



**VIGON**

Version 1 / IRL  
102000015984

1/11

Revision Date: 02.09.2016  
Print Date: 06.09.2016

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**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1 Product identifier**

**Trade name** VIGON  
**Product code (UVP)** 79479824

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

**Use** Herbicide

**1.3 Details of the supplier of the safety data sheet**

**Supplier** Bayer CropScience Ltd  
Bayer Ltd  
The Atrium, Blackthorn Road  
Sandyford  
Dublin 18  
Ireland

**Telephone** +353-1-2999313

**Responsible Department** Email: [ukinfo@bayercropscience.com](mailto:ukinfo@bayercropscience.com)

**1.4 Emergency telephone no.**

**Emergency telephone no.** 1800-409-399

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**SECTION 2: HAZARDS IDENTIFICATION**

**2.1 Classification of the substance or mixture**

**Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.**

Acute aquatic toxicity: Category 4  
H302 Harmful if swallowed.

Specific target organ toxicity - repeated exposure: Category 2  
H373 May cause damage to organs (Nervous system) through prolonged or repeated exposure if swallowed.

Acute aquatic toxicity: Category 1  
H400 Very toxic to aquatic life.

Chronic aquatic toxicity: Category 1  
H410 Very toxic to aquatic life with long lasting effects.

**2.2 Label elements**

**Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.**

Hazard label for supply/use required.

**Hazardous components which must be listed on the label:**

- Flufenacet
- Flurtamone
- Diflufenican



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**Signal word:** Warning

**Hazard statements**

- H302 Harmful if swallowed.
- 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.
- EUH401 To avoid risks to human health and the environment, comply with the instructions for use.
- EUH208 Contains Flufenacet, 1,2-benzisothiazolin-3-one. May produce an allergic reaction.

**Precautionary statements**

- P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.
- 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.

**2.3 Other hazards**

No other hazards known.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**3.2 Mixtures**

**Chemical nature**

Suspension concentrate (=flowable concentrate)(SC)  
Diflufenican/Flufenacet/Flurtamone 60:240:120 g/l

**Hazardous components**

Hazard statements according to Regulation (EC) No. 1272/2008

Name	CAS-No. / EC-No. / REACH Reg. No.	Classification	Conc. [%]
		REGULATION (EC) No 1272/2008	
Flufenacet	142459-58-3	Acute Tox. 4, H302 STOT RE 2, H373 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	20.9
Diflufenican	83164-33-4	Aquatic Chronic 3, H412	5.2
Flurtamone	96525-23-4	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	10.4
1,2-Benzisothiazol-3(2H)-one	2634-33-5 220-120-9	Eye Dam. 1, H318 Aquatic Acute 1, H400 Acute Tox. 4, H302 Skin Sens. 1, H317	>= 0.005 – < 0.05



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		Skin Irrit. 2, H315
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**Further information**

Flufenacet	142459-58-3	M-Factor: 100 (acute), 100 (chronic)
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For the full text of the H-Statements mentioned in this Section, see Section 16.

**SECTION 4: FIRST AID MEASURES**

**4.1 Description of first aid measures**

- General advice**                      Move out of dangerous area. Remove contaminated clothing immediately and dispose of safely. Place and transport victim in stable position (lying sideways).
- 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**                                 Do NOT induce vomiting. Call a physician or poison control center immediately. Rinse mouth.

**4.2 Most important symptoms and effects, both acute and delayed**

- Symptoms**                                The absorption of this product into the body may lead to the formation of methaemoglobine that, in sufficient concentration, causes cyanosis.  
If large amounts are ingested, the following symptoms may occur:  
Shortness of breath, Drowsiness, Cyanosis, Headache, Tiredness, Dizziness, Nausea  
  
Symptoms and hazards refer to effects observed after intake of significant amounts of the active ingredient(s).

**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. There is no specific antidote.



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**SECTION 5: FIREFIGHTING MEASURES**

**5.1 Extinguishing media**

**Suitable** Water spray, Carbon dioxide (CO<sub>2</sub>), Foam, Sand

**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 (NO<sub>x</sub>), 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.

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures**

**Precautions** Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.

**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**

**Methods for cleaning up** Clean contaminated floors and objects thoroughly, observing environmental regulations. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections** Information regarding safe handling, see section 7.  
Information regarding personal protective equipment, see section 8.  
Information regarding waste disposal, see section 13.

