SAFETY DATA SHEET

PIXXARO™ 266 EC

Version	Revision Date:	SDS Number:	Date of last issue: -
0.0	30.05.2023	800080002785	Date of first issue: 30.05.2023

Corteva Agriscience™ encourages you and expects you to read and understand the entire SDS as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container. This Safety Data Sheet adheres to the standards and regulatory requirements of South Africa and may not meet the regulatory requirements in other countries.

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

1.1 Product identifier

Trade name : PIXXARO™ 266 EC

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

Use of the Substance/Mixture : Plant Protection Product, Herbicide

1.3 Details of the supplier of the safety data sheet

COMPANY IDENTIFICATION
Manufacturer/importer
Corteva Agriscience RSA Proprietary Limited
Block A, 2nd Floor, Lakefield Office Park, 272 West Avenue
Centurion, Gauteng, 1063
SOUTH AFRICA

Customer Information Number : +27 (0) 12 683 5700
E-mail address : SDS@corteva.com

1.4 Emergency telephone number

24-Hour Local Emergency Contact: +27 82 895 0621
24-Hour Emergency Contact: +32 3 575 55 55

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Serious eye damage, Category 1	H318: Causes serious eye damage.
Skin sensitisation, Sub-category 1B	H317: May cause an allergic skin reaction.
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

Hazard pictograms :

Signal word : Danger

Hazard statements :
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H410 Very toxic to aquatic life with long lasting effects.

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

Precautionary statements :

Prevention:

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338 + P310 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/ doctor.
P391 Collect spillage.

Disposal:

P501 Dispose of contents/container in accordance with applicable regulations.

Hazardous components which must be listed on the label:

Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide
Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts
Cloquintocet-mexyl

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.	Classification	Concentration (% w/w)

	Registration number		
fluroxypyr-meptyl (ISO)	81406-37-3 279-752-9 607-272-00-5	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	34,9
Cloquintocet-mexyl	99607-70-2 01-2119381871-32-0002, 01-2119381871-32-0003, 01-2119403579-35-0000	Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	1,66
Halauxifen-methyl	943831-98-9	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 _____ M-Factor (Acute aquatic toxicity): 1.000 M-Factor (Chronic aquatic toxicity): 1.000	1,63
Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide	Not Assigned 01-2119974115-37	Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H335 (Respiratory system)	>= 40 - < 50
Polyethylene glycol mono(tristyrylphenyl)ether	99734-09-5	Aquatic Chronic 3; H412	>= 3 - < 10
Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts	68953-96-8 273-234-6 01-2119964467-24	Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Dam. 1; H318 Aquatic Chronic 2; H411	>= 2,5 - < 3
Hydrocarbons, C10, aromatics, <1% naphthalene	1189173-42-9 01-2119463583-34-0008, 01-2119463583-34-0009, 01-2119463583-34-0010	STOT SE 3; H336 (Central nervous system) Asp. Tox. 1; H304 Aquatic Chronic 2; H411	>= 2,5 - < 3
N-methyl-2-pyrrolidone	872-50-4 212-828-1 606-021-00-7 01-2119472430-46	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Repr. 1B; H360D STOT SE 3; H335 (Respiratory system)	>= 0,1 - < 0,3

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection).
If potential for exposure exists refer to Section 8 for specific personal protective equipment.

If inhaled : Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.
If breathing is difficult, oxygen should be administered by qualified personnel.

In case of skin contact : Take off contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Wash clothing before reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly.

In case of eye contact : Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist.
Suitable emergency eye wash facility should be immediately available.

If swallowed : Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor.
Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist.
No specific antidote.
Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.
Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.
Skin contact may aggravate preexisting dermatitis.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water spray
Alcohol-resistant foam

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.
Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Nitrogen oxides (NOx)
Carbon oxides

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

Specific extinguishing methods : Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

6.2 Environmental precautions

Environmental precautions : If the product contaminates rivers and lakes or drains inform respective authorities.
Discharge into the environment must be avoided.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g. by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages

cannot be contained.
Prevent from entering into soil, ditches, sewers,underwater.
See Section 12, Ecological Information.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Clean up remaining materials from spill with suitable absorbant.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped,
Recovered material should be stored in a vented container.
The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to overpressurization of the container.
Keep in suitable, closed containers for disposal.
Wipe up with absorbent material (e.g. cloth, fleece).
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
See Section 13, Disposal Considerations, for additional information.

