

# Axial<sup>®</sup> One

syngenta<sup>®</sup>

GROUP **1 | 2** HERBICIDES

PCS number 06864  
UFI: VY8E-V58U-Q00D-5ADW



Emulsifiable concentrate containing 45 g/l (4.5 % w/w) pinoxaden, 5 g/l florasulam (0.5 % w/w) and 11.25 g/l (1.1 % w/w) cloquintocet-mexyl.  
Controls wild oats, ryegrasses, loose silky bent and a range of annual broad-leaved weeds in winter and spring wheat and winter and spring barley.

In case of toxic or transport emergency ring +44 (0) 1484 538444 any time. SHAKE WELL BEFORE USE. PROTECT FROM FROST.

## FOR PROFESSIONAL USE ONLY

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

AXIAL<sup>®</sup> One is an emulsifiable concentrate containing 45 g/l (4.5 % w/w) pinoxaden, 5 g/l florasulam (0.5 % w/w) and 11.25 g/l (1.1 % w/w) cloquintocet-mexyl.

### Warning

May cause an allergic skin reaction.

Suspected of damaging the unborn child.

Very toxic to aquatic life with long lasting effects.

Obtain special instructions before use.

Avoid breathing mist or vapours.

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

IF exposed or concerned: Get medical advice/ attention.

IF skin irritation or rash occurs: Get medical advice/ attention.

Collect spillage.

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.



PCS 06864 UFI: VY8E-V58U-Q00D-5ADW

### Authorisation holder

Syngenta Crop Protection UK Limited  
CPC 4, Capital Park, Fulbourn  
Cambridge CB21 5XE  
Tel: Cambridge +44 (0)1223 883400

### Marketing Company

Syngenta Ireland Ltd.,  
Block 6, Cleaboy Business Park,  
Old Kilmeaden Road, Waterford, Ireland  
Tel: (051) 377203

LXXXXXX IREL/07A PPE XXXXXXX

# 5 litres

Product names marked ® or ™, the ALLIANCE FRAME logo, the SYNGENTA Logo and the PURPOSE ICON are Trademarks of a Syngenta Group Company

**CONDITIONS OF USE**

FOR USE ONLY AS AN AGRICULTURAL HERBICIDE

Crop	Max. single dose	Max. no. of applications	Max. total dose	Latest time of application
Winter wheat, spring wheat, winter barley and spring barley	1.0/ha	One per crop	1.0/ha	Before third node detectable stage (GS 33)

**Other Specific Restrictions:**

To avoid the build up of resistance do not apply products containing an ACCase inhibitor herbicide more than twice to any crop. In addition, do not use this product in mixture or sequence with any other product containing pinoxaden.

This product must only be applied after 1st February in the year of harvest.

The total amount of florasulam applied to a cereal crop must not exceed 7.5 g.

**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 INFORMATION****(a) Operator protection**

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES AND FACE PROTECTION (FACESHIELD) when handling the concentrate.

WASH SPLASHES from skin immediately

WASH HANDS AND EXPOSED SKIN before meals and after work.

**(b) Environmental Protection**

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.

Extreme care must be taken to avoid spray drift onto non-crop plants outside of the target area.

**(c) Storage and disposal**

RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of safely.

KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.

EMPTY CONTAINER COMPLETELY and dispose of safely.

This leaflet is part of the approved Product Label.

## **DIRECTIONS FOR USE**

**IMPORTANT:** This information is approved as part of the Product Label. All instructions within this section must be carefully read in order to obtain safe and successful use of this product.

## **RESTRICTIONS**

Do not use on oats.

Avoid overlapping spray swaths.

Extreme care must be taken to avoid spray drift onto non-crop plants outside of the target area.

Do not spray crops under stress or to crops suffering from waterlogging, pest attack, disease or frost.

Do not spray crops undersown with grass mixtures

Avoid the use of hormone-containing herbicides in mixture or sequence with AXIAL® ONE. When AXIAL ONE is applied first, leave 7 days before application. If hormone-containing products are applied first, leave 21 days before AXIAL ONE is applied.

To avoid crop damage do not apply Axial One in tank mixture with an organophosphate insecticide. A minimum interval of 14 days between applications should be observed.

Do not apply this product to any cereal crop in sequence or in tank-mixture with any product containing an 'ALS inhibiting' herbicide.

Do not roll or harrow 7 days before or after application

## **GENERAL INFORMATION**

### **WEEDS CONTROLLED**

AXIAL ONE is a foliar acting grass-weed and broad leaved weed killer for the control of wild oats, Italian rye-grass, perennial rye-grass (from seed) and a range of broad-leaved weeds in winter and spring wheat and winter and spring barley. AXIAL ONE contains pinoxaden, an ACCase inhibitor, also classified by the Herbicide Resistance Action Committee as 'Group 1' and florasulam, an ALS inhibitor, also classified by the herbicide Resistance Action Committee as 'Group 2'.

### **RESISTANCE MANAGEMENT**

#### **Grass weeds**

This product contains pinoxaden which is an ACCase inhibitor, also classified by the Herbicide Resistance Action Committee as 'Group 1'.

Use only as part of a resistance management strategy that includes cultural methods of control and does not use ACCase inhibitors as the sole chemical method of grass-weed control.

Applying a second product containing an ACCase inhibitor to a crop will increase the risk of resistance development; only use a second ACCase inhibitor to control different weeds at a different timing.

