

PELICAN DELTA®

A water-dispersible granule formulation containing 60% w/w diflufenican and 6% w/w metsulfuron-methyl. A herbicide for the post-emergence control of broadleaved weeds in the spring in winter wheat and winter and spring barley.

Safety Information



WARNING

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

Wear eye protection.
Wash hands thoroughly after handling.
Avoid release to the environment.
IF IN EYES: 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.
Dispose of contents/container to a licensed hazardous waste disposal contractor or collection site except for triple rinsed empty containers which can be disposed of as non-hazardous waste.



To avoid risk to human health and the environment, comply with the instructions for use.

PCS 05655

Authorisation Holder & Marketing Company

Nufarm UK Limited - Wyke Lane, Wyke, Bradford,
West Yorkshire, BD12 9EJ - United Kingdom

Technical Helpline telephone number

+44 (0)1274 694714

24-hour emergency telephone number

+44 (0)1274 696603

60 g

XXXXXXXXXX

 **Nufarm**

Grow a better tomorrow

**IMPORTANT INFORMATION
FOR PROFESSIONAL USE ONLY AS AN AGRICULTURAL HERBICIDE**

Crop	Maximum Individual Dose (L product/ha)	Maximum total dose (g product/ha/year)	Maximum number of treatments (per crop)	Latest Time of Application	Aquatic buffer zone distance (m)
Winter wheat, winter and spring barley	100	100	-	Before GS41 (flag leaf sheath extending)	7

Other Specific Restrictions:

- When applying to winter cereals no application must take place before 15th March.
- When applying to spring barley no application must take place before 1st April.

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS

Additional Safety Phrases

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

DIRECTIONS FOR USE

GENERAL INFORMATION

PELICAN DELTA is a highly active herbicide containing the active ingredients diflufenican and metsulfuron-methyl. It has contact and residual activity for post-emergence control of a wide range of broad-leaved weeds in the spring in winter wheat and winter and spring barley.

CAUTIONS

- Avoid treating crops suffering from stress resulting from drought, waterlogging, low temperatures, pest and disease attack or micronutrient deficiency.
- Do not apply to frosted crops. Sharp or severe frosts following application may cause crop scorch from which the crop will normally recover.
- Do not apply to cereal crops undersown with grass, clover, other legumes or any other broad-leaved crop.
- Do not harrow treated crops at any time after application; do not roll crops within 7 days before or after application of PELICAN DELTA.
- Do not use on crops being grown for seed.
- Take extreme care to avoid damage by drift onto broad-leaved plants outside the target area, or onto ponds, waterways or ditches. Thorough cleaning of the spraying equipment after use is also very important-see 'Tank Cleaning Procedure', below.
- Avoid overlapping spray swaths.
- Do not apply PELICAN DELTA to any cereal crop in tank-mixture or sequence with a product containing any sulfonylurea or ALS-inhibiting herbicide except as detailed in 'Sequential Treatments' below.
- In the event of crop failure, sow only wheat within 3 months of the application of PELICAN DELTA.

WEEDS CONTROLLED

Specific weeds controlled	At 100 g/ha			At 70 g/ha
	Weed Growth Stage			
	Plants up to 2 expanded true leaves	Plants up to 6 expanded true leaves	Plant up to 15 cm across/high	Weed size
Bindweed, black	MS	MR	R	MS up to 2 true leaves
Buttercup creeping	S	MS	R	-
Charlock	S	S	S	S up to 15 cm
Chickweed, Common	S	S	MS	S up to 6 true leaves
Corn Spurrey	S	S	S	-
Cranes-bill, Doves's-Foot	S	S	-	-
Dead-nettle, Red	S	S	MS	S up to 6 true leaves
Docks	S	S	S	-
Fat-hen	S	MR	R	S up to 2 true leaves
Field-speedwell, Common	S	S	MS	MS up to 15 cm
Forget-me-not, Field	S	S	MS	MS up to 6 true leaves
Fool's parsley	S	S	MS	-
Groundsel	-	-	-	S up to 15 cm

