

SAFETY DATA SHEET

STELLAR™ UNPACKED Herbicide



Version 2.0 Revision Date: 04/25/2023 SDS Number: 800080006463 Date of last issue: 09/22/2022
Date of first issue: 09/22/2022

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 Canada and may not meet the regulatory requirements in other countries.

SECTION 1. IDENTIFICATION

Product name : STELLAR™ UNPACKED Herbicide
Other means of identification : No data available

Manufacturer or supplier's details

COMPANY IDENTIFICATION

Manufacturer/importer : CORTEVA AGRISCIENCE CANADA COMPANY
#2450, 215 - 2ND STREET S.W.
CALGARY AB, T2P 1M4
CANADA

Customer Information Number : 800-667-3852

E-mail address : solutions@corteva.com

Emergency telephone number : CANUTEC
1-888-226-8832

Recommended use of the chemical and restrictions on use

Recommended use : End use herbicide product

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Flammable liquids : Category 4
Skin irritation : Category 2
Eye irritation : Category 2A
Skin sensitisation : Sub-category 1B
Specific target organ toxicity - single exposure : Category 3 (Respiratory system, Central nervous system)

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H227 Combustible liquid.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.

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Precautionary statements

: **Prevention:**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P261 Avoid breathing mist or vapours.
 P264 Wash skin thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.
 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 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P337 + P313 If eye irritation persists: Get medical advice/ attention.
 P362 + P364 Take off contaminated clothing and wash it before reuse.
 P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Additional Labelling

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
 6.1928 %

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
fluroxypyr-meptyl (ISO)	fluroxypyr-meptyl (ISO)	81406-37-3	14.53
florasulam (ISO)	florasulam (ISO)	145701-23-1	0.25

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Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified	Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified	64742-95-6	>= 30 - < 40 *
1,2,4-trimethylbenzene	1,2,4-trimethylbenzene	95-63-6	>= 10 - < 20 *
Propylene glycol	Propylene glycol	57-55-6	>= 3 - < 10 *
mesitylene	mesitylene	108-67-8	>= 1 - < 3 *
cumene	cumene	98-82-8	>= 1 - < 3 *
Balance	Balance	Not Assigned	> 5

* Actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

- 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 : Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice.
Suitable emergency eye wash facility should be available in work area.
- If swallowed : Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : None known.
- 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.
- Notes to physician : Skin contact may aggravate preexisting dermatitis.
Maintain adequate ventilation and oxygenation of the patient.
No specific antidote.
Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

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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.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
- Unsuitable extinguishing media : None known.
- Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.
Combustion products may include and are not limited to:
Carbon oxides
- Specific extinguishing methods : Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.
Use water spray to cool unopened containers.
- Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.
Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.
- 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.
- Methods and materials for containment and cleaning up : Clean up remaining materials from spill with suitable absorbent.
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 over-pressurization of the container.

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Keep in suitable, closed containers for disposal.
 Wipe up with absorbent material (e.g. cloth, fleece).
 See Section 13, Disposal Considerations, for additional information.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Do not breathe vapours/dust.
 Handle in accordance with good industrial hygiene and safety practice.
 Smoking, eating and drinking should be prohibited in the application area.
 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.
- Conditions for safe storage : Store in a closed container.
 Keep in properly labelled containers.
 Store in accordance with the particular national regulations.
- Materials to avoid : Strong oxidizing agents
- Packaging material : Unsuitable material: None known.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified	64742-95-6	TWA	100 mg/m ³	Dow IHG
		STEL	300 mg/m ³	Dow IHG
		TWA	200 mg/m ³ (total hydrocarbon vapor)	CA AB OEL
fluroxypyr-meptyl (ISO)	81406-37-3	TWA	200 mg/m ³ (total hydrocarbon vapor)	ACGIH
		TWA	10 mg/m ³	Dow IHG
		TWA	25 ppm 123 mg/m ³	CA AB OEL
		TWAEV	25 ppm	CA QC OEL
		TWA	25 ppm	CA BC OEL
Propylene glycol	57-55-6	TWA	25 ppm	ACGIH
		TWA	10 ppm	ACGIH
		TWA (Vapour and aerosols)	50 ppm 155 mg/m ³	CA ON OEL
mesitylene	108-67-8	TWA (aerosol)	10 mg/m ³	CA ON OEL
		TWA	25 ppm 123 mg/m ³	CA AB OEL
		TWAEV	25 ppm	CA QC OEL
		TWA	25 ppm	CA BC OEL
		TWA	10 ppm	ACGIH