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Local/Total ventilation : Use with local exhaust ventilation.

Advice on safe handling : To avoid spills during handling keep bottle on a metal tray.
Avoid formation of aerosol.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Provide sufficient air exchange and/or exhaust in work rooms.
Do not breathe vapours/dust.
Do not smoke.
Handle in accordance with good industrial hygiene and safety practice.
Avoid exposure - obtain special instructions before use.
Smoking, eating and drinking should be prohibited in the application area.
Do not get on skin or clothing.
Do not breathe vapours or spray mist.
Do not swallow.
Do not get in eyes.
Avoid contact with skin and eyes.
Keep container tightly closed.
Take care to prevent spills, waste and minimize release to the environment.

Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in a closed container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in properly labelled containers. Store in accordance with the particular national regulations.

Advice on common storage : Do not store near acids.
Strong oxidizing agents

Packaging material : Unsuitable material: None known.

7.3 Specific end use(s)

Specific use(s) : Plant protection products subject to Regulation (EC) No 1107/2009.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
N-methyl-2-pyrrolidone	872-50-4	TWA	10 ppm 40 mg/m3	2009/161/EU
		STEL	20 ppm 80 mg/m3	2009/161/EU
		TWA	10 ppm 40 mg/m3	2004/37/EC
		STEL	20 ppm 80 mg/m3	2004/37/EC

8.2 Exposure controls

Engineering measures

Use engineering controls to maintain airborne level below exposure limit requirements or guidelines.
If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation.
Local exhaust ventilation may be necessary for some operations.

Personal protective equipment

Eye/face protection : Use chemical goggles.
Chemical goggles should be consistent with EN 166 or equivalent.

Hand protection

Remarks : Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Polyethylene.

Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended. Glove thickness alone is not a good indicator of the level of protection a glove provides against a chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from. The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and frequent contact with the substance. As an exception to this general rule it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm. Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Skin and body protection : Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection : Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator.
Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material.
For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	Liquid.
Colour	:	Yellow
Odour	:	Mild
Odour Threshold	:	No data available
pH	:	4,95 (23,6 °C) Concentration: 1 % Method: pH Electrode

Melting point/range	:	Not applicable to liquids
Freezing point		No data available
Boiling point/boiling range	:	No data available
Flash point	:	> 100 °C Method: Pensky-Martens Closed Cup ASTM D 93, closed cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
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	:	1,0252 g/cm3 (20 °C) Method: Digital density meter
Solubility(ies)		
Water solubility	:	No data available
Auto-ignition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	48,15 mPa.s (20 °C)
		18,4 mPa.s (40 °C)
Explosive properties	:	No
Oxidizing properties	:	No significant increase (>5C) in temperature.

9.2 Other information

Flammability (liquids)	:	Not expected to be a static-accumulating flammable liquid.

SECTION 10: Stability and reactivity

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

No decomposition if stored and applied as directed.
Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Stable under recommended storage conditions.
No hazards to be specially mentioned.
None known.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : Strong acids
Strong bases

10.6 Hazardous decomposition products

Carbon oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat, female): 5.000 mg/kg
Method: OECD Test Guideline 425

Acute inhalation toxicity : LC50 (Rat, male and female): > 5,57 mg/l
Exposure time: 4 h
Test atmosphere: Aerosol
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 5.000 mg/kg
Method: OECD Test Guideline 402

Components:

fluroxypyr-meptyl (ISO):

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat, male and female): > 1,16 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Maximum attainable concentration.

Acute dermal toxicity	:	LD50 (Rabbit): > 2.000 mg/kg Symptoms: No deaths occurred at this concentration. Assessment: The substance or mixture has no acute dermal toxicity

Cloquintocet-mexyl:

Acute oral toxicity	:	LD50 (Rat, female): > 2.000 mg/kg Symptoms: No deaths occurred at this concentration. Assessment: The substance or mixture has no acute oral toxicity
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 5,42 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, male and female): > 5.000 mg/kg

Halauxifen-methyl:

Acute oral toxicity	:	LD50 (Rat, female): > 5.000 mg/kg
Acute dermal toxicity	:	LD50 (Rat, male and female): > 5.000 mg/kg

Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide:

Acute oral toxicity	:	LD50 (Rat): > 2.000 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 3,551 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

Polyethylene glycol mono(tristyrylphenyl)ether:

Acute oral toxicity	:	LD50 (Rat): > 5.000 mg/kg Method: Estimated. Remarks: Typical for this family of materials.
Acute dermal toxicity	:	LD50 (Rabbit): > 2.000 mg/kg Method: Estimated. Assessment: The substance or mixture has no acute dermal toxicity Remarks: Typical for this family of materials.

