L1101384 GBRI/03B

Overtake® Herbicide

syngenta®

GROUP 4 2 HERBICIDES **MAPP No.** 20559
UFI: X990-T030-0004-8ES1

A suspension emulsion formulation containing 141.12 g/L fluroxypyr (as the 1-methylheptyl ester) and 2.45 g/L florasulam.

A post-emergence herbicide for control of broad leaved weeds in sports pitches, golf courses, race courses and gallops, bowling greens, airfields, professional application to commercial and residential lawns and other managed amenity turf and amenity grassland.

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work.

SHAKE WELL BEFORE USE.
PROTECT FROM FROST.

Approval holder	UK Marketing Company
GLOBACHEM NV, Brustem Industriepark- Lichtenberglaan 2019, B-3800 Sint-Truiden - Belgium, Tel: +32 11 78 57 17 Fax: +32 11 68 15 65 E-mail: globachem@globachem.com Web: www.globachem.com	Syngenta UK Ltd, CPC4, Capital Park, Fulbourn, Cambridge, CB21 5XE, Tel: +44 (0)1223 883400

In case of toxic or transport emergency ring +44 (0)1484 538444 any time.

4 x 5 litres

OVERTAKE®
A suspension emulsion formulation containing 141.12 g/L fluroxypyr (as the 1-methylheptyl ester) and 2.45 g/L florasulam.

Danger
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Very toxic to aquatic life with long lasting effects.

Avoid breathing vapours or spray.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/ face protection.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
Take off contaminated clothing and wash before reuse.
Collect spillage.
Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

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

MAPP No. 20559 **UFI:** X990-T030-0004-8ES1

Overtake® Herbicide

IMPORTANT INFORMATION
FOR USE ONLY AS A PROFESSIONAL HERBICIDE

Crops	Maximum individual dose (L/ha)	Maximum number of treatments: (per year)	Latest time of application
Amenity grassland, lawns, managed amenity turf	2.0	One	End of October

Apply to established grass from March to October and to newly sown grass from May (BBCH 20) to October when soil is moist.

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.

SAFETY PRECAUTIONS

(a) Operator protection

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:
WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES AND FACE PROTECTION (FACESHIELD) when handling the concentrate.
However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.
DO NOT BREATHE SPRAY.
WHEN USING DO NOT EAT, DRINK OR SMOKE.
WASH CONCENTRATE from skin and eyes immediately.
WASH HANDS AND EXPOSED SKIN before eating and drinking, 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 yards and roads.
To protect aquatic organisms respect an unsprayed buffer zone to surface water bodies in line with LERAP requirements.
DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within 5 m of the top of the bank of a static or flowing water body, unless a Local Environment Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 1 m of the top of a ditch which is dry at the time of application.
DO NOT ALLOW DIRECT SPRAY from hand-held sprayers to fall within 1 m of the top of the bank of a static or flowing water body. Aim spray away from water.
This product qualifies for inclusion within the Local Environment Risk Assessment for Pesticides (LERAP) scheme. Before each spraying operation from a horizontal boom sprayer, either a LERAP must be carried out in accordance with CRD's published guidance or the statutory buffer zone must be maintained. The results of the LERAP must be recorded and kept available for three years.

(c) Storage and disposal

KEEP IN ORIGINAL CONTAINER, tightly closed in a safe place.
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.
DO NOT RE-USE CONTAINER for any purpose.

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 read carefully in order to obtain safe and successful use of this product.

GENERAL INFORMATION

OVERTAKE® herbicide has activity against a range of broad-leaved weeds. OVERTAKE® is mainly absorbed through the foliage of weeds. The ideal timing for application is when the weeds are small and actively growing.

NOTES

Broad-leaved weeds not present at application will not be controlled.
Clippings from grass treated with OVERTAKE® can be safely used for mulch after the third cut.
An interval of four weeks must elapse between application of OVERTAKE® and re-seeding turf.
Do not apply if turfgrass is wet.
Do not apply to turf, lawns or grass areas which are under stress.
Do not apply if night temperatures are low, if ground frost is imminent, or in periods of prolonged cold or dry weather.
Ensure weeds are actively growing as after periods of prolonged drought, weeds can take a long time to start actively growing again after soil moisture returns.
Extreme care must be taken to avoid spray drift onto crops and non-target plants e.g. trees, shrubs, bedding, outside the target area.

