

**SAFETY DATA SHEET****Flyflo**

Commission Regulation (EU) No 2015/830 of 28 May 2015.

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

Product name Flyflo
Product number MAPP Number 19481

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

Identified uses Herbicide

1.3. Details of the supplier of the safety data sheet

Supplier Gemini Agriculture Limited
71-75 Shelton Street
Covent Garden
London
WC2H 9JQ
+44 (0)20 30115515
sales@geminiag.com

1.4. Emergency telephone number

Emergency telephone +44 (0) 845 564 6959

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification (EC 1272/2008)**

Physical hazards Not Classified
Health hazards Not Classified
Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

2.2. Label elements**Pictogram**

Signal word Warning

Hazard statements H410 Very toxic to aquatic life with long lasting effects.
EUH208 Contains 1,2-BENZISOTHAZOL-3(2H)-ONE. May produce an allergic reaction.

Precautionary statements P501 Dispose of contents/ container in accordance with national regulations.
P102 Keep out of reach of children.

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Supplemental label information	<p>EUH 208 Contains 1,2-Benzisothiazolin-3-one. May produce an allergic reaction.</p> <p>EUH401 To avoid risks to human health and the environment, comply with the instructions for use.</p> <p>SP1 Do not contaminate water with the product or its container</p>
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2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Diflufenican 98% tech	50.5%
CAS number: 83164-33-4	
Classification Aquatic Chronic 3 - H412	
1,2-BENZISOTHIAZOL-3(2H)-ONE	<0.05%
CAS number: 2634-33-5 EC number: 220-120-9	
M factor (Acute) = 1	
Classification Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Aquatic Acute 1 - H400	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	CAUTION! First aid personnel must be aware of own risk during rescue! In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
Inhalation	Move affected person to fresh air at once. If breathing stops, provide artificial respiration. For breathing difficulties, oxygen may be necessary. Get medical attention.
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth. Give plenty of water to drink. Get medical attention if symptoms are severe or persist.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if symptoms are severe or persist after washing.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

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

Inhalation	No specific symptoms known.
Ingestion	No specific symptoms known.
Skin contact	May cause an allergic skin reaction.

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Eye contact No specific symptoms known.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards None known.

5.3. Advice for firefighters

Protective actions during firefighting Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. In case of fire and/or explosion do not breathe fumes. Control run-off water by containing and keeping it out of sewers and watercourses. Contain and collect extinguishing water.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions No action shall be taken without appropriate training or involving any personal risk. Wear protective clothing as described in Section 8 of this safety data sheet. Avoid contact with skin, eyes and clothing.

6.2. Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Avoid the spillage or runoff entering drains, sewers or watercourses. Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation.

Advice on general occupational hygiene Persons susceptible to allergic reactions should not handle this product. When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Good personal hygiene procedures should be implemented. Provide eyewash station and safety shower. Wash at the end of each work shift and before eating, smoking and using the toilet.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

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SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Ingredient comments No exposure limits known for ingredient(s).

Diflufenican 98% tech (CAS: 83164-33-4)

Ingredient comments No exposure limits known for ingredient(s).

8.2. Exposure controls

Protective equipment



Appropriate engineering controls Provide adequate ventilation.

Eye/face protection Tight-fitting safety glasses.

Other skin and body protection Wear suitable protective clothing as protection against splashing or contamination.

Hygiene measures Persons susceptible to allergic reactions should not handle this product. Good personal hygiene procedures should be implemented. When using do not eat, drink or smoke. Take off contaminated clothing and wash it before reuse. Avoid contact with skin and eyes. Wash at the end of each work shift and before eating, smoking and using the toilet. Provide eyewash station and safety shower.

Environmental exposure controls Avoid the spillage or runoff entering drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	White.
Odour	Slight. Acidic.
Odour threshold	No data available.
pH	pH (concentrated solution): 6.5-9.5
Melting point	Not applicable.
Flash point	> 100°C
Vapour pressure	Not applicable.
Relative density	1.19
Partition coefficient	log Pow: 4.2 @ 20°C (Diflufenican CAS: 83164-33-4)
Auto-ignition temperature	550°C
Viscosity	1706 mm ² /s @ 4°C
Explosive properties	Not explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.