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Acute oral toxicity	:	LD50 (Rat, male and female): > 2.000 mg/kg Method: OECD 401 or equivalent Symptoms: No deaths occurred at this concentration.

Assessment: The substance or mixture has no acute oral toxicity
Remarks: For similar material(s):

Acute dermal toxicity : LD50 (Rat, male and female): > 1.000 - < 1.600 mg/kg
Method: OECD 402 or equivalent
Remarks: For similar material(s):

Hydrocarbons, C10, aromatics, <1% naphthalene:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg
Remarks: For similar material(s):

Acute inhalation toxicity : LC50 (Rat): > 4,688 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: For similar material(s):
Maximum attainable concentration.

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: For similar material(s):

N-methyl-2-pyrrolidone:

Acute oral toxicity : LD50 (Rat, male and female): 4.150 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat, male and female): > 5,1 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Symptoms: No deaths occurred at this concentration.

Acute dermal toxicity : LD50 (Rat, male and female): > 5.000 mg/kg
Method: OECD Test Guideline 402

Skin corrosion/irritation

Product:

Method : OECD Test Guideline 404
Result : No skin irritation

Components:

fluroxypyr-meptyl (ISO):

Species : Rabbit
Result : No skin irritation

Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide:

Species : Rabbit
Result : Skin irritation

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:
Result : Skin irritation

N-methyl-2-pyrrolidone:
Species : Rabbit
Result : Skin irritation

Serious eye damage/eye irritation

Product:
Method : OECD Test Guideline 405
Result : Corrosive

Components:

Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide:
Species : Rabbit
Result : Corrosive

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:
Result : Corrosive

N-methyl-2-pyrrolidone:
Species : Rabbit
Result : Eye irritation

Respiratory or skin sensitisation

Product:
Assessment : The product is a skin sensitiser, sub-category 1B.
Method : OECD Test Guideline 429

Components:

fluroxypyr-meptyl (ISO):
Species : Guinea pig
Assessment : Does not cause skin sensitisation.

Cloquintocet-mexyl:
Species : Guinea pig
Assessment : May cause sensitisation by skin contact.

Halauxifen-methyl:
Remarks : Did not demonstrate the potential for contact allergy in mice.

Remarks : For respiratory sensitization:
No relevant data found.

Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide:

Species : Guinea pig
Assessment : Does not cause skin sensitisation.
Remarks : For similar material(s):

Polyethylene glycol mono(tristyrylphenyl)ether:

Species : Guinea pig
Assessment : Does not cause skin sensitisation.
Remarks : For similar material(s):

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Remarks : For skin sensitization:
For similar material(s):
Did not cause allergic skin reactions when tested in guinea pigs.

Remarks : For respiratory sensitization:
No relevant data found.

Hydrocarbons, C10, aromatics, <1% naphthalene:

Remarks : For similar material(s):
Did not cause allergic skin reactions when tested in guinea pigs.

Remarks : For respiratory sensitization:
No relevant data found.

N-methyl-2-pyrrolidone:

Species : Guinea pig
Assessment : Does not cause skin sensitisation.

Germ cell mutagenicity

Components:

fluroxypyr-meptyl (ISO):

Germ cell mutagenicity- Assessment : In vitro genetic toxicity studies were negative., Animal genetic toxicity studies were negative.

Cloquintocet-mexyl:

Germ cell mutagenicity- Assessment : In vitro genetic toxicity studies were negative., Animal genetic toxicity studies were negative.

Halauxifen-methyl:

Germ cell mutagenicity- Assessment : In vitro genetic toxicity studies were negative.

Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide:

Germ cell mutagenicity- Assessment : In vitro genetic toxicity studies were negative.

Polyethylene glycol mono(tristyrylphenyl)ether:

Germ cell mutagenicity- Assessment : For the major component(s):, In vitro genetic toxicity studies were negative., Animal genetic toxicity studies were negative.

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Germ cell mutagenicity- Assessment : For similar material(s):, In vitro genetic toxicity studies were negative., Animal genetic toxicity studies were negative.

