

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

1.1. Product identifier

Product name: PELICAN DELTA

Product code: 1270

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

Use of substance / mixture: Can be used as herbicide only.

1.3. Details of the supplier of the safety data sheet

Company name: Headland Agrochemicals

Rectors Lane

Pentre

Flintshire

CH5 2DH

United Kingdom

Tel: +44(0)1244 537370

Fax: +44(0)1244 532097

Email: enquiry@headlandgroup.com

1.4. Emergency telephone number

Emergency tel: +44(0)1244 537370

(office hours only)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CHIP: N: R50/53

Classification under CLP: * Skin Irrit. 2: H315; Eye Dam. 1: H318; Aquatic Chronic 1: H410; -: EUH401

Most important adverse effects: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2. Label elements

Label elements under CLP:

Hazard statements: * H315: Causes skin irritation.

H318: Causes serious eye damage.

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.

Signal words: * Danger

SAFETY DATA SHEET

PELICAN DELTA

Page: 2

Hazard pictograms: * GHS05: Corrosion

GHS09: Environmental



Precautionary statements: * P264: Wash thoroughly after handling.

P273: Avoid release to the environment.

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

P302+352: IF ON SKIN: Wash with plenty of soap and water.

P362: Take off contaminated clothing and wash before reuse.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a POISON CENTER or doctor.

P332+313: If skin irritation occurs: Get medical advice/attention.

P391: Collect spillage.

P501: Dispose of contents/container to hazardous or special waste collection point.

Label elements under CHIP:

Hazard symbols: Dangerous for the environment.



Risk phrases: R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases: S2: Keep out of the reach of children.

S13: Keep away from food, drink and animal feeding stuffs.

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S46: If swallowed, seek medical advice immediately and show this container or label.

S57: Use appropriate container to avoid environmental contamination.

S60: This material and its container must be disposed of as hazardous waste.

Precautionary phrases: To avoid risks to man and the environment, comply with the instructions for use.

To protect aquatic organisms respect an unsprayed buffer zone of 7m to surface water bodies.

2.3. Other hazards

PBT: This product is not identified as a PBT substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

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SAFETY DATA SHEET

PELICAN DELTA

Page: 3

Hazardous ingredients:

DIFLUFENICAN

EINECS	CAS	CHIP Classification	CLP Classification	Percent
-	83164-33-4	-: R52/53	Aquatic Chronic 3: H412	50-70%

METSULFURON-METHYL

-	74223-64-6	N: R50/53	Aquatic Chronic 1: H410; Aquatic Acute 1: H400	5-10%
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SODIUM ALKYLNAPHTHALENE SULPHONATE-FORMALDEHYDE CONDENSATE

-	577773-56-9	Xi: R36	Eye Irrit. 2: H319	5-10%
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LIGNOSULPHONIC ACID, SODIUM SALT, SULFOMETHYLATED

-	68512-34-5	Xi: R36	Eye Irrit. 2: H319	1-5%
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SODIUM METHYLNAPHTHALENE SULPHONATE

247-564-6	26264-58-4	Xi: R36	Eye Irrit. 2: H319	1-5%
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Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash immediately with plenty of soap and water. Consult a doctor if irritation develops.

Eye contact: * Bathe the eye with running water for 15 minutes. Remove contact lenses, if present, after the first few minutes, then continue rinsing. Transfer to hospital for specialist examination.

Ingestion: Do not induce vomiting. Wash out mouth with water. Drink several glasses of water or milk. If vomiting occurs, rinse mouth and drink fluids again. Consult a doctor.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Get medical attention if any discomfort continues.

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

Skin contact: * There may be irritation and redness at the site of contact.

Eye contact: * There may be pain and redness. The eyes may water profusely. The vision may become blurred. May cause permanent damage.

Ingestion: * Poisoning is unlikely, unless large quantities are ingested. In acute toxicity tests on Diflufenican, only non-specific signs of toxicity were observed. Metsulfuron-methyl may cause lethargy, confusion, dizziness, seizures and coma on ingestion.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest.

Delayed / immediate effects: No data available.

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

Immediate / special treatment: * Immediate medical attention is required in case of ingestion or eye contact. Show this safety data sheet to the doctor in attendance. There is no specific antidote against this

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SAFETY DATA SHEET

PELICAN DELTA

Page: 4

substance. Gastric lavage and/or administration of activated charcoal can be considered. After decontamination, treatment should be directed at the control of symptoms and the clinical condition.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Dry chemical or carbon dioxide for small fires, water spray or foam for large fires. Avoid heavy hose streams. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: In combustion emits toxic fumes. The essential breakdown products are volatile, malodorous, toxic, irritant and inflammable compounds such as hydrogen fluoride, nitrogen oxides, sulphur dioxide, carbon monoxide, carbon dioxide and various fluorinated organic compounds.