Strains of some annual grasses (e.g. black-grass, wild-oats, and Italian rye-grass) have developed resistance to herbicides which may lead to poor control. A strategy for preventing and managing such resistance should be adopted. Guidelines have been produced by the Weed Resistance Action Group and copies are available from the HGCA, CPA, your distributor, crop advisor or product manufacturer.

#### **Broad-leaved weeds**

This product also contains florasulam which is an ALS inhibitor, classified by the Herbicide Resistance Action Committee as 'Group 2'.

Strains of some annual broad-leaved weeds (e.g. Chickweed and Mayweeds) have developed resistance to herbicides which may lead to poor control. A strategy for preventing and managing such resistance should be adopted. With regard to potential resistance of broad-leaved weeds to ALS herbicides avoid using single mode of action herbicides, such as ALS herbicides, in the same field over a number of years. Growers are advised to apply products containing herbicides with different modes of action or use sequences or tank mixtures where two or more components are active against the target weeds.

**Key aspects of the AXIAL ONE overall resistance management strategy are:**

- Always follow WRAG guidelines for preventing and managing herbicide resistant weeds.
- Do not use AXIAL ONE or any other ACCase inhibitor as the sole means of grass weed control in successive crops.
- Use herbicides with different modes of action throughout the cropping rotation.
- To reduce the risk of developing resistance, applications should be made to young, actively growing weeds.
- Use tank/product mixes or sequences of herbicides with different modes of action within individual crops, or successive crops.
- Monitor weed control effectiveness and investigate any odd patches of poor weed control. If unexplained, contact your agronomist who may consider a resistance test appropriate.
- Use crop rotation and other cultural control measures to prevent and manage herbicide resistant weeds.
- Only apply AXIAL ONE once per crop.

AXIAL ONE has no residual activity on grass weeds and no practical residual activity on broad-leaved weeds. Optimum weed control will only be achieved when all weeds have emerged. The activity of AXIAL ONE is not affected by soil type, organic matter or straw residues.

**CROP SPECIFIC INFORMATION**

**Crops**

AXIAL ONE can be used on all varieties of winter and spring wheat and winter and spring barley.

**Timing**

Spray in the spring from two true leaves (GS13) to before third node detectable stage (GS33 inclusive), no earlier than the 1st February of the year of harvest. Spraying should be done when the majority of weeds have germinated, but before weed competition reduces yield. The effectiveness of AXIAL ONE may be reduced when soils are very dry, or temperatures are low and weed growth is slow. Weeds that germinate after application will not be controlled.

**Rates of use**

Apply AXIAL ONE at 0.5 – 1.0 litres per hectare.

Grass weeds

The dose rate of AXIAL ONE depends on target grass species and season.

Winter and spring wheat and winter and spring barley

Wild oats – apply 0.67 litres per hectare AXIAL ONE from 1st leaf unfolded to flag leaf ligule visible and no earlier than 1st of February of the year of harvest.

**Italian rye-grass and perennial rye-grass (from seed)** – apply 1.0 litres per hectare AXIAL ONE from 1st leaf unfolded to flag leaf ligule visible, no earlier than 1st of February of year of harvest. Where applications are made to ryegrasses no larger than the 2 tiller stage (GS22) a dose of 0.67 litres per hectare may give acceptable levels of control. Always use as part of a weed control programme including other products active against ryegrasses.  
Always use as part of a weed control programme including other products active against ryegrasses.

**Loose silky bent** – apply 1.0 litres per hectare AXIAL ONE from 1st leaf unfolded to 1st node stage (GS31), no earlier than 1st of February of year of harvest.

Grass weeds	Dose rate litres/ha	Maximum growth stage
Wild oats	0.67	Flag leaf ligule visible
Italian & perennial rye-grass (from seed)	1.0	Flag leaf ligule visible
Loose silky bent	1.0	1st node stage (GS 31)

#### **Broad-leaved weeds**

Apply AXIAL ONE according to the following table.

The following broad-leaved weeds will be controlled from first leaf unfolded to the growth stages indicated.

Weed	Rate l/ha	Maximum growth stage
Volunteer Oilseed rape	0.5	Flower buds visible
Common Chickweed	0.67	Beginning of flowering
Mayweeds	0.67	1st node stage
Charlock	0.67	1st node stage
Field forget-me-not	0.67	3rd node stage
Shepherds purse	1	Flower buds visible
Cleavers	1	9 internodes per shoot
Common Poppy	1	Beginning of stem extension

#### **FOLLOWING CROPS**

The following crops can be planted in the autumn after normal harvest of a crop treated with AXIAL ONE. Cereals, oilseed rape<sup>1</sup>, field beans, grass and vegetable brassicae as transplants.

<sup>1</sup>Vigour reductions may be seen in following crops of oilseed rape after a dry summer. This will be outgrown and will not result in yield loss.

Crops that can be sown in the year following the harvest of crops treated with AXIAL ONE: Cereals, oilseed rape, field beans, grass, linseed, peas, sugar beet, potatoes, maize, clover (for use in grass/clover mixtures), carrots and vegetable brassicas as transplants

In the event of spring crop failure of a crop treated with AXIAL ONE only spring wheat, spring barley, spring oats, maize and ryegrass may be sown.

#### **MIXING AND SPRAYING**

##### **Mixing Procedure**

Make sure the sprayer is set to give an even application at the correct volume. Fill the spray tank with half the required volume of water and begin agitation. Add the required amount of AXIAL ONE to the spray tank and allow to disperse before adding any other product. Add the rest of the water and continue to agitate the mixture thoroughly. Always agitate during spraying.