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cumene	98-82-8	TWA	50 ppm 246 mg/m3	CA AB OEL
		TWA	25 ppm	CA BC OEL
		STEL	75 ppm	CA BC OEL
		TWAEV	50 ppm 246 mg/m3	CA QC OEL
		TWA	5 ppm	ACGIH

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

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.
 In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

Hand protection
Remarks : Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Styrene/butadiene rubber. Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). **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.

Eye protection : Use chemical goggles.
 If exposure causes eye discomfort, use a full-face respirator.

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid
Colour : Off-white
Odour : Characteristic

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Odour Threshold : No data available

pH : 5.8
Concentration: 1 %
Method: CIPAC MT 75.2
(1% aqueous suspension)

Melting point/range : Not applicable

Freezing point : -5.41 °C

Boiling point/boiling range : No data available

Flash point : 61 °C
Method: Pensky-Martens Closed Cup ASTM D 93, closed cup

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable to liquids

Flammability (liquids) : 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 : 0.992 g/cm³ (22 °C)
Method: Pyknometer

Solubility(ies)
Water solubility : emulsifies/suspends

Auto-ignition temperature : Method: 92/69/EEC A15
none below 400 degC

Viscosity
Viscosity, dynamic : No data available

Viscosity, kinematic : 95 mm²/s (40 °C)
Approx.

Explosive properties : No

Oxidizing properties : No

Surface tension : 34.5 mN/m, 25 °C, GLP: yes
36.5 mN/m, 40 °C, GLP: yes

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SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	No decomposition if stored and applied as directed. Stable under normal conditions.
Possibility of hazardous reactions	:	Stable under recommended storage conditions. No hazards to be specially mentioned. May form explosive dust-air mixture.
Conditions to avoid	:	None known.
Incompatible materials	:	Strong acids Strong bases
Hazardous decomposition products	:	Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	:	LD50 (Rat, male): > 2,000 mg/kg Method: OECD Test Guideline 401 Symptoms: No deaths occurred at this concentration. Assessment: The substance or mixture has no acute oral toxicity
		LD50 (Rat, female): > 5,000 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	Acute toxicity estimate: > 20 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
Acute dermal toxicity	:	LD50 (Rat): > 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

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florasulam (ISO):

- Acute oral toxicity : LD50 (Rat): > 6,000 mg/kg
LD50 (Mouse): > 5,000 mg/kg
- Acute inhalation toxicity : LC50 (Rat): > 5.0 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity
- 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

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

- Acute oral toxicity : LD50 (Rat): 3,500 mg/kg
- Acute inhalation toxicity : Remarks: Vapor concentrations are attainable which could be hazardous on single exposure.
May cause respiratory irritation and central nervous system depression.
Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness.
LC50 (Rat): > 10.2 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Assessment: The substance or mixture has no acute inhalation toxicity
- Acute dermal toxicity : LD50 (Rabbit): > 3,160 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

1,2,4-trimethylbenzene:

- Acute oral toxicity : LD50 (Rat): > 3,400 mg/kg
- Acute inhalation toxicity : Remarks: Prolonged excessive exposure may cause serious adverse effects, even death.
Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs.
May cause central nervous system effects.
Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.
LC50 (Rat): 18 mg/l
Exposure time: 4 h
Test atmosphere: vapour
- Acute dermal toxicity : LD50 (Rabbit): > 3,160 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

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Propylene glycol:

- Acute oral toxicity : LD50 (Rat): > 20,000 mg/kg
- Acute inhalation toxicity : LC50 (Rabbit): 317.042 mg/l
Exposure time: 2 h
Test atmosphere: dust/mist
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Mist may cause irritation of upper respiratory tract (nose and throat).
- 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

mesitylene:

