

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

1.1. Product identifier

CA Code (Nufarm)	: 3068
Oracle Recipe Code (Nufarm)	: 610000594
Item codes	: 100011063
Product form	: Mixture
Trade name	: Pelican Delta
Type (Nufarm)	: Country Specific
Country (Nufarm)	: United Kingdom

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

1.2.1. Relevant identified uses

Main use category	: Professional use
Use of the substance/mixture	: Herbicide

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

Nufarm S.A.S.
28 boulevard Zéphirin Camélinat
92230 Gennevilliers - France
T +330140855050 - F +330147922545
FDS@nufarm.com

1.4. Emergency telephone number

Emergency number : Organisme Français INRS : +33 1 45 42 59 59; Nufarm S.A.S. : +33 1 40 85 51 15

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Serious eye damage/eye irritation, Category 2
H319
Hazardous to the aquatic environment — H400
Acute Hazard, Category 1
Hazardous to the aquatic environment — H410
Chronic Hazard, Category 1

Full text of hazard classes and H-statements : see section 16

Adverse physicochemical, human health and environmental effects

Causes eye irritation. Very toxic to aquatic life with long lasting effects. Causes serious eye irritation.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

GHS09

Signal word (CLP)	: Warning
Hazardous ingredients	: Diflufenican + Metsulfuron-methyl
Hazard statements (CLP)	: H319 - Causes serious eye irritation. H410 - Very toxic to aquatic life with long lasting effects.
Precautionary statements (CLP)	: P264 - Wash hands thoroughly after handling. P273 - Avoid release to the environment. P280 - Wear eye protection. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 - If eye irritation persists: Get medical advice/attention.

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P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

EUH-statements : EUH401 - To avoid risks to human health and the environment, comply with the instructions for use.

2.3. Other hazards

Other hazards not contributing to the classification : Dust may form explosive mixture in air.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
diflufenican (ISO); N-(2,4-difluorophenyl)-2-[3-(trifluoromethyl)phenoxy]-3-pyridinecarboxamide	(CAS-No.) 83164-33-4 (EC Index-No.) 616-032-00-9	60	Aquatic Chronic 3, H412
metsulfuron-methyl (ISO); methyl-2-[[[4-methoxy-6-methyl-1,3,5-triazin-2-yl]carbonyl]sulfamoyl]benzoate	(CAS-No.) 74223-64-6 (EC Index-No.) 613-139-00-2	6	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Sodium alkyl naphthalenesulphonate-formaldehyde condensate	(CAS-No.) 577773-56-9	4-8	Eye Irrit. 2, H319
Aromatic hydrocarbons, C10-13, reaction products with branched nonene, sulfonated, sodium salts	(CAS-No.) 1258274-08-6 (EC-No.) 800-660-7 (REACH-no) 01-2119980591-31	3-5	Skin Irrit. 2, H315 Eye Dam. 1, H318
Lignosulfonic acid, sodium salt, sulfomethylated	(CAS-No.) 68512-34-5 (EC-No.) 614-547-3	2-6	Eye Irrit. 2, H319

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.

First-aid measures after skin contact : Take off immediately all contaminated clothing. Rinse skin with water/shower. Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell. Rinse mouth out with water. Do not induce vomiting. Drink plenty of water.

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

Symptoms/effects after inhalation : None under normal use.

Symptoms/effects after skin contact : None under normal conditions.

Symptoms/effects after eye contact : Eye irritation.

Symptoms/effects after ingestion : None under normal conditions.

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

Treat symptomatically. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released. Carbon monoxide. Carbon dioxide. Nitrogen oxides. Hydrogen fluoride. Sulphur dioxide. Fluorinated hydrocarbons.

5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location.

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Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.
Measures in case of dust release : Remove all sources of ignition.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Advise local authorities if considered necessary.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.
Methods for cleaning up : Mechanically recover the product. Minimise generation of dust.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Dust may form flammable and explosive mixture with air.
Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Use explosion-proof electrical/ventilating/lighting equipment.
Storage conditions : Store in a well-ventilated place. Keep cool.
Heat and ignition sources : Keep away from open flames, hot surfaces and sources of ignition.
Information on mixed storage : Keep away from food, drink and animal feeding stuffs. Keep out of the reach of children.
Special rules on packaging : Keep only in original container. Store in a closed container.