### **Spray Quality**

Apply AXIAL ONE using a conventional fan nozzle producing a spray quality at the finer end of the medium range as defined by the British Crop Protection Council. Do not use pre-orifice and air induction nozzles as these may give reduced control, which in high weed populations can prove unacceptable. A spray pressure of 2-3 bars is recommended.

### **Spray Volume**

Spray AXIAL ONE in 100 - 400 litres of water per hectare.

### **WASHING OUT PROCEDURE**

To avoid subsequent injury to crops other than cereals, all spraying equipment must be thoroughly cleaned both inside and out, using All Clear Extra spray cleaner as follows:

- (i) Immediately after spraying, drain tank completely. Any contamination on the outside of the spraying equipment should be removed by washing with clean water.
- (ii) Rinse inside of tank with clean water and flush through booms and hoses using at least one tenth of the spray tank volume. Drain tank completely.
- (iii) Half fill tank with clean water and add All Clear Extra at the recommended rate. Agitate and then briefly flush the booms and hoses with the cleaning solution. Top up with water making sure the tank is completely full and allow to stand for 15 minutes with agitation. Flush the booms and hoses and drain tank completely.
- (iv) Nozzles and filters should be removed and cleaned separately with All Clear Extra solution containing 50 ml of All Clear Extra per 10 litres of water.
- (v) Rinse the tank with clean water and flush through the booms and hoses using at least one tenth of the spray tank volume. Drain tank completely.
- (vi) For disposal of washings, follow Code of Practice for Using Plant Protection Products. Do not spray onto sensitive crop or land intended for cropping with sensitive crop.

### **COMPATIBILITY**

Tank-mixes with some broad leaved weed specific sulfonyl-urea herbicides can reduce blackgrass control. Do not apply this product to any cereal crop in sequence or in tank-mixture with any product containing an 'ALS inhibiting' herbicide. Other grassweeds can be affected if AXIAL ONE is applied at reduced rates. For specific information consult Syngenta Ireland Ltd.

The products should be added separately to the bulk of water in the spray tank. Continuous agitation should be maintained and the products used immediately after mixing.

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## **SAFETY DATA SHEET v2.0**

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

#### **1.1 Product Identifier**

Trade name : AXIAL ONE

Design code : A15343M

Unique Formula Identifier (UFI): VY8E-V58U-Q00D-5ADW

#### **1.2 Relevant Identified Uses of the substance or mixture and uses advised against**

Use of the Substance/Mixture: Herbicide Spraying

Recommended restrictions on use: professional use

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

Company: Syngenta Ireland Limited

Block 6 Cleaboy Business Park, Old Kilmeaden Road, Waterford, Ireland

Telephone : (051) 377203

Telefax : (051) 354748

E-mail address of person responsible for the SDS: cropsales.ie@syngenta.com

### 1.4 Emergency telephone number

Emergency telephone number: Syngenta +44 1484 538444

Poisons Information Centre of Ireland

Members of Public: +353 (1) 809 2166. (8.00 a.m. to 10.00 p.m. 7 days a week)

Healthcare Professionals: +353 (1) 809 2566 (24-hour service)

## SECTION 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

**Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)**

Skin sensitisation, Sub-category 1B - H317: May cause an allergic skin reaction.

Reproductive toxicity, Category 2 - H361d: Suspected of damaging the unborn child.

Short-term (acute) aquatic hazard, Category 1 - H400: Very toxic to aquatic life.

Long-term (chronic) aquatic hazard, Category 1 - H410: Very toxic to aquatic life with long lasting effects.

### 2.2 Label elements

**Labelling (REGULATION (EC) No 1272/2008)**

#### Hazard pictograms



**Signal Word** Warning

**Hazard Statements** H317 May cause an allergic skin reaction.

H361d Suspected of damaging the unborn child.

H410 Very toxic to aquatic life with long lasting effects.

**Precautionary Statements** P201 Obtain special instructions before use.

P261 Avoid breathing mist or vapours.

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

P308+P313 IF exposed or concerned: Get medical advice/ attention.

P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.

P391 Collect spillage.

Hazardous components which must be listed on the label:

- pinoxaden (ISO)
- cloquintocet-mexyl

### Additional Labelling

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

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

#### 3.2 Mixtures

##### Components

Chemical Name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
hydrocarbons, C10-C13, aromatics, <1% naphthalene	Not Assigned  01-2119451097-39	Asp. Tox. 1; H304 Aquatic Chronic 2; H411 EUH066	>= 10 - < 20
propylene carbonate	108-32-7 203-572-1 607-194-00-1 01-2119537232-48	Eye Irrit. 2; H319	>= 10 - < 20
benzyl alcohol	100-51-6 202-859-9 603-057-00-5 01-2119492630-38	Acute Tox. 3; H302 Acute Tox. 4; H332 Eye Irrit. 2; H319	>= 10 - < 20
pinoxaden (ISO)	243973-20-8  607-726-0-2	Acute Tox. 4; H302 Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1A; H317 Repr. 2; H361d STOT SE 3; H335 (Respiratory system) Aquatic Acute 1; H400 Aquatic Chronic 3; H412 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	>= 3 - < 10
cloquintocet-mexyl	99607-70-2  01-2119381871-32, 01-2119387592-28	Acute Tox. 4; H332 Skin Sens. 1; H317 STOT RE 2; H373 (Urinary system, Liver) Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	>= 1 - < 2.5
florasulam (ISO)	145701-23-1  613-230-00-7	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 100	>= 0.25 - < 1

Chemical Name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
naphthalene	91-20-3 202-049-5 601-052-00-2	Flam. Sol. 2; H228 Acute Tox. 4; H302 Carc. 2; H351 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 0.1 - < 0.25

For explanation of abbreviations see section 16.