Specific weeds controlled	At 100 g/ha			At 70 g/ha
	Weed Growth Stage			
	Plants up to 2 expanded true leaves	Plants up to 6 expanded true leaves	Plant up to 15 cm across/high	Weed size
Stinging Nettle, Common	S	S	S	S up to 15 cm
Herbit dead nettle	-	-	-	S up to 6 true leaves
Knotgrass	S	MS	MS	R up to 4 true leaves
Marijuana	S	S	S	S up to 15 cm
Nettle, Small	S	S	-	-
Nipplewort	S	S	-	-
Orache, common	MS	R	R	-
Pale Persicaria	S	S	S	MS up to 15 cm
Pansy, Field	S	S	MS	S up to 6 true leaves
Parsley-Piert	S	S	S	-
Pennycress, field	-	-	-	S up to 15 cm
Poppy, Common	S	S	MS	MS up to 15 cm
Redshank	S	S	S	MR up to 15 cm
Scarlet pimpernel	S	S	S	-

Specific weeds controlled	At 100 g/ha			At 70 g/ha
	Weed Growth Stage			
	Plants up to 2 expanded true leaves	Plants up to 6 expanded true leaves	Plant up to 15 cm across/high	Weed size
Shepherd's-purse	S	S	S	MS up to 6 true leaves
Sowthistle, Smooth	S	S	-	MS up to 6 true leaves
Speedwell, common field	-	-	-	MS up to 15 cm
Speedwell, Ivy-leaved	MS	MS	-	MS up to 6 true leaves
Sun Spurge	S	MS	-	-
Thistle, Creeping	MS	MS	MS	-
Volunteer oilseed rape	S	S	-	-
Volunteer Sugar-beet	S	S	S	-
Wild Mignonette	S	MS	MR	-

* S=Susceptible, MS=Moderately susceptible, MR=Moderately resistant, R=Resistant

WEED RESISTANCE

When herbicides with the same mode of action are used repeatedly over several years in the same field, selection of resistant biotypes can take place. These can propagate and may become dominating. A weed species is considered resistant to a herbicide if it survives correctly applied treatment at the recommended dose.

Development of resistance within a weed species can be avoided or delayed by sequencing or tank-mixing with suitable products having a different mode of action. PELICAN DELTA contains both metsulfuron-methyl, a sulfonylurea which acts via ALS inhibition and diflufenican, a carotenoid biosynthesis inhibitor. Do not use ALS inhibitors as a sole means of broad-leaved weed control in successive years. Do not apply PELICAN DELTA in tank mix or sequence with any other herbicide containing an ALS-inhibitor except as detailed in 'Joint Application' below.

A strategy for preventing and managing resistance should be adopted. The Weed Resistance Action Groups have produced guidelines and copies are available from HGCA, CPA, your distributor, crop adviser or product manufacturer.

SEQUENTIAL TREATMENTS

PELICAN DELTA may be applied as a sequential treatment with certain other 'ALS-inhibiting' herbicides. To improve the spectrum of activity, provided always that each product is applied within the label recommendations for its use.

PELICAN DELTA may be applied in sequence with the following herbicides:

Boxer
Cabadex
Eagle
Galaxy
Starane XL

Always follow requirements and restrictions on the labels of other products when making sequential applications.

CROP SPECIFIC INFORMATION

TIMING

WINTER WHEAT AND WINTER BARLEY

Application Rate: Apply PELICAN DELTA at a dose of 70g product/ha between 3 leaves unfolded stage (BBCH 13) and up to the end of tillering (BBCH 29).

However if applying between the beginning of stem elongation (BBCH 30) and flag leaf ligule just visible (BBCH 39) a rate of 100 g product/ha can be applied.

Application Timing: Do not apply before 15 March in the year of harvest.

Water volume: Apply using a conventional hydraulic ground sprayer in 200 - 400 litres of water/ha. Use the higher water volume where the crop is dense to ensure adequate weed coverage. A spray pressure of at least 2 bar (30 psi) is advised.

SPRING BARLEY

Application Rate/Timing: Apply PELICAN DELTA at a dose of 70g product/ha between 3 leaves unfolded stage (BBCH 13) and up to the end of tillering (BBCH 29). However if applying between the beginning of stem elongation (BBCH 30) and flag leaf ligule just visible (BBCH 39) a rate of 100 g product/ha can be applied.

Application Timing: Do not apply before 01 April in the year of harvest.