Hydrocarbons, C10, aromatics, <1% naphthalene:

Germ cell mutagenicity- Assessment : For similar material(s):, In vitro genetic toxicity studies were negative., Animal genetic toxicity studies were negative.

N-methyl-2-pyrrolidone:

Germ cell mutagenicity- Assessment : In vitro genetic toxicity studies were negative in some cases and positive in other cases., Animal genetic toxicity studies were negative.

Carcinogenicity

Components:

fluroxypyr-meptyl (ISO):

Carcinogenicity - Assessment : For similar active ingredient(s)., Fluroxypyr., Did not cause cancer in laboratory animals.

Cloquintocet-mexyl:

Carcinogenicity - Assessment : Did not cause cancer in laboratory animals.

Halauxifen-methyl:

Carcinogenicity - Assessment : For similar active ingredient(s)., Halauxifen., Did not cause cancer in laboratory animals.

Polyethylene glycol mono(tristyrylphenyl)ether:

Carcinogenicity - Assessment : For the major component(s):, Polyethylene glycols did not cause cancer in long-term animal studies.

N-methyl-2-pyrrolidone:

Carcinogenicity - Assessment : Did not cause cancer in laboratory animals.

Reproductive toxicity

Product:

Reproductive toxicity - Assessment : No toxicity to reproduction

Components:

fluroxypyr-meptyl (ISO):

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction.
Has been toxic to the fetus in laboratory animals at doses toxic to the mother., Did not cause birth defects in laboratory animals.

Cloquintocet-mexyl:

Reproductive toxicity - Assessment : Did not cause birth defects or any other fetal effects in laboratory animals.

Halauxifen-methyl:

Reproductive toxicity - Assessment : For similar active ingredient(s)., Halauxifen., In animal studies, did not interfere with reproduction.
Has been toxic to the fetus in laboratory animals at doses toxic to the mother., Did not cause birth defects in laboratory animals.

Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide:

Reproductive toxicity - Assessment : For similar material(s):, Did not cause birth defects or any other fetal effects in laboratory animals.

Polyethylene glycol mono(tristyrylphenyl)ether:

Reproductive toxicity - Assessment : For the major component(s):, In animal studies, did not interfere with reproduction.
For the major component(s):, Did not cause birth defects or any other fetal effects in laboratory animals.

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Reproductive toxicity - Assessment : For similar material(s):, In animal studies, did not interfere with reproduction.
For similar material(s):, Did not cause birth defects or any other fetal effects in laboratory animals.

Hydrocarbons, C10, aromatics, <1% naphthalene:

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction.
For similar material(s):, Did not cause birth defects or any other fetal effects in laboratory animals.

N-methyl-2-pyrrolidone:

Reproductive toxicity - Assessment : Clear evidence of adverse effects on development, based on animal experiments.

N-methyl pyrrolidone has caused toxic effects to the fetus in laboratory animals at high dose levels with either mild or un-detectable maternal toxicity.

STOT - single exposure

Product:

Assessment : May cause respiratory irritation.

Components:

Cloquintocet-mexyl:

Assessment : Available data are inadequate to determine single exposure specific target organ toxicity.

Halauxifen-methyl:

Assessment : Available data are inadequate to determine single exposure specific target organ toxicity.

Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide:

Exposure routes : Inhalation
Assessment : May cause respiratory irritation.

Polyethylene glycol mono(tristyrylphenyl)ether:

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Assessment : Available data are inadequate to determine single exposure specific target organ toxicity.

Hydrocarbons, C10, aromatics, <1% naphthalene:

Exposure routes : Inhalation
Assessment : May cause drowsiness or dizziness.

N-methyl-2-pyrrolidone:

Exposure routes : Inhalation
Target Organs : Respiratory Tract
Assessment : May cause respiratory irritation.

STOT - repeated exposure

Product:

Assessment : Evaluation of available data suggests that this material is not an STOT-RE toxicant.

Repeated dose toxicity

Components:

fluroxypyr-meptyl (ISO):

Remarks : Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Cloquintocet-mexyl:

Remarks : In animals, effects have been reported on the following organs:
Liver.
Kidney.
Thymus.
Thyroid.
Bladder.
Bone marrow.

Halauxifen-methyl:

Remarks : In animals, effects have been reported on the following organs:
Kidney.
Liver.
Thyroid.

Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide:

Remarks : For similar material(s):
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Polyethylene glycol mono(tristyrylphenyl)ether:

Remarks : Additives are encapsulated in the product and are not expected to be released under normal processing conditions or foreseeable emergency.

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Remarks : For similar material(s):
In animals, effects have been reported on the following organs:
Kidney.

Hydrocarbons, C10, aromatics, <1% naphthalene:

Remarks : Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.

N-methyl-2-pyrrolidone:

Remarks : Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Aspiration toxicity

Product:
Based on physical properties, not likely to be an aspiration hazard.

Components:

fluroxypyr-meptyl (ISO):
Based on physical properties, not likely to be an aspiration hazard.

Cloquintocet-mexyl:
Based on physical properties, not likely to be an aspiration hazard.

Halauxifen-methyl:
Based on physical properties, not likely to be an aspiration hazard.

Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide:
May be harmful if swallowed and enters airways.

Polyethylene glycol mono(tristyrylphenyl)ether:
Based on physical properties, not likely to be an aspiration hazard.

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:
Based on physical properties, not likely to be an aspiration hazard.

Hydrocarbons, C10, aromatics, <1% naphthalene:
May be fatal if swallowed and enters airways.

N-methyl-2-pyrrolidone:
Based on physical properties, not likely to be an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to algae/aquatic plants	:	Remarks: Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species). ErC50 (Myriophyllum spicatum): 0,0445 mg/l Exposure time: 14 d NOEC (Myriophyllum spicatum): 0,00791 mg/l Exposure time: 14 d
Toxicity to terrestrial organ-	:	Remarks: Material is slightly toxic to birds on an acute basis

isms		(LD50 between 501 and 2000 mg/kg). oral LD50: 784 mg/kg bodyweight. End point: mortality Species: Colinus virginianus (Bobwhite quail)

Ecotoxicology Assessment

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

Components:

fluroxypyr-meptyl (ISO):

Toxicity to fish	:	Remarks: Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species). LC50 (Oncorhynchus mykiss (rainbow trout)): > 0,225 mg/l Exposure time: 96 h Test Type: semi-static test Method: OECD Test Guideline 203 or Equivalent
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 0,183 mg/l Exposure time: 48 h Test Type: semi-static test Method: OECD Test Guideline 202 or Equivalent
Toxicity to algae/aquatic plants	:	ErC50 (diatom Navicula sp.): 0,24 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 or Equivalent EbC50 (alga Scenedesmus sp.): > 0,47 mg/l Exposure time: 72 h ErC50 (Selenastrum capricornutum (green algae)): > 1,410 mg/l Exposure time: 96 h ErC50 (Myriophyllum spicatum): 0,075 mg/l Exposure time: 14 d NOEC (Myriophyllum spicatum): 0,031 mg/l Exposure time: 14 d
Toxicity to fish (Chronic toxicity)	:	NOEC: 0,32 mg/l Species: Rainbow trout (Oncorhynchus mykiss)
Toxicity to soil dwelling organisms	:	LC50: > 1.000 mg/kg Species: Eisenia fetida (earthworms)
Toxicity to terrestrial organ-	:	Remarks: Material is practically non-toxic to birds on an acute

isms		basis (LD50 > 2000 mg/kg). Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm). oral LD50: > 2000 mg/kg bodyweight. Exposure time: 5 d Species: Colinus virginianus (Bobwhite quail) dietary LC50: > 5000 mg/kg diet. Species: Colinus virginianus (Bobwhite quail) oral LD50: > 100 micrograms/bee Exposure time: 48 h Species: Apis mellifera (bees) contact LD50: > 100 micrograms/bee Exposure time: 48 h Species: Apis mellifera (bees)

Ecotoxicology Assessment

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

Cloquintocet-mexyl:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 0,97 mg/l Exposure time: 96 h Test Type: flow-through test Method: Method Not Specified. Remarks: As the ester active substance.
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 0,82 mg/l Exposure time: 48 h Test Type: flow-through test Method: Method Not Specified.
Toxicity to algae/aquatic plants	:	EbC50 (alga Scenedesmus sp.): 0,63 mg/l End point: Biomass Exposure time: 96 h Method: Method Not Specified. EbC50 (Lemna minor (duckweed)): > 0,42 mg/l End point: Biomass Exposure time: 14 d Method: Method Not Specified.
Toxicity to soil dwelling organisms	:	LC50: > 1.000 mg/kg Species: Eisenia fetida (earthworms)
Toxicity to terrestrial organisms	:	oral LD50: > 2000 mg/kg bodyweight. Species: Anas platyrhynchos (Mallard duck) dietary LC50: > 5200 mg/kg diet.