RESISTANCE

OVERTAKE® contains active ingredients with differing modes of action and the risk of resistance building is therefore reduced. However, as florasulam is an ALS-inhibitor there is a risk of resistance building to this active ingredient and so precautions should be taken to minimize the risk. Therefore, avoid using single action mode of action herbicides, such as ALS-inhibitors in the same field over a number of years. Users 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.

AREA OF USE

OVERTAKE® can be applied to newly sown or established managed amenity turf and amenity grassland.
Ensure newly sown turf has become established before treating. Turf sown in spring or summer may be ready for spraying at or after stem elongation stage, usually two months after sowing, but turf sown in late summer or autumn should not be sprayed until growth is resumed in the following spring, perhaps 8 months after sowing.
OVERTAKE® may be used on all soil types.
In view of the large number of turf grass cultivars grown consult your manufacturer for current approved list or test OVERTAKE® for turf safety on a small area of turf before overall application.

APPLICATION TIMING

Apply when weeds are in active growth. Apply to established grass from March to October and to newly sown grass from BBCH 20, May to October when the soil is moist. Do not apply in periods of drought unless irrigation is applied. Avoid mowing 3 days before and after spraying to ensure sufficient weed leaf surface is present and to allow uptake and movement of OVERTAKE® within the weed.

RATE OF APPLICATION AND WEEDS CONTROLLED

One application of OVERTAKE® will control susceptible emerged weeds at the following rates:

Weed	Rate L product/ha	Rate ml product/100m^2
Common daisy Common dandelion White clover	2.0	20

Application timing:

WATER VOLUME

OVERTAKE® may be applied through tractor-mounted hydraulic sprayers or knapsack sprayers. For overall application, apply OVERTAKE® in 200 to 400 litres of water per hectare. For knapsack application, apply OVERTAKE® in 2 to 4 litres of water per 100 m^2.

APPLICATION EQUIPMENT

OVERTAKE® may be applied through tractor-mounted hydraulic sprayers or knapsack sprayers providing they are in good working order and have been calibrated according to the manufacturers' recommendations.
Do not apply through CDA applicators.

MIXING

Half fill the spray tank with water and add the required amount of OVERTAKE®. Fill up the spray tank, agitating continuously to ensure thorough mixing, and maintain agitation until spraying is complete. Use only clean water for mixing.

SPRAY QUALITY

Apply OVERTAKE® as a MEDIUM spray as defined by the BCPC system.

TANK CLEANING

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

1) Immediately after spraying, drain tank completely. Any contamination on the outside of the spraying equipment should be removed by washing with clean water.
2) 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.
3) 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.
4) 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.
5) 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.

6) For disposal of washings, follow The Code of Practice for Using Plant Protection Products. Do not spray onto sensitive crop or land intended for cropping with sensitive crop.

Note: If it is not possible to drain the tank completely, step 3 must be repeated before going onto step 4.

CONDITIONS OF SUPPLY

All goods supplied by us are of high grade and we believe them to be suitable but, as we cannot exercise control over their storage, handling, mixing or use, or the weather conditions before, during or after application which may affect the performance of the goods, all conditions and warranties, statutory or otherwise, as to the quality or fitness for any purpose of our goods are excluded. No responsibility will be accepted by us or re-sellers for any failure in performance, damage or injury whatsoever arising from their storage, handling, application or use. These conditions cannot be varied by our staff or agents whether or not they supervise or assist in the use of such goods.

Section 6 of the Health and Safety at Work Act
Additional Product Safety Information

(This section does not form part of the product label under the Plant Protection Products Regulations 1995.)

The product label provides information on a specific pesticidal use of the product; do not use otherwise, unless you have assessed any potential hazard involved, the safety measures required and that the particular use has 'Extension of Use' approval or is otherwise permitted under the Plant Protection Products Regulations.

The information on this label is based on the best available information including data from test results.