Water volume:

Apply using a conventional hydraulic ground sprayer in 200 - 400 litres of water/ha. Use the higher water volume where the crop is dense to ensure adequate weed coverage. A spray pressure of at least 2 bar (30 psi) is advised.

SOIL TYPES AND WEATHER CONDITIONS

PELICAN DELTA can be applied to all soils except those containing more than 10% organic matter. The speed of activity of PELICAN DELTA is dependent upon temperature and can be less in cool weather. Weed control may also be reduced if the soil is very dry. For best results, soil should be moist at and after application. Seed beds should be fine and firm and should not contain clods greater than fist size.

FOLLOWING CROPS

Only cereals, oilseed rape, field beans or grass may be sown in the same calendar year to succeed a cereal crop treated with PELICAN DELTA. Soil must be ploughed before drilling or sowing following crops. As a precaution, users who rent out their land to growers should not use diflufenican-containing products in successive years before renting out the land. In a crop failure situation, only re-drill with winter wheat or winter barley after ploughing. Other following crops must not be planted until at least 12 weeks have elapsed after the initial application of diflufenican.

MIXING

Half-fill the spray tank with clean water and begin agitation. Add the required quantity of PELICAN DELTA to the water. Rinse the empty container thoroughly with water and add the rinsings to the tank. Complete the filling and apply without delay. Maintain agitation while travelling and throughout the spraying operation.

Good even coverage of the soil and weeds is essential.

Wash out the sprayer thoroughly after use using the procedure detailed in 'Tank Cleaning Procedure' below.

SPRAY QUALITY

Apply PELICAN DELTA as a 'medium' spray (as defined by BCPC).

COMPATIBILITY

PELICAN DELTA is incompatible with formulations of chlorpyrifos. Allow at least 14 days between applications of PELICAN DELTA and chlorpyrifos-containing products.

TANK CLEANING PROCEDURE

To avoid subsequent injury to crops other than cereals all spraying equipment must be thoroughly cleaned both inside and outside using an ammonia based cleaner as follows:

1. Immediately after spraying drain the tank completely. Any contamination on the outside of the spraying equipment should be removed by washing with clean water.
2. Rinse inside the tank with clean water and flush through booms and hoses using at least one tenth of the spray tank volume. Drain tank completely.
3. Half-fill the tank with clean water and add the correct quantity of ALL CLEAR™ EXTRA. Agitate and then flush the boom and hoses with the solution. Top up completely with water and allow to stand for 15 minutes with agitation.
4. Again flush the booms and hoses and drain tank completely. (if it is not possible to drain tank completely, repeat step 3 before going on).
5. Remove nozzles and filters and soak in a bucket containing 50ml ALL CLEAR™ EXTRA per 10 litres water.
6. Rinse tank again with clean water and flush at least one tenth of the tank volume through the boom and hoses. Drain tank completely.
7. For disposal of washings, follow the Code of Practice for the Safe Use of Pesticides on Farms and Holdings. Do not spray onto sensitive crops or land intended for planting with sensitive crops.

COMPANY ADVISORY INFORMATION

This section is not part of the Product Label under the Plant Protection Products Regulations 2011. It provides additional advice on use of the product

ACKNOWLEDGMENTS

PELICAN® is a registered trademark.

CONDITIONS OF SUPPLY

All goods supplied by us are of high grade and we believe them to be suitable but (as we cannot exercise any control over their mixing or use) all conditions and warranties, statutory or otherwise, as to the quality and fitness for any purpose of our goods are excluded, except in so far as such exclusion is prevented by law, and no responsibility will be accepted by us for any damage or injury whatsoever arising from their storage, handling, application or use. This product is to be used only in accordance with the recommendations and instructions given on the labels provided with this pack. Use in any other circumstances is entirely at users risk.

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/ UNDERTAKING

1.1. Product identifier

CA Code (Nufarm)	3068
Product form	Mixture

Trade name	Pelican Delta
Type (Nufarm)	Country Specific
Country (Nufarm)	Ireland

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

Distributor

Nufarm UK Limited
Wyke Lane
Wyke
BD12 9EJ Bradford - UK
T +44 (0)1274 691234 - F +44 (0)1274691176
infouk@uk.nufarm.com

1.4. Emergency telephone number:

Emergency number : +44 (0)1274 696603

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 —

Acute Hazard, Category 1 H400

Hazardous to the aquatic environment —

Chronic Hazard, Category 1 H410

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

Signal word (CLP):

Hazardous ingredients:

Hazard statements (CLP):

Precautionary statements (CLP):



GHS09

Warning:

Dinofenacil + Metsulfuron-methyl

H319 - Causes serious eye irritation.