## SECTION 4. FIRST-AID MEASURES

### 4.1 Description of first aid measures

**General Advice:** Have the product container, label or Material Safety Data Sheet with you when calling the Syngenta emergency number, a poison control centre or physician, or going for treatment.

**If inhaled :** Move the victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician or poison control centre immediately.

**In case of skin contact :** Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.

**In case of eye contact :** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.

**If swallowed :** If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.

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

**Symptoms:** Aspiration may cause pulmonary oedema and pneumonia.

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

**Treatment :** There is no specific antidote available. Treat symptomatically. Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.

## SECTION 5. FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

Extinguishing media - small fires: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media - large fires: Alcohol-resistant foam or water spray.

Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire.

### 5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting: As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10).

Exposure to decomposition products may be a hazard to health.

### 5.3 Advice for firefighters

Special protective equipment for firefighters: Wear full protective clothing and self-contained breathing apparatus.

Further information : Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

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

Refer to protective measures listed in sections 7 and 8.

### 6.2 Environmental precautions

Environmental precautions : Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.

### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Clean contaminated surface thoroughly. Clean with detergents. Avoid solvents. Retain and dispose of contaminated wash water.

### 6.4 Reference to other sections

For disposal considerations see section 13., Refer to protective measures listed in sections 7 and 8.

## SECTION 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Advice on safe handling : No special protective measures against fire required. Avoid contact with skin and eyes. When using do not eat, drink or smoke. For personal protection see section 8.

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

Requirements for storage areas and containers: No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

### 7.3 Specific end use(s)

Specific use(s) : For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

## SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

#### Occupational Exposure Limits

Components	CAS-No.	Value (Type of exposure)	Control parameters	Basis
hydrocarbons, C10-C13, aromatics, <1% naphthalene	Not Assigned	TWA	8 ppm 50 mg/m <sup>3</sup>	Supplier
pinoxaden (ISO)	243972-20-8	TLV-C	0.1 mg/m <sup>3</sup>	Syngenta
cloquintocet-mexyl	99607-16-2	TWA	1 mg/m <sup>3</sup>	Syngenta
naphthalene	91-20-3	TWA	10 ppm 50 mg/m <sup>3</sup>	91/322/EEC
Further information:		Indicative		
		DNELV - 8 hrs (TWA)	10 ppm 50 mg/m <sup>3</sup>	IE OEL

#### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
tris(2-ethylhexyl) phosphate	Workers	Inhalation	Long-term systemic effects	350 mg/m <sup>3</sup>
	Workers	Inhalation	Acute systemic effects	2800 mg/m <sup>3</sup>
	Workers	Dermal	Long-term systemic effects	50 mg/kg
	Workers	Dermal	Acute systemic effects	40 mg/kg
	Consumers	Dermal	Acute systemic effects	200 mg/kg
	Consumers	Dermal	Long-term systemic effects	25 mg/kg
	Consumers	Inhalation	Acute systemic effects	500 mg/m <sup>3</sup>
	Consumers	Inhalation	Long-term systemic effects	62.5 mg/m <sup>3</sup>
	Consumers	Oral	Acute systemic effects	200 mg/kg
benzyl alcohol	Consumers	Oral	Long-term systemic effects	25 mg/kg
	Workers	Inhalation	Long-term systemic effects	22 mg/m <sup>3</sup>
	Workers	Inhalation	Short-term exposure, Systemic effects	110 mg/m <sup>3</sup>

Substance name	End Use	Exposure routes	Potential health effects	Value
	Workers	Dermal	Long-term systemic effects	8 mg/kg
	Workers	Dermal	Short-term exposure, Systemic effects	40 mg/kg
	Consumers	Inhalation	Long-term systemic effects	5.4 mg/m3
	Consumers	Inhalation	Short-term exposure, Systemic effects	27 mg/m3
	Consumers	Dermal	Long-term systemic effects	4 mg/kg
	Consumers	Dermal	Short-term exposure, Systemic effects	20 mg/kg
	Consumers	Oral	Long-term systemic effects	4 mg/kg
	Consumers	Oral	Short-term exposure, Systemic effects	20 mg/kg
hydrocarbons, C10- C13, aromatics, <1% naphthalene	Workers	Inhalation	Long-term systemic effects	151 mg/m3
	Workers	Dermal	Long-term systemic effects	12.5 mg/kg
	Consumers	Inhalation	Long-term systemic effects	32 mg/m3
	Consumers	Dermal	Long-term systemic effects	7.5 mg/kg
	Consumers	Oral	Long-term systemic effects	7.5 mg/kg
propylene carbonate	Workers	Dermal	Long-term systemic effects	50 mg/kg
	Workers	Inhalation	Long-term local effects	20 mg/m3
	Workers	Inhalation	Long-term systemic effects	176 mg/m3
	Consumers	Dermal	Long-term systemic effects	25 mg/kg
	Consumers	Inhalation	Long-term systemic effects	43.5 mg/m3
	Consumers	Oral	Long-term systemic effects	25 mg/kg
	Consumers	Inhalation	Long-term local effects	10 mg/m3
castor oil, ethoxylated	Workers	Inhalation	Long-term systemic effects	16.4 mg/m3
	Workers	Dermal	Long-term systemic effects	4.67 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	2.9 mg/m3
	Consumers	Dermal	Long-term systemic effects	1.67 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	1.67 mg/kg bw/day
cloquintocet-mexyl	Industrial use	Dermal	Long-term exposure, Systemic effects	3.33 mg/kg
	Industrial use	Inhalation	Long-term exposure, Systemic effects	0.303 mg/m3
naphthalene	Workers	Inhalation	Long-term systemic effects	25 mg/m3
	Workers	Inhalation	Long-term local effects	25 mg/m3
	Workers	Dermal	Long-term systemic effects	3.57 mg/kg

#### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
tris(2-ethylhexyl) phosphate	Sewage treatment plant	1 mg/l
benzyl alcohol	Soil	0.456 mg/kg
	Marine sediment	0.527 mg/kg
	Fresh water	1 mg/l
	Freshwater - intermittent	2.31 mg/l
	Marine water	0.1 mg/l
	Sewage treatment plant	39 mg/l
	Fresh water sediment	5.27 mg/kg
propylene carbonate	Marine water	0.09 mg/l
	Sewage treatment plant	7400 mg/l

Substance name	Environmental Compartment	Value
	Soil	0.81 mg/kg
	Fresh water	0.9 mg/l
castor oil, ethoxylated	Fresh water sediment	0.0129 mg/kg dry weight (d.w.)
	Marine sediment	0.00129 mg/kg dry weight (d.w.)
	Soil	0.00258 mg/kg dry weight (d.w.)
cloquintocet-mexyl	Fresh water	0.0018 mg/l
	Fresh water sediment	0.934 mg/kg dry weight (d.w.)
	Marine water	0.00018 mg/l
	Marine sediment	0.0934 mg/kg dry weight (d.w.)
	Soil	0.463 mg/kg dry weight (d.w.)
naphthalene	Fresh water	0.0024 mg/l
	Marine water	0.0024 mg/l
	Sewage treatment plant	2.9 mg/l
	Fresh water sediment	0.0672 mg/kg
	Marine sediment	0.0672 mg/kg
	Soil	0.0533 mg/kg

## 8.2 Exposure controls

**Engineering Measures:** Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use. Maintain air concentrations below occupational exposure standards. Where necessary, seek additional occupational hygiene advice.

### Personal protective equipment

**Eye protection :** No special protective equipment required

#### Hand protection

**Material :** Nitrile rubber

**Break through time :** > 480 min

**Glove thickness :** 0.5 mm

**Remarks :** Wear protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

**Skin and body protection :** Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Remove and wash contaminated clothing before re-use.

**Wear as appropriate:** Impervious clothing

**Respiratory protection :** No personal respiratory protective equipment normally required. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

**Protective measures :** The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice.

## Environmental exposure controls

### Water:

Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Physical state : clear to slightly opalescent

Colour : yellow

Odour : aromatic

Odour Threshold : No data available

Melting point/range : No data available

Boiling point/boiling range : No data available

Flammability : No data available

Upper explosion limit / Upper flammability limit: No data available

Lower explosion limit / Lower flammability limit: No data available

Flash point : estimated 107 °C. Method: Pensky-Martens closed cup

Auto-ignition temperature : 400 °C

Decomposition temperature : No data available

pH : 4.4. Concentration: 1 % w/v

Viscosity, kinematic : 22.8 mm<sup>2</sup>/s (40 °C)

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: noctanol/water: No data available

Vapour pressure : No data available

Density : 1.015 g/cm<sup>3</sup> (25 °C)

Relative vapour density : No data available

Particle size : No data available

### 9.2 Other information

Explosives : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Evaporation rate : No data available

Surface tension : 31.3 mN/m

## SECTION 10. STABILITY AND REACTIVITY

### 10.1 Reactivity:

None reasonably foreseeable.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

### 10.4 Conditions to avoid

Conditions to avoid : No decomposition if used as directed.

### 10.5 Incompatible materials

Materials to avoid : None known.

### 10.6 Hazardous decomposition products

Hazardous decomposition products: No hazardous decomposition products are known.

## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

Information on likely routes of exposure: Ingestion, Inhalation, Skin contact, Eye contact

#### Acute toxicity

##### Product:

Acute oral toxicity : LD50 (Rat, female): > 5,000 mg/kg

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg  
Remarks: Based on data from similar materials

**Components:**

**benzyl alcohol:**

Acute oral toxicity : LD50 (Rat, male): 1,620 mg/kg  
Acute inhalation toxicity : LC50 (Rat, male and female): > 4.178 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The substance or mixture has no acute inhalation toxicity

**pinoxaden (ISO):**

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg  
Acute toxicity estimate: 500 mg/kg  
Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008  
Acute inhalation toxicity : LC50 (Rat, male): 4.63 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Acute toxicity estimate: 4.63 mg/l  
Test atmosphere: dust/mist  
Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008  
Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

**cloquintocet-mexyl:**

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg  
Acute inhalation toxicity : LC50 (Rat, male and female): > 0.935 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The component/mixture is moderately toxic after short term inhalation.  
Remarks: Highest attainable concentration  
Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

**florasulam (ISO):**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
Acute inhalation toxicity : LC50 (Rat): > 5 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The substance or mixture has no acute inhalation toxicity  
Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Assessment: The component/mixture is minimally toxic after single contact with skin.

**naphthalene:**

Acute oral toxicity : Assessment: The component/mixture is moderately toxic after single ingestion.

**Skin corrosion/irritation**

**Product:**

Species : Rabbit  
Result : No skin irritation  
Remarks : Based on data from similar materials

**Components:**

**hydrocarbons, C10-C13, aromatics, <1% naphthalene:**

Result : Repeated exposure may cause skin dryness or cracking.

**benzyl alcohol:**

Species : Rabbit  
Result : Mild skin irritation

**pinoxaden (ISO):**

Method : Based on Human Evidence

Result : Irritating to skin.