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**SECTION 7: HANDLING AND STORAGE**

**7.1 Precautions for safe handling**

**Advice on safe handling** Use only in area provided with appropriate exhaust ventilation.

**Advice on protection against fire and explosion** No special precautions required.

**Hygiene measures** Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands before breaks and immediately after handling the product. Wash hands immediately after work, if necessary take a shower. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be

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destroyed (burnt).

**7.2 Conditions for safe storage, including any incompatibilities**

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

**Advice on common storage** Keep away from food, drink and animal feedingstuffs.

**Suitable materials** HDPE (1000L IBC)

**7.3 Specific end use(s)** Refer to the label and/or leaflet.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Diflufenican	83164-33-4	5.5 mg/m <sup>3</sup> (TWA)		OES BCS*
Flufenacet	142459-58-3	0.3 mg/m <sup>3</sup> (SK-SEN)		OES BCS*
Flurtamone	96525-23-4	1.4 mg/m <sup>3</sup> (TWA)		OES BCS*
1,2-Propanediol (Particulate.)	57-55-6	10 mg/m <sup>3</sup> (TWA)	2011	ELV (IE)
1,2-Propanediol (Total vapour and particulates.)	57-55-6	470 mg/m <sup>3</sup> /150 ppm (TWA)	2011	ELV (IE)

\*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

**8.2 Exposure controls****Personal protective equipment**

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

<b>Form</b>	suspension
<b>Colour</b>	white to beige
<b>Odour</b>	weakly pungent
<b>pH</b>	3.0 - 4.0 at 100 % (23 °C)
<b>Flash point</b>	>100 °C Not relevant; aqueous solution
<b>Ignition temperature</b>	570 °C
<b>Density</b>	ca. 1.15 g/cm <sup>3</sup> at 20 °C

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<b>Partition coefficient: n-octanol/water</b>	Diflufenican: log Pow: 4.2 Flufenacet: log Pow: 3.2
<b>Surface tension</b>	34.3 mN/m at 25 °C Determined in the undiluted form.
<b>Oxidizing properties</b>	No oxidizing properties
<b>Explosivity</b>	Not explosive 92/69/EEC, A.14 / OECD 113
<b>9.2 Other information</b>	Further safety related physical-chemical data are not known.

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**SECTION 10: STABILITY AND REACTIVITY****10.1 Reactivity****Thermal decomposition** 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 materials** Store only in the original container.**10.6 Hazardous decomposition products** No decomposition products expected under normal conditions of use.

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**SECTION 11: TOXICOLOGICAL INFORMATION****11.1 Information on toxicological effects****Acute oral toxicity** LD50 (Rat) > 300 - 2,000 mg/kg**Acute inhalation toxicity** LC50 (Rat) > 1.647 mg/l  
Exposure time: 4 h  
Highest attainable concentration.  
Determined in the form of liquid aerosol.**Acute dermal toxicity** LD50 (Rat) > 2,000 mg/kg**Skin irritation** No skin irritation (Rabbit)**Eye irritation** No eye irritation (Rabbit)**Sensitisation** Non-sensitizing. (Mouse)  
OECD Test Guideline 429, local lymph node assay (LLNA)**Assessment repeated dose toxicity**

Diflufenican did not cause specific target organ toxicity in experimental animal studies.  
Flufenacet caused neurobehavioral effects and/or neuropathological changes in animal studies.  
Flurtamone did not cause specific target organ toxicity in experimental animal studies.

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Diflufenican was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.  
Flufenacet was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.  
Flurtamone was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

**Assessment carcinogenicity**

Diflufenican was not carcinogenic in lifetime feeding studies in rats and mice.  
Flufenacet was not carcinogenic in lifetime feeding studies in rats and mice.  
Flurtamone was not carcinogenic in lifetime feeding studies in rats and mice.

**Assessment toxicity to reproduction**

Diflufenican did not cause reproductive toxicity in a two-generation study in rats.  
Flufenacet did not cause reproductive toxicity in a two-generation study in rats.  
Flurtamone did not cause reproductive toxicity in a two-generation study in rats.

**Assessment developmental toxicity**

Diflufenican did not cause developmental toxicity in rats and rabbits.  
Flufenacet caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Flufenacet are related to maternal toxicity.  
Flurtamone did not cause developmental toxicity in rats and rabbits.

**Further information**

The toxicological data refer to a similar formulation.