Safety Data Sheet V1

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

1.1 Product Identifier

Trade name: OVERTAKE
Design code: A16312B
Product Registration Number: MAPP 20559
Unique Formula Identifier (UFI): X990-T030-004-8ES1

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

Use of the Substance/Mixture: Herbicide
Recommended restrictions on use: professional use

1.3 Details of the supplier of the safety data sheet

Company: Syngenta UK Ltd
CPC4, Capital Park, Fulbourn, Cambridge, CB21 5XE
Telephone: +44 (0) 1223 883400
Telefax: +44 (0) 1223 882195
E-mail address: customer.services@syngenta.com

1.4 Emergency telephone number

Emergency phone No.: +44 (0) 1484 538444

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 irritation, Category 2 - H315: Causes skin irritation.
Serious eye damage, Category 1 - H318: Causes serious eye damage.
Skin sensitisation, Category 1 - H317: May cause an allergic skin reaction.
Specific target organ toxicity - single exposure, Category 3, Central nervous system - H336: May cause drowsiness or dizziness.
Specific target organ toxicity - single exposure, Category 3, Respiratory system - H335: May cause respiratory irritation.
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) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Hazard pictograms		
Signal Word	Danger	
Hazard Statements	H315	Causes skin irritation.
	H317	May cause an allergic skin reaction.
	H318	Causes serious eye damage.
	H335	May cause respiratory irritation.
	H336	May cause drowsiness or dizziness.
	H410	Very toxic to aquatic life with long lasting effects.
Precautionary Statements	P261	Avoid breathing mist or vapours.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/ eye protection/ face protection.
	P302+P352	IF ON SKIN: Wash with plenty of soap and water.
	P333+P313	If skin irritation or rash occurs: Get medical advice/ attention.
	P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	P305+P351 +P338+ P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if pre-sent and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
	P362+P364	Take off contaminated clothing and wash it before reuse.
	P391	Collect spillage.
	P403+P233	Store in a well-ventilated place. Keep container tightly closed.
	P501	Dispose of contents/container to a licensed hazardous waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.
Additional Labelling	EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

Hazardous components which must be listed on the label:
Hydrocarbons, C9, Aromatics

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.

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, C9, Aromatics	128601-23-0 265-199-0	Flam. Liq. 3; H226 STOT SE 3; H335 (Respiratory system) STOT SE 3; H336 (Central nervous system) Asp. Tox. 1; H304 Aquatic Chronic 2; H411	>= 30 - < 50
fluroxypyr-meptyl (ISO)	81406-37-3 279-752-9 607-272-00-5	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 1	>= 10 - < 20
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	>= 0.1 - < 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 Safety Data Sheet with you when calling the emergency number, a poison control center 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 pneumonitis.

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

Suitable 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 fire-fighting: 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

Personal precautions: 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 (Form of exposure)	Control parameters	Basis
Hydrocarbons, C9, Aromatics	128601-23-0	TWA	19 ppm 100 mg/m³	Supplier
fluroxypyr-meptyl (ISO)	81406-37-3	TWA	10 mg/m³	Supplier

Derived No Effect Level (DNEL):

Substance name	End Use	Exposure routes	Potential health effects	Value
Hydrocarbons, C9, Aromatics	Workers	Inhalation	Long-term systemic effects	150 mg/m³
	Workers	Dermal	Long-term systemic effects	25 mg/kg
	Consumers	Inhalation	Long-term systemic effects	32 mg/m³
	Consumers	Dermal	Long-term systemic effects	11 mg/kg
	Consumers	Oral	Long-term systemic effects	11 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: Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.

Tightly fitting safety goggles.

Face-shield

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.

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: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Suitable respiratory equipment: Respirator with a half face mask.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: liquid
Colour: white
Odour: characteristic
Odour Threshold: No data available
pH: 6.3, Concentration: 100 %w/v; 6.76, Concentration: 1 %w/v
Melting point/range: No data available
Boiling point/boiling range: No data available
Flash point: > 100 °C. Does not flash
Evaporation rate: No data available
Flammability (solid, gas): Not classified as a flammability hazard
Upper explosion limit / Upper flammability limit: No data available
Lower explosion limit / Lower flammability limit: No data available
Vapour pressure: No data available
Relative vapour density: No data available
Density: 1.0041 g/cm³
Water solubility: No data available
Solubility in other solvents: No data available
Partition coefficient: n-octanol/water: No data available
Auto-ignition temperature: > 400 °C
Decomposition temperature: No data available
Viscosity, kinematic: No data available
Explosive properties: Not explosive
Oxidizing properties: The substance or mixture is not classified as oxidizing.

