional information:***EUH401 To avoid risk to human health and the environment, comply with instructions for use.**SP1 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****· Results of PBT and vPvB assessment****· PBT:***This mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT)***· vPvB:***This mixture contains no components considered to be very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.*

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures**· Description:** *Mixture of substances listed below with nonhazardous additions.***· Dangerous components:**

CAS: 156963-66-5	Benzobicyclon Technical		Aquatic Acute 1, H400; Aquatic Chronic 1, H410	40.0%
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· 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:** *No special measures required.***· After inhalation:** *Supply fresh air; consult doctor in case of complaints.***· After skin contact:** *Generally the product does not irritate the skin.***· After eye contact:***• Hold eye open and rinse slowly and gently with water for 15-20 minutes.**• Remove contact lenses, if present, after first 5 minutes, then continue rinsing eyes.**• Call a poison control center or doctor for treatment advice.***· After swallowing:** *Do not induce vomiting; call for medical help immediately.***· 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.***· 5.3 Advice for firefighters****· Protective equipment:** *Wear self-contained respiratory protective device.*

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures *Not required.***· 6.2 Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.*

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- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **6.4 Reference to other sections**
No dangerous substances are released.
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**
No special precautions are necessary if used correctly.
Keep away from heat and direct sunlight.
· **Information about fire - and explosion protection:** Keep ignition sources away - Do not smoke.
- **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
 - **Requirements to be met by storerooms and receptacles:** Store in a cool location.
 - **Information about storage in one common storage facility:** Keep away from food, drink and feed.
 - **Further information about storage conditions:** Store in dry conditions.
- **7.3 Specific end use(s)** Herbicide

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:**
The usual precautionary measures are to be adhered to when handling chemicals.
 - **Respiratory protection:** Not required.
 - **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **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.

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· **Eye protection:**

Safety glasses

Goggles recommended during refilling

· **Body protection:** Protective work clothing

SECTION 9: Physical and chemical properties

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

Viscous liquid

· **Colour:**

beige and untransparent

· **Odour:**

Light

· **Odour threshold:**

Not determined.

· **pH-value:**

7.12 at 20 °C and 1% w/v (8,11 at 20 °C (neat formu))

· **Change in condition**· **Melting point/freezing point:**

Not available

· **Initial boiling point and boiling range:** Not available· **Flash point:**

>100 °C

· **Flammability (solid, gas):**

Not applicable.

· **Decomposition temperature:**

Not available

· **Auto-ignition temperature:**

505 °C

· **Explosive properties:**

Not explosive

· **Explosion limits:**· **Lower:**

Not determined.

· **Upper:**

Not determined.

· **Oxidising properties**

No oxidising properties.

Vapour pressure: Not determined.

· **Density at 20 °C:**1.1544 g/cm³· **Relative density**

Not determined.

· **Vapour density**

Not determined.

· **Evaporation rate**

Not determined.

· **Solubility in / Miscibility with**· **water:**

Dispersible.

· **Partition coefficient: n-octanol/water:** Not determined.· **Viscosity:**· **Dynamic:**

496.79 mPa*s (20°C at shear ra (383.79 mPa*s (40°C at she)

· **Kinematic:**

Not determined.

· **9.2 Other information**

No further relevant information available.

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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	>5,000 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rat)
Inhalative	LC50/4 h	>5.1 mg/l (rat) (nose-only)

- **Primary irritant effect:**
 - **Skin corrosion/irritation** Not an irritant
 - **Serious eye damage/irritation** Not an irritant
- **Respiratory or skin sensitisation** Not a skin sensitizer
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
 - **Germ cell mutagenicity**
The product: No data available

Benzobicyclon: Based on available data, the classification criteria are not met.

Genotoxicity in vitro:

In vitro gene mutation study in bacteria , OECD 471,
Result: Negative with and without metabolic activation

In vitro DNA repair study with Bacillus subtilis
Result: Negative with and without metabolic activation

In vitro gene mutation study in mammalian cells, OECD 490
Result: non-mutagenic

In vitro chromosome aberration study in mammalian cells, OECD 473
Result: Positive (clastogenic and aneugenic) with and without metabolic activation

Genotoxicity in vivo: in vivo mammalian somatic cell study: erythrocyte micronucleus, OECD 474, Result:
Negative

- **Carcinogenicity**
The product: No data available

Benzobicyclon: Based on available data, the classification criteria are not met.
(oral, combined chronic toxicity/carcinogenicity study, rat, OECD 453
oral, chronic toxicity study, mouse, OECD 452)

- **Reproductive toxicity**
The product: No data available

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Benzobicyclon: Based on available data, the classification criteria are not met.

(oral, two-generation reproduction toxicity study, rat, OECD 416

oral, prenatal developmental toxicity study, rat, OECD 414

oral, prenatal developmental toxicity study, rabbit, OECD 414)

· **STOT-single exposure**

The product: Based on available data, the classification criteria are not met.