7.3. Specific end use(s)

Herbicide.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

metsulfuron-methyl (ISO); methyl-2-[[[4-methoxy-6- methyl-1,3,5-triazin-2-yl]carbamoyl]sulfamoyl]benzoate (74223-64-6)		
EU	Notes	10 mg/m3 (8-hr TWA) Sulphonyl urea

DNEL : Systemic: 0.11 mg/kg bw/day (Diflufenican); 0.7 mg/kg bw/day (Metsulfuron-methyl)
PNEC : Aquatic: 2.5 ng/l (Diflufenican); 16 ng/l (Metsulfuron-methyl)

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protective equipment:

Gloves. Insufficient ventilation: wear respiratory protection. Protective clothing. Safety glasses.

Materials for protective clothing:

Impermeable clothing

Hand protection:

Butyl rubber gloves. Nitrile rubber gloves. PVC gloves

Eye protection:

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Safety glasses. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment



Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Granulate.
Colour	: Off-white.
Odour	: mild. Ester.
Odour threshold	: No data available
pH	: No data available
pH solution concentration	: 1 % 4.7 @ 25°C
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Diflufenican 159°C; Metsulfuron-methyl 162°C
Freezing point	: Not applicable
Boiling point	: Decomposes before boiling
Flash point	: Not applicable
Auto-ignition temperature	: > 400 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: Diflufenican 4.25 x 10E-6 Pa @ 25°C, 8.19 x 10E-6 Pa @ 35°C; Metsulfuron-methyl 1.1 x 10E-10 Pa @ 20°C, 3.3 x 10E-10 Pa @ 25°C
Relative vapour density at 20 °C	: No data available
Relative density	: Not applicable
Density	: 0.66 - 0.68 g/cm ³
Solubility	: Water: Dispersible
Log Pow	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available
Explosive properties	: Product is not explosive.
Oxidising properties	: Non oxidizing material according to EC criteria.
Explosive limits	: Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

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10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Pelican Delta	
LD50 oral rat	> 2000 mg/kg (OECD 420 method)
LD50 dermal rat	> 2000 mg/kg (OECD 402 method)
LC50 inhalation rat (mg/l)	> 4.9 mg/l/4h (OECD 403 method)
diflufenican (ISO); N-(2,4-difluorophenyl)-2-[3-(trifluoromethyl)phenoxy]-3-pyridinecarboxamide (83164-33-4)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 2000 mg/kg (OECD 402 method)
LC50 inhalation rat (mg/l)	> 5.12 mg/l/4h US EPA (1985)
metsulfuron-methyl (ISO); methyl-2-[[[4-methoxy-6-methyl-1,3,5-triazin-2-yl]carbamoyl]sulfamoyl]benzoate (74223-64-6)	
LD50 oral rat	> 5000 mg/kg (method 40 CFR 163-81-1)
LD50 dermal rabbit	> 2000 mg/kg (method 40 CFR 163-81-2)
LC50 inhalation rat (mg/l)	> 6.2 mg/l/4h (method EEC B2)
Sodium alkylnaphthalenesulphonate-formaldehyde condensate (577773-56-9)	
LD50 oral rat	> 5000 mg/kg
Aromatic hydrocarbons, C10-13, reaction products with branched nonene, sulfonated, sodium salts (1258274-08-6)	
LD50 oral rat	2000 - 5000 mg/kg (OECD 401 method)
LD50 dermal rat	> 2000 mg/kg (OECD 402 method)
Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met)
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Very toxic to aquatic life with long lasting effects.
Acute aquatic toxicity	: Very toxic to aquatic life.
Chronic aquatic toxicity	: Very toxic to aquatic life with long lasting effects.

Pelican Delta	
LC50 96h fish	> 164 mg/l <i>Oncorhynchus mykiss</i> (Rainbow trout)
EC50 48h crustacea	> 164 mg/l
EC50 72h algae	0.506 ug/l (<i>Desmodesmus subspicatus</i>)
ErC50 (other aquatic plants)	7-day EC50: 5.47 ug/l (<i>Lemna gibba</i>)
Additional ecotoxicological information	
LC50 1000 mg/kg dry soil (<i>Eisenia foetida</i>)	
48-h LD50 oral: > 100 ug/bee (<i>Apis mellifera</i>)	
48-h LD50 contact: > 100 ug/bee (<i>Apis mellifera</i>)	

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diflufenican (ISO); N-(2,4-difluorophenyl)-2-[3-(trifluoromethyl)phenoxy]-3-pyridinecarboxamide (83164-33-4)	
LC50 96h fish	> 0.109 Oncorhynchus mykiss (Rainbow trout)
EC50 48h crustacea	> 0.24 mg/l
EC50 72h algae	< 0.001 mg/l Scenedesmus subspicatus

metsulfuron-methyl (ISO); methyl-2-[[[4-methoxy-6- methyl-1,3,5-triazin-2-yl]carbamoyl]sulfamoyl]benzoate (74223-64-6)	
NOEC (chronic)	100 mg/l Daphnia magna
NOEC chronic fish	68 mg/l Oncorhynchus mykiss (Rainbow trout)