9.2 Other information

Particle size: No data available

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): > 2,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity

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 substance or mixture has no acute dermal toxicity

Components:

Hydrocarbons, C9, Aromatics:

Acute oral toxicity: LD50 (Rat, female): 3,492 mg/kg

fluroxypyr-meptyl (ISO):

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

Acute inhalation toxicity: LC50 (Rat, male and female): > 1.16 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Highest attainable concentration

Acute dermal toxicity: LD50 (Rabbit): > 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.

Skin corrosion/irritation

Product:

Result: Irritating to skin.

Components:

Hydrocarbons, C9, Aromatics:

Result: Repeated exposure may cause skin dryness or cracking.
Species: Rabbit
Result: Mild skin irritation

fluroxypyr-meptyl (ISO):

Result: No skin irritation

florasulam (ISO):

Species: Rabbit
Result: No skin irritation

Serious eye damage/eye irritation

Product:

Result: Risk of serious damage to eyes.

Components:

fluroxypyr-meptyl (ISO):

Result: No eye irritation

florasulam (ISO):

Species: Rabbit
Result: No eye irritation

Respiratory or skin sensitisation

Product:

Result: May cause sensitisation by skin contact.

Components:

fluroxypyr-meptyl (ISO):

Result: Did not cause sensitisation on laboratory animals.

florasulam (ISO):

Species: Guinea pig
Result: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Components:

fluroxypyr-meptyl (ISO):

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:

fluroxypyr-meptyl (ISO):

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

florasulam (ISO):

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

Reproductive toxicity

Components:

fluroxypyr-meptyl (ISO):

Reproductive toxicity - Assessment: No toxicity to reproduction

florasulam (ISO):

Reproductive toxicity - Assessment: No toxicity to reproduction.

STOT - single exposure

Components:

Hydrocarbons, C9, Aromatics:

Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

fluroxypyr-meptyl (ISO):

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

STOT - repeated exposure

Components:

fluroxypyr-meptyl (ISO):

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

Aspiration toxicity
Components:
Hydrocarbons, C9, Aromatics:
May be fatal if swallowed and enters airways.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Product:

Toxicity to fish:	LC50 (*Oncorhynchus mykiss* (rainbow trout)): 8.71 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates:	EC50 (*Daphnia magna* (Water flea)): 7.34 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants:	EC50 (*Raphidocelis subcapitata* (freshwater green alga)): 0.653 mg/l Exposure time: 72 h EC50 (*Lemna gibba* (gibbous duckweed)): 0.821 mg/l Exposure time: 72 h ErC50 (*Myriophyllum spicatum* (Eurasian watermilfoil)): 0.299 mg/l

Components:
Hydrocarbons, C9, Aromatics:

Toxicity to fish:	LL50 (*Oncorhynchus mykiss* (rainbow trout)): 9.2 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates:	EL50 (*Daphnia magna* (Water flea)): 3.2 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants:	ErC50 (*Raphidocelis subcapitata* (freshwater green alga)): 2.9 mg/l Exposure time: 72 h NOELR (*Raphidocelis subcapitata* (freshwater green alga)): 1.0 mg/l End point: Growth rate Exposure time: 72 h
Toxicity to fish (Chronic toxicity):	NOELR: 1.228 mg/l Exposure time: 28 d Species: *Oncorhynchus mykiss* (rainbow trout)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):	NOELR: 2.144 mg/l Exposure time: 21 d Species: *Daphnia magna* (Water flea)
Ecotoxicology Assessment Chronic aquatic toxicity:	Toxic to aquatic life with long lasting effects.

fluroxypyr-meptyl (ISO):

Toxicity to fish:	LC50 (*Oncorhynchus mykiss* (rainbow trout)): > 0.225 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates:	EC50 (*Daphnia magna* (Water flea)): > 0.183 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants:	ErC50 (*Raphidocelis subcapitata* (freshwater green alga)): > 1.1410 mg/l Exposure time: 72 h ErC50 (*Myriophyllum spicatum* (Eurasian watermilfoil)): 0.075 mg/l Exposure time: 14 d NOEC (*Myriophyllum spicatum* (Eurasian watermilfoil)): 0.031 mg/l Exposure time: 14 d
M-Factor (Acute aquatic toxicity):	10
Toxicity to fish (Chronic toxicity):	NOEC: 0.32 mg/l Species: *Oncorhynchus mykiss* (rainbow trout)
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: 28 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