**cloquintocet-mexyl:**

Species : Rabbit

Result : No skin irritation

**florasulam (ISO):**

Species : Rabbit

Result : No skin irritation

**Serious eye damage/eye irritation****Product:**

Species : Rabbit

Result : No eye irritation

Remarks : Based on data from similar materials

**Components:****propylene carbonate:**

Species : Rabbit

Result : irritating

**benzyl alcohol:**

Species : Rabbit

Result : Irritation to eyes, reversing within 21 days

**pinoxaden (ISO):**

Species : Rabbit

Result : Irritation to eyes, reversing within 21 days

**cloquintocet-mexyl:**

Species : Rabbit

Result : No eye irritation

**florasulam (ISO):**

Species : Rabbit

Result : No eye irritation

**Respiratory or skin sensitisation****Product:**

Test Type : Local lymph node assay (LLNA)

Species : Mouse

Result : The product is a skin sensitiser, sub-category 1B.

Remarks : Based on data from similar materials

**Components:****benzyl alcohol:**

Species : Mouse

Result : Did not cause sensitisation on laboratory animals.

**pinoxaden (ISO):**

Test Type : mouse lymphoma cells

Species : Mouse

Result : The product is a skin sensitiser, sub-category 1A.

Test Type : Respiratory sensitisation

Result : Does not cause respiratory sensitisation.

Remarks : Experience with human exposure

**cloquintocet-mexyl:**

Species : Guinea pig

Result : May cause sensitisation by skin contact.

**florasulam (ISO):**

Species : Guinea pig

Result : Did not cause sensitisation on laboratory animals.

## **Germ cell mutagenicity**

### **Components:**

#### **propylene carbonate:**

Germ cell mutagenicity- Assessment: Animal testing did not show any mutagenic effects., Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

#### **pinoxaden (ISO):**

Germ cell mutagenicity- Assessment: Animal testing did not show any mutagenic effects.

#### **cloquintocet-mexyl:**

Germ cell mutagenicity- Assessment: Animal testing did not show any mutagenic effects.

#### **florasulam (ISO):**

Germ cell mutagenicity- Assessment: Animal testing did not show any mutagenic effects., In vitro tests did not show mutagenic effects

## **Carcinogenicity**

### **Components:**

#### **propylene carbonate:**

Carcinogenicity - Assessment: Not classifiable as a human carcinogen.

#### **pinoxaden (ISO):**

Carcinogenicity - Assessment: No evidence of carcinogenicity in animal studies.

#### **cloquintocet-mexyl:**

Carcinogenicity - Assessment: No evidence of carcinogenicity in animal studies.

#### **florasulam (ISO):**

Carcinogenicity - Assessment: No evidence of carcinogenicity in animal studies.

#### **naphthalene:**

Carcinogenicity - Assessment: Limited evidence of carcinogenicity in animal studies.

## **Reproductive toxicity**

### **Components:**

#### **propylene carbonate:**

Reproductive toxicity - Assessment: No toxicity to reproduction  
No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

#### **pinoxaden (ISO):**

Reproductive toxicity - Assessment: No toxicity to reproduction

#### **cloquintocet-mexyl:**

Reproductive toxicity - Assessment: No toxicity to reproduction

#### **florasulam (ISO):**

Reproductive toxicity - Assessment: No toxicity to reproduction

## **STOT - single exposure**

### **Components:**

#### **pinoxaden (ISO):**

Assessment : Based on Human Evidence, The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

Remarks : Breathing difficulties. Cough

Acute irritation of the respiratory system leading to tightness of the chest and an asthmatic condition.

#### **cloquintocet-mexyl:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

## **STOT - repeated exposure**

### **Components:**

#### **pinoxaden (ISO):**

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

#### **cloquintocet-mexyl:**

Target Organs : Urinary system, Liver

Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

## Aspiration toxicity

### Components:

hydrocarbons, C10-C13, aromatics, <1% naphthalene:

May be fatal if swallowed and enters airways.

## 11.2 Information on other hazards

### Endocrine disrupting properties

#### Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## SECTION 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

#### Product:

Toxicity to daphnia and other aquatic invertebrates:

EC50 (*Daphnia magna* (Water flea)): 9 mg/l

Exposure time: 48 h

Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants:

ErC50 (*Raphidocelis subcapitata* (freshwater green alga)): 11 mg/l

Exposure time: 96 h

Remarks: Based on data from similar materials

EC10 (*Raphidocelis subcapitata* (freshwater green alga)): 2.0 mg/l

End point: Growth rate

Exposure time: 96 h

Remarks: Based on data from similar materials

NOEC (*Raphidocelis subcapitata* (freshwater green alga)): 0.063 mg/l

End point: Growth rate

Exposure time: 96 h

Remarks: Based on data from similar materials

ErC50 (*Lemna gibba* (gibbous duckweed)): 0.32 mg/l

Exposure time: 7 d

Remarks: Based on data from similar materials

EC10 (*Lemna gibba* (gibbous duckweed)): 0.058 mg/l

End point: Growth rate

Exposure time: 7 d

Remarks: Based on data from similar materials

NOEC (*Lemna gibba* (gibbous duckweed)): 0.063 mg/l

End point: Growth rate

Exposure time: 7 d

Remarks: Based on data from similar materials

### Components:

hydrocarbons, C10-C13, aromatics, <1% naphthalene:

Toxicity to fish :

LL50 (*Oncorhynchus mykiss* (rainbow trout)): 3.6 mg/l

Exposure time: 96 h

Remarks: Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates:

EL50 (*Daphnia magna* (Water flea)): 1.1 mg/l

Exposure time: 48 h

Remarks: Information given is based on data obtained from similar substances.