- Acute oral toxicity : LD50 (Rat, male): 6,000 mg/kg
- Acute inhalation toxicity : LC50 (Rat, male and female): > 10.2 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Symptoms: No deaths occurred following exposure to a saturated atmosphere.
Assessment: The substance or mixture has no acute inhalation toxicity
- Acute dermal toxicity : LD50 (Rat, male and female): > 3,440 mg/kg
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute dermal toxicity

cumene:

- Acute oral toxicity : LD50 (Rat): 2,260 mg/kg
Remarks: Contact with the tongue may produce a burning sensation and excess salivation.
- Acute inhalation toxicity : LC50 (Rat): > 17.6 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute inhalation toxicity
- Acute dermal toxicity : LD50 (Rabbit): > 3,160 mg/kg

Skin corrosion/irritation**Product:**

- Species : Rabbit
Method : OECD Test Guideline 404
Result : Skin irritation

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Components:**fluroxypyr-meptyl (ISO):**

Species : Rabbit
Result : No skin irritation

1,2,4-trimethylbenzene:

Result : Skin irritation

Propylene glycol:

Species : Rabbit
Result : No skin irritation

mesitylene:

Result : Skin irritation

cumene:

Result : No skin irritation

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

Species : Rabbit
Result : Eye irritation
Method : OECD Test Guideline 405

Components:**1,2,4-trimethylbenzene:**

Result : Eye irritation

Propylene glycol:

Species : Rabbit
Result : No eye irritation

mesitylene:

Result : Eye irritation

cumene:

Result : No eye irritation

Respiratory or skin sensitisation**Product:**

Test Type : Local lymph node assay (LLNA)
Species : Mouse
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.

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florasulam (ISO):

Remarks : Did not cause allergic skin reactions when tested in guinea pigs.

Remarks : For respiratory sensitization:
No relevant data found.

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

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

Remarks : For respiratory sensitization:
No relevant data found.

1,2,4-trimethylbenzene:

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

Remarks : For respiratory sensitization:
No relevant data found.

Propylene glycol:

Species : human
Assessment : Does not cause skin sensitisation.

mesitylene:

Assessment : Does not cause skin sensitisation.
Remarks : Did not cause allergic skin reactions when tested in guinea pigs.

Remarks : For respiratory sensitization:
No relevant data found.

cumene:

Remarks : For skin sensitization:
Did not cause allergic skin reactions when tested in guinea pigs.

Remarks : For respiratory sensitization:
No relevant data found.

Germ cell mutagenicity
Components:
fluroxypyr-meptyl (ISO):

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

florasulam (ISO):

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

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Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

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

1,2,4-trimethylbenzene:

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

Propylene glycol:

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

mesitylene:

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

cumene:

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

florasulam (ISO):

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

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Carcinogenicity - Assessment : Xylene was not found to be carcinogenic in a National Toxicology Program bioassay in rats and mice.

Propylene glycol:

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

cumene:

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

Has caused cancer in laboratory animals., However, the relevance of this to humans is unknown.

Reproductive toxicity**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.

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florasulam (ISO):

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction. Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Reproductive toxicity - Assessment : In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. Has caused birth defects in laboratory animals only at doses producing severe toxicity in the mother., Exaggerated doses of xylene given orally to pregnant mice resulted in an increase in cleft palate, a common developmental abnormality in mice. In animal inhalation studies, xylene caused toxicity to the fetus but did not cause birth defects.

1,2,4-trimethylbenzene:

Reproductive toxicity - Assessment : For similar material(s);, 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.

Propylene glycol:

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction., In animal studies, did not interfere with fertility. Did not cause birth defects or any other fetal effects in laboratory animals.

mesitylene:

Reproductive toxicity - Assessment : In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. Has been toxic to the fetus in laboratory animals at doses toxic to the mother., Did not cause birth defects in laboratory animals.

cumene:

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction. Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

STOT - single exposure

Product:

Assessment : May cause respiratory irritation., May cause drowsiness or dizziness.

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Assessment : May cause respiratory irritation.

Assessment : May cause drowsiness or dizziness.