5.3. Advice for fire-fighters

Advice for fire-fighters: * Approach fire from upwind to avoid hazardous vapours and toxic decomposition products. Fight fire from protected location or maximum possible distance. Dike area to prevent water run off. Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Avoid and reduce dust formation as much as possible, if appropriate by moistening. Eliminate all sources of ignition. In the case of large spills, (1 ton or more) alert the appropriate authorities.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Wash waters must be prevented from entering surface water drains. Accidental release into water courses must be alerted to the appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Surface water drains within close vicinity of the spill should be covered. Small spills should be immediately swept up or vacuumed using equipment with high efficiency final filter. Transfer to a closable, labelled salvage container for disposal by an appropriate method. Rinse the area with water and industrial detergent. Absorb wash liquid onto absorbent and transfer to suitable containers. Spills in water should be contained as much as possible by isolation of the contaminated water. The contaminated water must be collected and removed for treatment or disposal. Refer to section 13 of SDS for suitable method of disposal.

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SAFETY DATA SHEET

PELICAN DELTA

Page: 5

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS. Refer to section 13 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Avoid direct contact with the substance. Material should be handled by mechanical means as much as possible. Ensure there is sufficient ventilation of the area. Exhaust gases should be filtered or treated otherwise. May form explosive mixture with air. Avoid dust formation and use explosion protected equipment. Take precautionary measures against static discharges. Keep away from sources of ignition and protect from exposure to fire and heat. For its use as a pesticide, look for precautions and personal protective measures on the officially approved label or other official guidance or policy in force. If these are lacking, see section 8 of this SDS. Remove contaminated clothing immediately after handling, then wash thoroughly and put on clean clothes. Clean protective clothing and protective equipment with soap and water after use. Collect all wash water and dispose of as hazardous waste.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in cool, well ventilated area. Keep container tightly closed. The storage room should be constructed of incombustible material, closed, dry, ventilated and with impermeable floor. The room should only be used for storage of chemicals, and without access to unauthorised persons or children. Food, drink, feed and seed should not be present. A hand wash station should be available.

7.3. Specific end use(s)

Specific end use(s): This product is a registered pesticide, which may only be used for the applications it is registered for, in accordance with a label approved by the regulatory authorities.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: No data available.

8.1. DNEL/PNEC Values

Hazardous ingredients:

DIFLUFENICAN

Type	Exposure	Value	Population	Effect
DNEL	-	0.11 mg/kg.bw/day	-	Systemic
PNEC	Aquatic	2.5 ng/l	-	-

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SAFETY DATA SHEET

PELICAN DELTA

Page: 6

8.2. Exposure controls

Engineering measures: When used in a closed system, personal protection equipment will not be required. The following is meant for other situations, when the use of a closed system is not possible, or when it is necessary to open the system. Consider the need to render equipment or piping system non-hazardous before opening.

Respiratory protection: The product is not likely to present an airborne exposure concern during normal handling, but in the event of a discharge of the material which produces a heavy dust, workers should put on officially approved face mask or respiratory protection:
Respiratory protection with universal filter type, including particle filter.

Hand protection: Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber. The breakthrough times of these materials for the product are unknown. Replace gloves frequently and limit work done manually.

Eye protection: * Safety goggles. Ensure eye bath is to hand.

Skin protection: Waterproof pants and apron of chemical resistant material or coveralls with polyethylene (PE) coating will be sufficient for short time exposure. Coveralls must be discarded after use if contaminated. In cases of prolonged exposure, barrier laminate coveralls may be required.

Environmental: Refer to specific Member State legislation for requirements under Community environmental legislation.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Solid

Colour: Off-white

Odour: Faint, ester-like

Oxidising: Non-oxidising (by EC criteria)

Solubility in water: Dispersible in water

Boiling point/range°C: Decomposes

Melting point/range°C: See section 9.2

Part.coeff. n-octanol/water: See section 12.3

Autoflammability°C: >400

Vapour pressure: See section 9.2

Relative density: 0.66 - 0.68 g/cm³

pH: 4.7 (1% soln, 25°C)

9.2. Other information

Other information: * Mpt: Diflufenican 159°C; Metsulfuron-methyl 162°C. Vapour Pressure: Diflufenican 4.25 µPa at 25°C, 8.19 µPa at 35°C; Metsulfuron-methyl 0.11 nPa at 20°C, 0.33 nPa at 25°C.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

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SAFETY DATA SHEET

PELICAN DELTA

Page: 7

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.
Decomposition may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Conditions to avoid: Excessive dust formation may pose a dust explosion hazard. Heating of the product will produce harmful and irritant vapours.

10.5. Incompatible materials

Materials to avoid: No data available.

10.6. Hazardous decomposition products

Haz. decomp. products: See subsection 5.2.