Exposure time: 8 d
Species: Anas platyrhynchos (Mallard duck)

oral LD50: > 100 micrograms/bee
Exposure time: 48 h
Species: Apis mellifera (bees)

contact LD50: > 100 micrograms/bee
Exposure time: 48 h
Species: Apis mellifera (bees)

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

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

Halauxifen-methyl:

Toxicity to fish : Remarks: Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species).

LC50 (Rainbow trout (Oncorhynchus mykiss)): 2,01 mg/l
Exposure time: 96 h
Test Type: static test

LC50 (Pimephales promelas (fathead minnow)): > 3,22 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2,12 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 3,0 mg/l
Exposure time: 96 h

ErC50 (Myriophyllum spicatum): 0,000393 mg/l
End point: Growth rate inhibition
Exposure time: 14 d

M-Factor (Acute aquatic toxicity) : 1.000

Toxicity to microorganisms : EC50 (activated sludge): > 981 mg/l
Exposure time: 1 d

Toxicity to fish (Chronic toxicity) : NOEC: 0,259 mg/l
End point: Other
Species: Pimephales promelas (fathead minnow)
Test Type: flow-through test

NOEC: 0,00272 mg/l

Exposure time: 36 d
Species: Cyprinodon variegatus (sheepshead minnow)
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,484 mg/l
End point: number of offspring
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test

M-Factor (Chronic aquatic toxicity) : 1.000

Toxicity to soil dwelling organisms : LC50: > 1.000 mg/kg
Exposure time: 14 d
End point: mortality
Species: Eisenia fetida (earthworms)

Toxicity to terrestrial organisms : Remarks: Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).
Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm).

dietary LC50: > 5.620 ppm
Exposure time: 5 d
Species: Colinus virginianus (Bobwhite quail)
Method: Other guidelines

dietary LC50: > 5.620 ppm
Exposure time: 5 d
Species: Anas platyrhynchos (Mallard duck)
Method: Other guidelines

oral LD50: > 2250 mg/kg bodyweight.
End point: mortality
Species: Colinus virginianus (Bobwhite quail)

contact LD50: > 98,1 µg/bee
Exposure time: 48 h
End point: mortality
Species: Apis mellifera (bees)

oral LD50: > 108 µg/bee
Exposure time: 48 h
End point: mortality
Species: Apis mellifera (bees)

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

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

Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide:

Toxicity to fish : Remarks: Material is moderately toxic to aquatic organisms on

an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

Remarks: Material is toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in the most sensitive species).

LC50 (Danio rerio (zebra fish)): 14,8 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 7,7 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 16,06 mg/l
Exposure time: 72 h

Ecotoxicology Assessment

Acute aquatic toxicity : Toxic to aquatic life.

Polyethylene glycol mono(tristyrylphenyl)ether:

Ecotoxicology Assessment

Acute aquatic toxicity : Harmful to aquatic life.

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Toxicity to fish : Remarks: Material is harmful to aquatic organisms (LC50/EC50/IC50 between 10 and 100 mg/L in the most sensitive species).

LC50 (zebra fish (Brachydanio rerio)): 31,6 mg/l
Exposure time: 96 h
Remarks: For similar material(s):

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 62 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Selenastrum capricornutum (green algae)): 29 mg/l
End point: Growth rate inhibition
Exposure time: 96 h
Remarks: For similar material(s):

Toxicity to microorganisms : EC50 (activated sludge): 550 mg/l
End point: Respiration rates.
Exposure time: 3 h
Remarks: For similar material(s):

Toxicity to fish (Chronic toxicity) : NOEC: 0,23 mg/l
End point: survival
Exposure time: 72 d

Species: Rainbow trout (Salmo gairdneri)
Remarks: For similar material(s):

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 1,18 mg/l
End point: number of offspring
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Remarks: For similar material(s):

Hydrocarbons, C10, aromatics, <1% naphthalene:

Toxicity to fish : Remarks: For similar material(s):
Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

Remarks: For similar material(s):
Material is toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in the most sensitive species).