H410 - Very toxic to aquatic life with long lasting effects

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.

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

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.

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 Acute 1, H400 Aquatic Chronic 1, H410
metsulfuron-methyl (ISO); methyl-2-[[4-methoxy-6-methyl-3,5-thiazin-2-yl] carbamoyl]sulfamoylbenzoate	(CAS-No.) 74223-64-6 (EC Index-No.) 613-139-00-2	6	Acute Tox. 3 (Inhalation:vapour), H331 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Sodium alkylnaphthalenesulphonate-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	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.

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.

5. FIRE-FIGHTING 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.

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

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 materials for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Mechanically recover the product. Minimize 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.

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 uses

Herbicide.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

metsulfuron-methyl (ISO); methyl-2-[[[4-methoxy-6- methyl-1,3,5-triazin-2-yl]carbonyl]sulfonyl]benzoate (74223-64-6)

EU	Notes	10 mg/m3 (8-hr TWA) Sulphonyl urea
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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:

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.

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):	Not flammable
Vapour pressure:	Diflufenican $4.25 \times 10E-6$ Pa @ 25°C, $8.19 \times 10E-6$ Pa @ 35°C; Metsulfuron-methyl $1.1 \times 10E-9$ Pa @ 20°C, $3.3 \times 10E-10$ 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

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).

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.

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 (OECD 402 method)
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]carbonyl]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)	> 5 mg/l/4h (method EEC B2)

Sodium alkyl naphthalenesulphonate-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	> 1000 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)

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

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
Additional Ecotox information	

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 0.68 mg/l Oncorhynchus mykiss (Rainbow trout)

Additional Ecotox information

Sodium alkylnaphthalenesulphonate-formaldehyde condensate (57773-56-9)

Additional Ecotox information

Lignosulfonic acid, sodium salt, sulfomethylated (68512-34-5)

Additional Ecotox information

Aromatic hydrocarbons, C10-13, reaction products with branched nonene, sulfonated, sodium salts (1258274-08-6)

Additional Ecotox information

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)

BCF other aquatic organisms 1

Log Kow -1.7 pH 7, 25°C

Bioaccumulative potential No bioaccumulation.

12.4. Mobility in soil

diflufenican (ISO); N-(2,4-difluorophenyl)-2-[3-(trifluoromethyl)phenoxy]-3-pyridinecarboxamide (83164-33-4)

Mobility in soil Adsorbs into the 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

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.

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. n.o.s. (Diflufenican + Metsulfuron-methyl)
Transport document description		
UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Metsulfuron methyl), 9, III, (-)	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Metsulfuron methyl), 9, III, MARINE POLLUTANT	UN 3077 Environmentally hazardous substance, solid, n.o.s. (Metsulfuron methyl), 9, III
14.3. Transport hazard class(es)		
9	9	9

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): 7
 Special provisions (ADR): 271, 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 (Kernler No.): 90
 Orange plates:

90

 Tunnel restriction code (ADR): -

3082

 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
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

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

Germany

VwVwS Annex reference:
Water hazard class (WVK) 3, severe hazard to water (Classification according to VwVwS, Annex 4)
12th Ordinance Implementing the Federal Immission Control Act -12.BImSchV :
Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerwekkende stoffen: None of the components are listed
SZW-lijst van mutagene stoffen: None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding:
None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid:
None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling:
None of the components are listed

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out

16. OTHER INFORMATION

Full text of H- and EUH-statements:

Acute Tox. 3 (Inhalation-vapour)	Acute toxicity (Inhalation-vapour) Category 3	H315	Causes skin irritation.
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1	H318	Causes serious eye damage
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1	H319	Causes serious eye irritation.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1	H331	Toxic if inhaled.
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2	H400	Very toxic to aquatic life.
Skin Irrit. 2	Skin corrosion/irritation, Category 2	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.