Section 11: Toxicological information

11.1. Information on toxicological effects

Toxicity values:

Route	Species	Test	Value	Units
DUST/MIST	RAT	4H LC50	>4.9	mg/l
DERMAL	RAT	LD50	>2000	mg/kg
ORAL	RAT	LD50	>2000	mg/kg

Hazardous ingredients:

DIFLUFENICAN

DERMAL	RAT	LD50	>2000	mg/kg
INHALATION	RAT	4H LC50	>5.12	mg/l
ORAL	RAT	LD50	>5000	mg/kg

METSULFURON-METHYL

DERMAL	RBT	LD50	>2000	mg/kg
INHALATION	RAT	4H LC50	>5.0	mg/l
ORAL	RAT	LD50	>5000	mg/kg

SODIUM ALKYLNAPHTHALENE SULPHONATE-FORMALDEHYDE CONDENSATE

ORAL	RAT	LD50	>5000	mg/kg
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SAFETY DATA SHEET

PELICAN DELTA

Page: 8

SODIUM METHYLNAPHTHALENE SULPHONATE

DERMAL	RAT	LD50	>2000	mg/kg
ORAL	RAT	LD50	5620	mg/kg

Symptoms / routes of exposure

Skin contact: * There may be irritation and redness at the site of contact.

Eye contact: * There may be pain and redness. The eyes may water profusely. The vision may become blurred. May cause permanent damage.

Ingestion: * Poisoning is unlikely, unless large quantities are ingested. In acute toxicity tests on Diflufenican, only non-specific signs of toxicity were observed. Metsulfuron-methyl may cause lethargy, confusion, dizziness, seizures and coma on ingestion.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest.

Delayed / immediate effects: No data available.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values:

Species	Test	Value	Units
RAINBOW TROUT (<i>Oncorhynchus mykiss</i>)	96H LC50	>164	mg/l
DAPHNIDS (<i>Daphnia magna</i>)	48H EC50	>164	mg/l
ALGAE (<i>Desmodesmus subspicatus</i>)	72H EC50	0.506	µg/l
DUCKWEED (<i>Lemna gibba</i>)	7-day EC50	5.47	µg/l
EARTHWORMS (<i>Eisenia fetida</i>)	LC50	>1000	mg/kg dry soil
HONEYBEES (<i>Apis mellifera</i>)	48H LD50 oral	>100	µg/bee
HONEYBEES (<i>Apis mellifera</i>)	48H LD50 contact	>100	µg/bee

12.2. Persistence and degradability

Persistence and degradability: Diflufenican is not rapidly degraded in the environment or in wastewater treatment plants. Primary half-life in soil can vary from several months to a year, depending on circumstances. Metsulfuron-methyl does not fulfil the criteria for being readily biodegradable. It is moderately persistent in the environment. Primary degradation half-lives vary from a few weeks to a few months in aerobic soil and water. Degradation occurs both by chemical hydrolysis and by microbiological degradation. The product contains minor amounts of not readily biodegradable ingredients, which may not be degradable in waste water treatment plants.

12.3. Bioaccumulative potential

Bioaccumulative potential: Diflufenican: Log Kow = 4.9 at 25°C. Diflufenican has a potential to bioaccumulate. Bioconcentration factor (BCF) was measured to be approx. 1500 for whole fish (rainbow trout). It was excreted within 14 days. Metsulfuron-methyl: Log Kow = -1.7 at pH 7 and 25°C. Metsulfuron-methyl does not bioaccumulate.

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SAFETY DATA SHEET

PELICAN DELTA

Page: 9

12.4. Mobility in soil

Mobility: Diflufenican is not mobile in the environment, but is readily absorbed by soil particles. Metsulfuron-methyl is mobile in soil, under normal conditions, with a potential for leaching to groundwater.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT substance.

12.6. Other adverse effects

Other adverse effects: No data available.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Waste that cannot be reused or chemically reprocessed can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Disposal of packaging: Triple rinse (or equivalent) and offer for recycling or reconditioning. Do not discharge cleaning water to sewer systems. Alternatively, packaging can be delivered to a licensed service for disposal of hazardous waste. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

14.1. UN number

UN number: UN3077

14.2. UN proper shipping name

Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(DIFLUFENICAN; METSULFURON-METHYL)

14.3. Transport hazard class(es)

Transport class: 9

14.4. Packing group

Packing group: III

14.5. Environmental hazards

Environmentally hazardous: Yes

Marine pollutant: Yes

14.6. Special precautions for user

Special precautions: Do not discharge to the environment.

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SAFETY DATA SHEET

PELICAN DELTA

Page: 10

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk: The product is not transported in bulk tankers.

Section 15: Regulatory information

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

Specific regulations: Seveso III, Dir. 2012/18/EU, Annex 1, part 1, section E2: Hazardous to the Aquatic Environment in Category Chronic 2. All ingredients in this product are covered by EU chemical legislation. Product Registration Number: MAPP 14312.

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

* indicates text in the SDS which has changed since the last revision.

Phrases used in s.2 and 3: EUH401: To avoid risks to human health and the environment, comply with the instructions for use.

H315: Causes skin irritation.

H318: Causes serious eye damage.

H319: Causes serious eye irritation.

H410: Very toxic to aquatic life with long lasting effects.

H412: Harmful to aquatic life with long lasting effects.

R36: Irritating to eyes.

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.