LC50 (Oncorhynchus mykiss (rainbow trout)): 2 - 5 mg/l
Exposure time: 96 h
Remarks: For similar material(s):

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna): 3 - 10 mg/l
Exposure time: 48 h
Remarks: For similar material(s):

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 11 mg/l
Exposure time: 72 h
Remarks: For similar material(s):

Ecotoxicology Assessment

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

N-methyl-2-pyrrolidone:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 5.000 mg/l
Exposure time: 96 h
Test Type: static test

LC50 (Pimephales promelas (fathead minnow)): 1.072 mg/l
Exposure time: 96 h
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1.000 mg/l
Exposure time: 24 h
Test Type: static test
Method: OECD Test Guideline 202 or Equivalent

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): > 500 mg/l
End point: Growth rate inhibition
Exposure time: 72 h
Test Type: static test

Method: OECD Test Guideline 201 or Equivalent

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 12,5 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test
Method: OECD Test Guideline 211 or Equivalent

12.2 Persistence and degradability

Components:

fluroxypyr-meptyl (ISO):

Biodegradability : Result: Not biodegradable
Remarks: Material is not readily biodegradable according to OECD/EEC guidelines.

Biodegradation: 32 %
Exposure time: 28 d
Method: OECD Test Guideline 301D or Equivalent
Remarks: 10-day Window: Fail

ThOD : 2,2 kg/kg

Stability in water : Test Type: Hydrolysis
Degradation half life (half-life): 454 d

Halauxifen-methyl:

Biodegradability : Result: Not biodegradable
Remarks: For similar active ingredient(s).
Halauxifen.
Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

Biodegradation: 7,7 %
Exposure time: 28 d
Method: OECD Test Guideline 310 or Equivalent
Remarks: 10-day Window: Not applicable

Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide:

Biodegradability : Remarks: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

Result: Readily biodegradable.
Biodegradation: > 80 %
Exposure time: 28 d
Method: OECD Test Guideline 301F or Equivalent
Remarks: 10-day Window: Pass

Chemical Oxygen Demand (COD) : 2,890 mg/g

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Biodegradability : Result: Not readily biodegradable.
Remarks: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

Biodegradation: 2,9 %
Exposure time: 28 d
Method: OECD Test Guideline 301E or Equivalent
Remarks: 10-day Window: Fail

Hydrocarbons, C10, aromatics, <1% naphthalene:

Biodegradability : Remarks: Material is inherently biodegradable (reaches > 20% biodegradation in OECD test(s) for inherent biodegradability).

N-methyl-2-pyrrolidone:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 91 %
Exposure time: 28 d
Method: OECD Test Guideline 301B or Equivalent
Remarks: 10-day Window: Pass

Concentration: 30 mg/l
Biodegradation: 73 %
Exposure time: 28 d
Method: OECD Test Guideline 301C or Equivalent
Remarks: 10-day Window: Not applicable

Biodegradation: > 90 %
Exposure time: 8 d
Method: OECD Test Guideline 302B or Equivalent
Remarks: 10-day Window: Not applicable

12.3 Bioaccumulative potential

Components:

fluroxypyr-meptyl (ISO):

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Bioconcentration factor (BCF): 26
Method: Measured

Partition coefficient: n-octanol/water :

log Pow: 5,04
Method: Measured
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Cloquintocet-mexyl:

Bioaccumulation	:	Species: Fish Bioconcentration factor (BCF): 122 - 621
Partition coefficient: n-octanol/water	:	log Pow: 5,3 Method: Estimated. Remarks: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5). log Pow: 5,2 (25 °C) pH: 7

Halauxifen-methyl:

Bioaccumulation	:	Species: Lepomis macrochirus (Bluegill sunfish) Exposure time: 42 d Temperature: 21,8 °C Concentration: 0,00194 mg/l Bioconcentration factor (BCF): 233
Partition coefficient: n-octanol/water	:	log Pow: 3,76 Remarks: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide:

Partition coefficient: n-octanol/water	:	log Pow: < 3,44 (20 °C) Remarks: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Polyethylene glycol mono(tristyrylphenyl)ether:

Partition coefficient: n-octanol/water	:	Remarks: No relevant data found.

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Partition coefficient: n-octanol/water	:	log Pow: 4,6 Method: OECD Test Guideline 107 or Equivalent Remarks: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Hydrocarbons, C10, aromatics, <1% naphthalene:

Partition coefficient: n-octanol/water	:	Remarks: No data available for this product. For similar material(s): Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).