Toxicity to algae/aquatic plants:

EL50 (*Raphidocelis subcapitata* (freshwater green alga)): 7.9 mg/l

End point: Growth rate

Exposure time: 72 h

Remarks: Information given is based on data obtained from similar substances.

NOELR (*Raphidocelis subcapitata* (freshwater green alga)): 0.22 mg/l

End point: Growth rate

Exposure time: 72 h

Remarks: Information given is based on data obtained from similar substances.

## Ecotoxicology Assessment

Chronic aquatic toxicity :

**benzyl alcohol:**

Toxicity to fish :

Toxic to aquatic life with long lasting effects.

LC50 (*Pimephales promelas* (fathead minnow)): 460 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:

EC50 (*Daphnia magna* (Water flea)): 230 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic plants:

EC50 (*Raphidocelis subcapitata* (freshwater green alga)): 770 mg/l

Exposure time: 72 h

NOEC (*Raphidocelis subcapitata* (freshwater green alga)): 310 mg/l

Exposure time: 72 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

NOEC: 51 mg/l

Exposure time: 11 d

Species: *Daphnia magna* (Water flea)

**pinoxaden (ISO):**

Toxicity to fish :

LC50 (*Oncorhynchus mykiss* (rainbow trout)): 10.3 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:

EC50 (*Daphnia magna* (Water flea)): 52 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic plants:

ErC50 (*Raphidocelis subcapitata* (freshwater green alga)): 3.6 mg/l

Exposure time: 72 h

ErC50 (*Skeletonema costatum* (marine diatom)): 1.72 mg/l

Exposure time: 72 h

NOEC (*Skeletonema costatum* (marine diatom)): 0.94 mg/l

End point: Growth rate

Exposure time: 96 h

NOEC (*Lemna gibba* (gibbous duckweed)): 0.73 mg/l

End point: Growth rate

Exposure time: 7 d

M-Factor (Acute aquatic toxicity): 1

Toxicity to fish (Chronic toxicity):

NOEC: 6.6 mg/l

Exposure time: 28 d

Species: *Oncorhynchus mykiss* (rainbow trout)

**cloquintocet-mexyl:**

Toxicity to fish :

LC50 (*Oncorhynchus mykiss* (rainbow trout)): > 0.97 mg/l

Exposure time: 96 h

LC50 (*Gobiocypris rarus* (rare gudgeon)): 0.102 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:

EC50 (*Daphnia magna* (Water flea)): > 0.82 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic plants: ErC50 (*Desmodesmus subspicatus* (green algae)): > 2.2 mg/l  
Exposure time: 72 h  
NOEC (*Desmodesmus subspicatus* (green algae)): 0.12 mg/l  
End point: Growth rate  
Exposure time: 72 h

M-Factor (Acute aquatic toxicity): 1

Toxicity to microorganisms : EC50 (activated sludge): > 1,000 mg/l  
Exposure time: 3 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

NOEC: > 0.437 mg/l  
Exposure time: 21 d  
Species: Daphnia (water flea)

M-Factor

(Chronic aquatic toxicity): 1

**florasulam (ISO):**

Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): > 100 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:

EC50 (*Daphnia magna* (Water flea)): > 292 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants: ErC50 (*Raphidocelis subcapitata* (freshwater green alga)): 0.00942 mg/l  
Exposure time: 72 h

M-Factor (Acute aquatic toxicity): 100

Toxicity to fish (Chronic toxicity): NOEC: 119 mg/l  
Exposure time: 96 d  
Species: *Oncorhynchus mykiss* (rainbow trout)  
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

NOEC: 38.9 mg/l  
Exposure time: 21 d  
Species: *Daphnia magna* (Water flea)

M-Factor

(Chronic aquatic toxicity): 100

**naphthalene:**

**Ecotoxicology Assessment**

Acute aquatic toxicity : Very toxic to aquatic life.

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

## 12.2 Persistence and degradability

### Components:

**hydrocarbons, C10-C13, aromatics, <1% naphthalene:**

Biodegradability : Result: Readily biodegradable.

**propylene carbonate:**

Biodegradability : Result: Readily biodegradable.

**benzyl alcohol:**

Biodegradability : Result: Readily biodegradable.

**pinoxaden (ISO):**

Biodegradability : Result: rapidly degradable

Stability in water : Degradation half life: 0.3 d

Remarks: Product is not persistent.

**cloquintocet-mexyl:**

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life: 0.4 d

Remarks: Product is not persistent.

**florasulam (ISO):**

Biodegradability : Result: Not readily biodegradable.

**12.3 Bioaccumulative potential**

**Components:**

**pinoxaden (ISO):**

Bioaccumulation : Remarks: Low bioaccumulation potential.

**cloquintocet-mexyl:**

Bioaccumulation : Remarks: Does not bioaccumulate.

Partition coefficient: noctanol/water: log Pow: 5.24 (25 °C)

**florasulam (ISO):**

Bioaccumulation : Remarks: Does not bioaccumulate.

Partition coefficient: noctanol/water: log Pow: -1.22

**12.4 Mobility in soil**

**Components:**

**pinoxaden (ISO):**

Distribution among environmental compartments: Remarks: Moderately mobile in soils

Stability in soil : Dissipation time: 0.1 - 1.8 d

Percentage dissipation: 50 % (DT50)

Remarks: Product is not persistent.