**SECTION 12: ECOLOGICAL INFORMATION****12.1 Toxicity**

<b>Toxicity to fish</b>	LC50 (Oncorhynchus mykiss (rainbow trout)) 13.6 mg/l Exposure time: 96 h
<b>Toxicity to aquatic invertebrates</b>	EC50 (Daphnia magna (Water flea)) 72 mg/l Exposure time: 48 h
<b>Toxicity to aquatic plants</b>	EC50 (Lemna gibba (gibbous duckweed)) 0.0475 mg/l Growth rate; Exposure time: 7 d EC50 (Raphidocelis subcapitata (freshwater green alga)) 0.0205 mg/l Growth rate; Exposure time: 72 h

**12.2 Persistence and degradability**

<b>Biodegradability</b>	Diflufenican: Not rapidly biodegradable Flufenacet: Not rapidly biodegradable Flurtamone: Not rapidly biodegradable
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<b>Koc</b>	Diflufenican: Koc: 3417 Flufenacet: Koc: 202 Flurtamone: Koc: 329
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**12.3 Bioaccumulative potential**

<b>Bioaccumulation</b>	Diflufenican: Bioconcentration factor (BCF) 1,596
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Does not bioaccumulate.  
Flufenacet: Bioconcentration factor (BCF) 71  
Does not bioaccumulate.  
Flurtamone: Bioconcentration factor (BCF) 28  
Does not bioaccumulate.

**12.4 Mobility in soil**

**Mobility in soil**

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

**12.5 Results of PBT and vPvB assessment**

**PBT and vPvB assessment**

Diflufenican: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).  
Flufenacet: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).  
Flurtamone: This substance 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 Other adverse effects**

**Additional ecological information**

No other effects to be mentioned.  
The ecological data refer to a similar formulation.

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**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.

**Waste key for the unused product**

**02 01 08\*** agrochemical waste containing dangerous substances

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**SECTION 14: TRANSPORT INFORMATION**

**ADR/RID/ADN**

14.1 UN number

14.2 Proper shipping name

**3082**

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



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14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES
Hazard no.	90
Tunnel Code	E

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

**IMDG**

14.1 UN number	<b>3082</b>
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLUFENACET SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Marine pollutant	YES

**IATA**

14.1 UN number	<b>3082</b>
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLUFENACET SOLUTION )
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES

**14.6 Special precautions for user**

See sections 6 to 8 of this Safety Data Sheet.

**14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code**

No transport in bulk according to the IBC Code.

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**SECTION 15: REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Republic of Ireland Regulations**

This material may be subject to some or all of the following regulations (and any subsequent amendments). Users must ensure that any uses and restrictions as indicated on the label and/or leaflet are followed.

**Supply and Use**

European Communities (Prohibition of Certain Active Substances in Plant Protection Products) Regulations 1981 (SI No 320/1981)

European Communities (Authorization, Placing on the Market, Use and Control of Plant Protection Products) Regulations 2003 (SI No 83/2003)

European Communities (Classification, Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations 2001 (SI No 624/2001)

2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations, 2001 (SI No 619/2001)

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Regulation on Substances That Deplete the Ozone Layer 1994 (EEC/3093/94)**Further information**

WHO-classification: II (Moderately hazardous)

**15.2 Chemical Safety Assessment**

A chemical safety assessment is not required.

**SECTION 16: OTHER INFORMATION****Text of the hazard statements mentioned in Section 3**

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

**Abbreviations and acronyms**

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
Conc.	Concentration
EC-No.	European community number
ECx	Effective concentration to x %
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
ELV	Exposure Limit Value
EN	European Standard
EU	European Union
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
ICx	Inhibition concentration to x %
IMDG	International Maritime Dangerous Goods
LCx	Lethal concentration to x %
LDx	Lethal dose to x %
LOEC/LOEL	Lowest observed effect concentration/level
MARPOL	MARPOL: International Convention for the prevention of marine pollution from ships
N.O.S.	Not otherwise specified
NOEC/NOEL	No observed effect concentration/level
OECD	Organization for Economic Co-operation and Development
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SI	Statutory Instrument
TWA	Time weighted average

# SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006



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UN United Nations  
WHO World health organisation

The information contained within this Safety Data Sheet is in accordance with the guidelines established by Regulation (EU) 1907/2006 and Regulation (EU) 2015/830 amending Regulation (EU) No 1907/2006 and any subsequent amendments. This data sheet complements the user's instructions, but does not replace them. The information it contains is based on the knowledge available about the product concerned at the time it was compiled. Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended. The required information complies with current EEC legislation. Addressees are requested to observe any additional national requirements.

**Reason for Revision:** Safety Data Sheet according to Regulation (EU) No. 2015/830.  
Safety Data Sheet according to Regulation (EU) No. 2015/830. New Safety Data Sheet.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.