12.2 Persistence and degradability

Components:
Hydrocarbons, C9, Aromatics:
Biodegradability: Result: Readily biodegradable.
fluroxypyr-meptyl (ISO):
Biodegradability: Result: Not readily biodegradable.
Stability in water: Degradation half life: 454 d
Remarks: Persistent in water.
florasulam (ISO):
Biodegradability: Result: Not readily biodegradable.
Stability in water: Degradation half life: 98 - 100 d (25 °C)
pH: 9
Remarks: Product is not persistent.

12.3 Bioaccumulative potential

Components:

fluroxypyr-meptyl (ISO):

Bioaccumulation: Remarks: Does not bioaccumulate.

florasulam (ISO):

Bioaccumulation: Remarks: Does not bioaccumulate.

Partition coefficient: n-octanol/water: log Pow: -1.22

12.4 Mobility in soil

Components:

fluroxypyr-meptyl (ISO):

Distribution among environmental compartments: Remarks: immobile

florasulam (ISO):

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

Stability in soil: Dissipation time: 2 - 18 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.

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 to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

14.1 UN number

ADR: UN 3082
RID: UN 3082
IMDG: UN 3082
IATA: UN 3082

14.2 UN proper shipping name

ADR: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLUROXYPYR)
RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLUROXYPYR)
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLUROXYPYR)
IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLUROXYPYR)

14.3 Transport hazard class(es)

ADR: 9
RID: 9
IMDG: 9
IATA: 9

14.4 Packing group

ADR

Packing group: III
Classification Code: M6
Hazard Identification Number: 90
Labels: 9
Tunnel restriction code: (-)

RID

Packing group: III
Classification Code: M6
Hazard Identification Number: 90
Labels: 9

IMDG

Packing group: III
Labels: 9
EmS Code: F-A, S-F

IATA (Cargo)

Packing instruction (cargo aircraft): 964
Packing instruction (LQ): Y964
Packing group: III
Labels: Miscellaneous

IATA (Passenger)

Packing instruction (passenger aircraft): 964
Packing instruction (LQ): Y964
Packing group: III
Labels: Miscellaneous

14.5 Environmental hazards

ADR

Environmentally hazardous: yes

RID

Environmentally hazardous: yes

IMDG

Marine pollutant: yes

IATA (Passenger)

Environmentally hazardous: yes

IATA (Cargo)

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 and the IBC Code

Not applicable for product as supplied.

SECTION 15. REGULATORY INFORMATION

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

Relevant EU provisions transposed through retained EU law

UK REACH List of restrictions (Annex 17): Conditions of restriction for the following entries should be considered: Number on list 3

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable

UK REACH List of substances subject to authorisation (Annex XIV): Not applicable

GB Export and import of hazardous chemicals - Prior Informed Consent (PIC) Regulation: Not applicable

Control of Major Accident Hazards Regulations 2015 (COMAH) E1 ENVIRONMENTAL HAZARDS

15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

SECTION 16. OTHER INFORMATION

Full text of H-Statements

H226: Flammable liquid and vapour.

H304: May be fatal if swallowed and enters airways.

H335: May cause respiratory irritation.

H336: May cause drowsiness or dizziness.

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.

Full text of other abbreviations

Aquatic Acute: Acute aquatic toxicity

Aquatic Chronic: Chronic aquatic toxicity

Asp. Tox.: Aspiration hazard

Flam. Liq.: Flammable liquids

STOT SE: Specific target organ toxicity - single exposure

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; KECI - 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; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:	**Classification procedure:**	
Skin Irrit. 2	H315	Based on product data or assessment
Eye Dam. 1	H318	Based on product data or assessment
Skin Sens. 1	H317	Based on product data or assessment
STOT SE 3	H335	Calculation method
Aquatic Acute 1	H400	Based on product data or assessment.
Aquatic Chronic 1	H410	Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.