N-methyl-2-pyrrolidone:

Partition coefficient: n-octanol/water	:	log Pow: -0,38 Method: Measured Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

12.4 Mobility in soil

Components:

fluroxypyr-meptyl (ISO):

Distribution among environmental compartments : Koc: 6200 - 43000
Remarks: Expected to be relatively immobile in soil (Koc > 5000).

Cloquintocet-mexyl:

Distribution among environmental compartments : Koc: 38070
Method: Estimated.
Remarks: Expected to be relatively immobile in soil (Koc > 5000).

Halauxifen-methyl:

Distribution among environmental compartments : Koc: 5684
Remarks: Expected to be relatively immobile in soil (Koc > 5000).

Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide:

Distribution among environmental compartments : Koc: 527,3
Remarks: Potential for mobility in soil is low (Koc between 500 and 2000).

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Distribution among environmental compartments : Remarks: No relevant data found.

Hydrocarbons, C10, aromatics, <1% naphthalene:

Distribution among environmental compartments : Remarks: No relevant data found.

N-methyl-2-pyrrolidone:

Distribution among environmental compartments : Koc: 21
Method: Estimated.
Remarks: Potential for mobility in soil is very high (Koc between 0 and 50).
Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

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:

fluroxypyr-meptyl (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).

Halauxifen-methyl:

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).

Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide:

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).

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

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).

Hydrocarbons, C10, aromatics, <1% 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).

N-methyl-2-pyrrolidone:

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.

Components:

fluroxypyr-meptyl (ISO):

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Cloquintocet-mexyl:

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Halauxifen-methyl:

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide:

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Hydrocarbons, C10, aromatics, <1% naphthalene:

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

N-methyl-2-pyrrolidone:

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.
If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

SECTION 14: Transport information

14.1 UN number

UNRTDG : UN 3082

IMDG : UN 3082

IATA : UN 3082

14.2 UN proper shipping name

UNRTDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Fluroxypyr 1-methylheptyl ester)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Fluroxypyr 1-methylheptyl ester)

IATA : Environmentally hazardous substance, liquid, n.o.s.
(Fluroxypyr 1-methylheptyl ester)

14.3 Transport hazard class(es)

UNRTDG : 9

IMDG : 9

IATA : 9

14.4 Packing group

UNRTDG

Packing group : III
Labels : 9

IMDG

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

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

IMDG

Marine pollutant : yes(Fluroxypyr 1-methylheptyl ester)

14.6 Special precautions for user

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 KG or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code, IATA Special provision A197, and ADR/RID special provision 375.

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 regulations/legislation specific for the substance or mixture

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	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.
The mixture is evaluated within the frame of the provisions of Regulation (EC) No. 1107/2009.
Refer to the label for exposure assessment information.

SECTION 16: Other information

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.
Classification was done in accordance with UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Purple Book and complies with the Regulations for Hazardous Chemical Agents, 2021.

Full text of H-Statements

H304 : May be fatal if swallowed and enters airways.
H312 : Harmful in contact with skin.
H315 : Causes skin irritation.
H317 : May cause an allergic skin reaction.
H318 : Causes serious eye damage.
H319 : Causes serious eye irritation.

H335	:	May cause respiratory irritation.
H336	:	May cause drowsiness or dizziness.
H360D	:	May damage the unborn child.
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.

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
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Repr.	:	Reproductive toxicity
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT SE	:	Specific target organ toxicity - single exposure
2004/37/EC	:	Europe. Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work
2009/161/EU	:	Europe. COMMISSION DIRECTIVE 2009/161/EU establishing a third list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Commission Directive 2000/39/EC
2004/37/EC / STEL	:	Short term exposure limit
2004/37/EC / TWA	:	Long term exposure limit
2009/161/EU / TWA	:	Limit Value - eight hours
2009/161/EU / STEL	:	Short term exposure limit

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; 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 - (Quanti-

tative) 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; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals 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:**
Eye Dam. 1	H318	Based on product data or assessment
Skin Sens. 1B	H317	Based on product data or assessment
STOT SE 3	H335	Based on product data or assessment
Aquatic Acute 1	H400	Based on product data or assessment
Aquatic Chronic 1	H410	Based on product data or assessment

Product code: GF-2688

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.

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