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1,2,4-trimethylbenzene:

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

Propylene glycol:

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

mesitylene:

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

cumene:

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.

florasulam (ISO):

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

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Remarks : In animals, effects have been reported on the following organs:
 Blood.
 Kidney.
 Liver.
 Xylene is reported to have caused hearing loss in laboratory animals upon exposure to high concentrations; such effects have not been reported in humans.
 For the minor component(s):
 Cumene.
 Eye.

1,2,4-trimethylbenzene:

Remarks : In animals, effects have been reported on the following organs:
 Respiratory tract.

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Propylene glycol:

Remarks : In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

mesitylene:

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

cumene:

Remarks : Cataracts were observed in rats exposed to cumene vapors.

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.

florasulam (ISO):

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

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

May be fatal if swallowed and enters airways.

1,2,4-trimethylbenzene:

May be harmful if swallowed and enters airways.

Propylene glycol:

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

mesitylene:

May be fatal if swallowed and enters airways.

cumene:

May be fatal if swallowed and enters airways.

SECTION 12. ECOLOGICAL INFORMATION
Ecotoxicity
Product:

Toxicity to fish : Remarks: Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).

LC50 (Oncorhynchus mykiss (rainbow trout)): 13.5 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 31.7 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 9.03 mg/l
End point: Biomass
Exposure time: 72 h

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ErC50 (*Lemna gibba*): 0.932 mg/l
End point: Biomass
Exposure time: 7 d

Toxicity to soil dwelling organisms : LC50 (*Eisenia fetida* (earthworms)): 608 mg/kg
Exposure time: 14 d

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

oral LD50 (*Colinus virginianus* (Bobwhite quail)): > 2000 mg/kg bodyweight.
End point: mortality

oral LD50 (*Apis mellifera* (bees)): 359 micrograms/bee

contact LD50 (*Apis mellifera* (bees)): 959 micrograms/bee

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 highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 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

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NOEC (Myriophyllum spicatum): 0.031 mg/l
Exposure time: 14 d

Toxicity to fish (Chronic toxicity) : NOEC (Rainbow trout (Oncorhynchus mykiss)): 0.32 mg/l

Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg

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).

oral LD50 (Colinus virginianus (Bobwhite quail)): > 2000 mg/kg bodyweight.
Exposure time: 5 d

dietary LC50 (Colinus virginianus (Bobwhite quail)): > 5000 mg/kg diet.

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

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

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

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

florasulam (ISO):

Toxicity to fish : Remarks: Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in the most sensitive species).

LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203 or Equivalent

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 292 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202 or Equivalent

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 0.00894 mg/l
End point: Growth rate inhibition
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201 or Equivalent

EC50 (Myriophyllum spicatum): > 0.305 mg/l
End point: Growth inhibition
Exposure time: 14 d

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- M-Factor (Acute aquatic toxicity) : 100
- Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 119 mg/l
End point: mortality
Exposure time: 28 d
Test Type: flow-through test
- NOEC (Pimephales promelas (fathead minnow)): > 2.9 mg/l
End point: Other
Exposure time: 33 d
Test Type: flow-through test
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 38.90 mg/l
End point: growth
Exposure time: 21 d
Test Type: semi-static test
- MATC (Maximum Acceptable Toxicant Level) (Daphnia magna (Water flea)): 50.2 mg/l
End point: growth
Exposure time: 21 d
Test Type: semi-static test
- M-Factor (Chronic aquatic toxicity) : 100
- Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): > 1,320 mg/kg
Exposure time: 14 d
- Toxicity to terrestrial organisms : Remarks: Material is slightly toxic to birds on an acute basis (LD50 between 501 and 2000 mg/kg)., Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm).
- oral LD50 (Coturnix japonica (Japanese quail)): 1047 mg/kg bodyweight.
- dietary LC50 (Anas platyrhynchos (Mallard duck)): > 5,000 ppm
Exposure time: 8 d
- oral LD50 (Apis mellifera (bees)): > 100 micrograms/bee
Exposure time: 48 h
- contact LD50 (Apis mellifera (bees)): > 100 micrograms/bee
Exposure time: 48 h
- Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:**
- 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).
- LC50 (Oncorhynchus mykiss (rainbow trout)): 9.22 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203 or Equivalent

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Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 2.9 mg/l
 Exposure time: 72 h
 Remarks: For similar material(s):