12.2. Persistence and degradability

Pelican Delta	
Persistence and degradability	Not readily biodegradable.

diflufenican (ISO); N-(2,4-difluorophenyl)-2-[3-(trifluoromethyl)phenoxy]-3-pyridinecarboxamide (83164-33-4)	
Persistence and degradability	Not readily biodegradable.

metsulfuron-methyl (ISO); methyl-2-[[[4-methoxy-6- methyl-1,3,5-triazin-2-yl]carbamoyl]sulfamoyl]benzoate (74223-64-6)	
Persistence and degradability	Not readily biodegradable.

12.3. Bioaccumulative potential

diflufenican (ISO); N-(2,4-difluorophenyl)-2-[3-(trifluoromethyl)phenoxy]-3-pyridinecarboxamide (83164-33-4)	
BCF fish 1	1500 Oncorhynchus mykiss (Rainbow trout)
Log Kow	4.9
Bioaccumulative potential	Bioaccumulative potential.

metsulfuron-methyl (ISO); methyl-2-[[[4-methoxy-6- methyl-1,3,5-triazin-2-yl]carbamoyl]sulfamoyl]benzoate (74223-64-6)	
Log Kow	< 1 pH7, 25°C
Bioaccumulative potential	No bioaccumulation.

12.4. Mobility in soil

metsulfuron-methyl (ISO); methyl-2-[[[4-methoxy-6- methyl-1,3,5-triazin-2-yl]carbamoyl]sulfamoyl]benzoate (74223-64-6)	
Mobility in soil	Mobile

12.5. Results of PBT and vPvB assessment

Pelican Delta	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
European List of Waste (LoW) code	: 02 01 08* - agrochemical waste containing dangerous substances

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA
14.1. UN number		
3077	3077	3077
14.2. UN proper shipping name		
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Diflufenican, Metsulfuron-methyl)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Diflufenican, Metsulfuron-methyl)	Environmentally hazardous substance, solid, n.o.s. (Diflufenican, Metsulfuron-methyl)
Transport document description (ADR)		
UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Diflufenican, Metsulfuron-methyl), 9, III, (-)	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Diflufenican, Metsulfuron-methyl), 9, III, MARINE POLLUTANT	UN 3077 Environmentally hazardous substance, solid, n.o.s. (Diflufenican, Metsulfuron-methyl), 9, III
14.3. Transport hazard class(es)		
9	9	9

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ADR	IMDG	IATA
14.4. Packing group		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes
No supplementary information available		

14.6. Special precautions for user

- Overland transport

Classification code (ADR)	: M7
Special provisions (ADR)	: 274, 335, 375, 601
Limited quantities (ADR)	: 5kg
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P002, IBC08, LP02, R001
Special packing provisions (ADR)	: PP12, B3
Mixed packing provisions (ADR)	: MP10
Portable tank and bulk container instructions (ADR)	: T1, BK1, BK2, BK3
Portable tank and bulk container special provisions (ADR)	: TP33
Tank code (ADR)	: SGAV, LGBV
Vehicle for tank carriage	: AT
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V13
Special provisions for carriage - Bulk (ADR)	: VC1, VC2
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13
Hazard identification number (Kemler No.)	: 90
Orange plates	:
Tunnel restriction code (ADR)	: -
EAC code	: 2Z

- Transport by sea

Special provisions (IMDG)	: 274, 335, 966, 967, 969
Limited quantities (IMDG)	: 5 kg
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P002, LP02
Special packing provisions (IMDG)	: PP12
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B3
Tank instructions (IMDG)	: T1, BK1, BK2, BK3
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-F
Stowage category (IMDG)	: A
Stowage and handling (IMDG)	: SW23

- Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y956

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PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 956
PCA max net quantity (IATA)	: 400kg
CAO packing instructions (IATA)	: 956
CAO max net quantity (IATA)	: 400kg
Special provisions (IATA)	: A97, A158, A179, A197
ERG code (IATA)	: 9L

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Seveso Information : Seveso category (Dir. 2012/18/EU): dangerous for the environment

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:

Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H315	Causes skin irritation.
H318	Causes serious eye damage
H319	Causes serious eye irritation.
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.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

NUFARM SDS TEMPLATE

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.