(acute oral, dermal and inhalation toxicity study)

· **STOT-repeated exposure**

No data available

The product: No data available

Benzobicyclon: Based on available data, the classification criteria are not met.

(oral subchronic toxicity (90 d) study, rat OECD 409;

dermal subacute toxicity study (21d), rabbit)

· **Aspiration hazard** *The product does not fulfil the criteria for classification in this hazard class.*

SECTION 12: Ecological information

· **12.1 Toxicity**

Data for the product

ErC50 (96 h, Raphidocelis subcapitata) > 0.66 mg/L

EC50 (48 h, Daphnia magna): > 1.0 mg/L

LC50 (96 h, Oncorhynchus mykiss): > 1.3 mg/L

ErC50 (7 d, Lemna gibba) 0.026 mg/L

NOEC (7d, Lemna gibba) 0.00084 mg/L

Data for the active ingredient Benzobicyclon

ErC50 (96 h, Anabaena flos-aquae) > 0.184 mg/L

EC50 (48 h, Daphnia magna): > 0.368 mg/L

LC50 (96 h, Oncorhynchus mykiss): > 0.489 mg/L

NOEC (21d, Daphnia magna): 0.279 mg/L

NOEC (28d, Pimephales promelas): 0.100 mg/L

LD50 (Northern bobwhite quail) > 2250 mg/kg bw

LD50 (Mallard duck) > 2250 mg/kg bw

LD50 (Zebra finch) > 2000 mg/kg bw

LD50 (72 h, oral / contact): > 200 µg a.s./bee

LD50 (10 d, oral): > 62 µg a.s./bee

EC50 (3h, Activated sludge) > 1000 mg/L

· **Aquatic toxicity:** *No further relevant information available.*

· **12.2 Persistence and degradability**

The product No data available

Data for the active ingredient Benzobicyclon

*Hydrolysis (25°C): DT50: 15.7 h (pH 4),
14.5 - 16.8 h (pH 7)
11.1 - 12.5 h (pH 9)*

Photolysis (25°C): determination technical not possible

Degradation (Soil): DT50: 371 d (LUFA 2.2, metabolite)

Biodegradation: not ready biodegradable (0.3 % at 36d, OECD 310 B)

· **12.3 Bioaccumulative potential**

The product No data available

Data for the active ingredient Benzobicyclon

The potential of the active ingredient to accumulate in biota and pass through the food chain is considered to be low based on the BCF and a rapid degradation of the substance.

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Bioconcentration factor (BCF): 161 L/kg (lipid corrected (whole fish))

Partition coefficient (n-octanol/water) $\log Pow = 3.1$ **· 12.4 Mobility in soil**

Data for the product

Surface tension: 27.5 mN/m (25.3 °C)

Data for the active ingredient Benzobicyclon

Adsorption coefficient (Koc): 214 - 1791 (low-medium mobility)

· 12.5 Results of PBT and vPvB assessment**· PBT:**

The product No data available

Data for the active ingredient Benzobicyclon

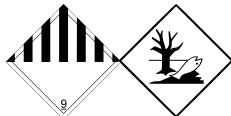
Based on the values of DT50 in soil and BCF of the active ingredient, it is considered to be neither PBT nor vPvB.

· 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**

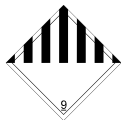
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· 14.2 UN proper shipping name**· ADR, IMDG, IATA**Environmentally hazardous substance, liquid,
n.o.s.(Benzobicyclon)**· 14.3 Transport hazard class(es)****· ADR****· Class**

9 Miscellaneous dangerous substances and articles.

· Label

9

· IMDG**· Class**

9 Miscellaneous dangerous substances and articles.

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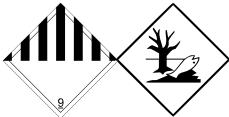
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· Label	9
· IATA	
	
· Class	9 Miscellaneous dangerous substances and articles.
· 14.4 Packing group	
· ADR, IMDG, IATA	III
· 14.5 Environmental hazards:	
· Marine pollutant:	Yes
· Special marking (ADR):	Symbol (fish and tree)
· Special marking (IATA):	Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Miscellaneous dangerous substances and articles.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· UN "Model Regulation":	Environmentally hazardous substance, liquid, n.o.s.(Benzobicyclon),III

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
 Substances of very high concern (SVHC)
 This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of 0.1 % (w/w).
 - **Directive 2012/18/EU**
 - **Named dangerous substances - ANNEX I** None of the ingredients is listed.
 - **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
 - **National regulations:**
 - **Other regulations, limitations and prohibitive regulations**
 Germany
 Water hazardous class (WHC): WGK 2 (deutlich wassergefährdend),
- **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**
 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

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*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**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