**cloquintocet-mexyl:**

Distribution among environmental compartments: Remarks: immobile

Stability in soil : Dissipation time: 2.4 d

Percentage dissipation: 50 % (DT50)

Remarks: Product is not persistent.

**florasulam (ISO):**

Distribution among environmental compartments: Remarks: Very highly mobile in soil.

Stability in soil : Dissipation time: 2 - 11 d

Percentage dissipation: 50 % (DT50)

Remarks: Product is not persistent.

**12.5 Results of PBT and vPvB assessment**

**Product:**

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**Components:**

**propylene carbonate:**

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

This substance is not considered to be very persistent and very bioaccumulating (vPvB).

**pinoxaden (ISO):**

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

This substance is not considered to be very persistent and very bioaccumulating (vPvB).

**cloquintocet-mexyl:**

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

This substance is not considered to be very persistent and very bioaccumulating (vPvB).

**naphthalene:**

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

This substance is not considered to be very persistent and very bioaccumulating (vPvB).

**12.6 Other adverse effects**

**Product:**

Endocrine disrupting potential: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## SECTION 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

**Product:** Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

**Contaminated packaging:** Empty remaining contents. Triple rinse containers. Empty containers should be taken for local recycling or waste disposal. Do not re-use empty containers.

**Waste Code:** uncleaned packagings 15 01 10, packaging containing residues of or contaminated by hazardous substances.

## SECTION 14. TRANSPORT INFORMATION

### 14.1 UN Number:

ADN	ADR	RID	IMDG	IATA
UN 3082				

### 14.2 UN proper shipping name

**ADR :** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLORASULAM)

**RID :** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLORASULAM)

**IMDG :** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLORASULAM)

**IATA :** Environmentally hazardous substance, liquid, n.o.s. (FLORASULAM)

### 14.3 Transport hazard class(es)

ADN	ADR	RID	IMDG	IATA
9	9	9	9	9

### 14.4 Packing group

ADN	ADR	RID
Packing group: III Classification Code: M6 Hazard Identification Number: 90 Labels: 9	Packing group: III Classification Code: M6 Hazard Identification Number: 90 Labels: 9 Tunnel restriction code: ( )	Packing group: III Classification Code: M6 Hazard Identification Number: 90 Labels: 9
IMDG	IA (Cargo)	IATA (Passenger)
Packing group: III Labels: 9 EmS Code: F-A, S-F	Packing instruction (cargo aircraft): 964 Packing instruction (LQ): Y964 Packing group: III Labels: Flammable Miscellaneous	Packing instruction (passenger aircraft): 964 Packing instruction (LQ): Y964 Packing group: III Labels: Flammable Miscellaneous

### 14.5 Environmental hazards

ADN	ADR	RID
Environmentally hazardous: yes	Environmentally hazardous: yes	Environmentally hazardous: yes
IMDG	IATA (Cargo)	IATA (Passenger)
Marine pollutant: yes	Environmentally hazardous: yes	Environmentally hazardous: yes

### 14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet.

Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

## 15. REGULATORY INFORMATION

### 15.1 Safety, health and environmental regulation/legislation specific for the substance or mixture

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII): Conditions of restriction for the following entries should be considered: Number on list 3 N-methyl-2-pyrrolidone (Number on list 72, 71, 30)  
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59): Not applicable  
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable  
Regulation (EU) 2019/1021 on persistent organic pollutants (recast): naphthalene  
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals: Not applicable  
REACH - List of substances subject to authorisation (Annex XIV): Not applicable  
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

	Quantity 1	Quantity 2
E1 ENVIRONMENTAL HAZARDS	100t	200t

#### Other regulations:

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

### 15.2 Chemical Safety Assessment

A chemical safety assessment is not required for this substance when it is used in the specified applications.

## 16. OTHER INFORMATION

### Full text of H-Statements

H228 : Flammable solid.

H302 : Harmful if swallowed.

H304 : May be fatal if swallowed and enters airways.

H315 : Causes skin irritation.

H317 : May cause an allergic skin reaction.

H319 : Causes serious eye irritation.

H332 : Harmful if inhaled.

H335 : May cause respiratory irritation.

H351 : Suspected of causing cancer.

H361d : Suspected of damaging the unborn child.

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.

H411 : Toxic to aquatic life with long lasting effects.

H412 : Harmful to aquatic life with long lasting effects.

EUH066 : Repeated exposure may cause skin dryness or cracking.

### Full text of other abbreviations

Acute Tox.: Acute toxicity

Aquatic Acute: Short-term (acute) aquatic hazard

Aquatic Chronic: Long-term (chronic) aquatic hazard

Asp. Tox. : Aspiration hazard

Carc. : Carcinogenicity

Eye Irrit. : Eye irritation

Flam. Sol. : Flammable solids

Repr. : Reproductive toxicity

Skin Irrit. : Skin irritation

Skin Sens. : Skin sensitisation  
STOT RE : Specific target organ toxicity - repeated exposure  
STOT SE : Specific target organ toxicity - single exposure  
91/322/EEC : Europe. Commission Directive 91/322/EEC on establishing indicative limit values  
IE OEL : Ireland. List of Chemical Agents and Occupational Exposure Limit Values - Schedule 1  
91/322/EEC / TWA : Limit Value - eight hours  
IE OEL / OELV - 8 hrs (TWA) : Occupational exposure limit value (8-hour reference period)

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; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECL - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

## Further information

### Classification of the mixture:

Skin Sens. 1B	H317
Repr. 2	H361d
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

### Classification procedure:

Based on product data or assessment
Calculation method
Calculation method
Based on product data or assessment

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