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9.2. Other information

Other information No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions No specific material or group of materials is likely to react with the product to produce a hazardous situation.

10.4. Conditions to avoid

Conditions to avoid Keep away from heat, sparks and open flame.

10.5. Incompatible materials

Materials to avoid No information available.

10.6. Hazardous decomposition products

Hazardous decomposition products Not known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ >2000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ >2000 mg/kg, Dermal, Rat

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC₅₀ >1.43 mg/l, 4 hours, Rat

Serious eye damage/irritation

Serious eye damage/irritation Not irritating.

Skin sensitisation

Skin sensitisation EUH208 Contains [1,2-benzisothiazolin-3-one] May produce an allergic reaction.

Inhalation

No specific symptoms known.

Ingestion

No specific symptoms known.

Skin contact

EUH208 Contains [1,2-benzisothiazolin-3-one] May produce an allergic reaction.

Eye contact

No specific symptoms known.

SECTION 12: Ecological Information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

12.1. Toxicity

Acute aquatic toxicity

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Acute toxicity - fish	LC ₅₀ , 96 hours: >100 mg/l, Oncorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: >100 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: 0.00174 mg/l, Selenastrum capricornutum
Acute toxicity - terrestrial	Birds Oral LD50 Diflufenican > 2150 mg/kg Bobwhite quail Bees Oral LD50 Diflufenican >100 µg/bee

12.2. Persistence and degradability

Biodegradation	Water - DT ₅₀ (Diflufenican CAS: 83164-33-4): 1-5 days Water - DT ₅₀ (Diflufenican CAS: 83164-33-4): 128 days
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12.3. Bioaccumulative potential

Bioaccumulative potential	BCF: 1276-1596 (Diflufenican CAS: 83164-33-4),
Partition coefficient	log Pow: 4.2 @ 20°C (Diflufenican CAS: 83164-33-4)

12.4. Mobility in soil

Adsorption/desorption coefficient	- Koc: 3417 (Diflufenican CAS: 83164-33-4) @ °C
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12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	This product does not contain any substances classified as PBT or vPvB.
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12.6. Other adverse effects

Other adverse effects	None known.
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information	Waste is classified as hazardous waste.
Disposal methods	This material and its container must be disposed of as hazardous waste. Avoid the spillage or runoff entering drains, sewers or watercourses. Control run-off water by containing and keeping it out of sewers and watercourses. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)	3082
UN No. (IMDG)	3082
UN No. (ICAO)	3082
UN No. (ADN)	3082

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican)
Proper shipping name (IMDG)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican)
Proper shipping name (ICAO)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican)

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Proper shipping name (ADN) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican)

14.3. Transport hazard class(es)

ADR/RID class	9
ADR/RID classification code	M6
ADR/RID label	9
IMDG class	9
ICAO class/division	9
ADN class	9

Transport labels



14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III
ADN packing group	III
ICAO packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

EmS	F-A, S-F
ADR transport category	3
Emergency Action Code	•3Z
Hazard Identification Number (ADR/RID)	90
Tunnel restriction code	(E)

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

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National regulations

Control of Substances Hazardous to Health Regulations 2002 (as amended).
 Health and Safety at Work etc. Act 1974 (as amended).
 Control of Pollution Act 1974.
 Control of Pollution (Special Waste) Regulations 1980 (as amended).
 Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
 Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

EU legislation

Commission Regulation (EU) No 2015/830 of 28 May 2015.
 Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
 Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Guidance

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Issued by	HS&E Manager.
Revision date	03/05/2018
Revision	3
Supersedes date	22/08/2016
SDS number	40602
SDS status	Approved.
Hazard statements in full	H302 Harmful if swallowed. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. 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. EUH208 Contains 1,2-BENZISOTHAZOL-3(2H)-ONE. May produce an allergic reaction.

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.