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 (Colinus virginianus (Bobwhite quail)): > 6500 mg/kg diet.
 Exposure time: 8 d
 oral LD50 (Colinus virginianus (Bobwhite quail)): > 2150 mg/kg bodyweight.
 Exposure time: 21 d

Ecotoxicology Assessment

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

1,2,4-trimethylbenzene:

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).
 LC50 (Pimephales promelas (fathead minnow)): 7.7 mg/l
 Exposure time: 96 h
 Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 3.6 mg/l
 Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 2.356 mg/l
 Exposure time: 96 h

Ecotoxicology Assessment

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

Propylene glycol:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l
 Exposure time: 96 h
 Test Type: static test
 Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : LC50 (Ceriodaphnia dubia (water flea)): 18,340 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)): 19,000 mg/l
 End point: Growth rate inhibition
 Exposure time: 96 h
 Method: OECD Test Guideline 201

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Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Ceriodaphnia dubia (water flea)): 13,020 mg/l
 End point: number of offspring
 Exposure time: 7 d
 Test Type: semi-static test

Toxicity to microorganisms : NOEC (Pseudomonas putida): > 20,000 mg/l
 Exposure time: 18 h

mesitylene:

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).

LC50 (Carassius auratus (goldfish)): 12.5 mg/l
 Exposure time: 96 h
 Test Type: flow-through test
 Method: Method Not Specified.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 6 mg/l
 Exposure time: 48 h
 Test Type: Static
 Method: OECD Test Guideline 202 or Equivalent

Toxicity to algae/aquatic plants : EbC50 (Desmodesmus subspicatus (green algae)): 25 mg/l
 End point: Biomass
 Exposure time: 48 h
 Method: OECD Test Guideline 201 or Equivalent

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.4 mg/l
 End point: number of offspring
 Exposure time: 21 d
 Test Type: semi-static test
 Method: OECD Test Guideline 211 or Equivalent

Ecotoxicology Assessment

Acute aquatic toxicity : Toxic to aquatic life.

cumene:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 2.7 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)): 4.0 mg/l
 Exposure time: 48 h
 Test Type: static test
 Method: OECD Test Guideline 202 or Equivalent

Toxicity to algae/aquatic plants : EbC50 (Pseudokirchneriella subcapitata (green algae)): 2.6 mg/l
 End point: Biomass
 Exposure time: 72 h
 Test Type: static test
 Method: OECD Test Guideline 201 or Equivalent

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Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.35 mg/l
 End point: number of offspring
 Exposure time: 21 d
 Test Type: semi-static test
 Method: OECD Test Guideline 211 or Equivalent

Toxicity to terrestrial organisms : oral LD50 (redwing blackbird (Agelaius phoeniceus)): > 98 mg/kg

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

florasulam (ISO):

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

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

Biochemical Oxygen Demand (BOD) : 0.012 kg/kg
 Incubation time: 5 d

ThOD : 0.85 kg/kg

Stability in water : Degradation half life: > 30 d

Photodegradation : Rate constant: 7.04E-11 cm³/s
 Method: Estimated.

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Biodegradability : Result: Not biodegradable
 Remarks: For the major component(s):
 Biodegradation under aerobic static laboratory conditions is high (BOD₂₀ or BOD₂₈/ThOD > 40%).
 For some component(s):
 Biodegradation under aerobic static laboratory conditions is low (BOD₂₀ or BOD₂₈/ThOD between 2.5 and 10%).

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1,2,4-trimethylbenzene:

Biodegradability : Result: Readily biodegradable.
Remarks: Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

Biodegradation: 100 %
Exposure time: 1 d

ThOD : 3.19 kg/kg

Photodegradation : Test Type: Half-life (indirect photolysis)
Sensitiser: OH radicals
Rate constant: 1.670E-11 cm³/s
Method: Estimated.

Propylene glycol:

Biodegradability : aerobic
Result: Readily biodegradable.
Biodegradation: 81 %
Exposure time: 28 d
Method: OECD Test Guideline 301F or Equivalent
Remarks: 10-day Window: Pass

Biodegradation: 96 %
Exposure time: 64 d
Method: OECD Test Guideline 306 or Equivalent
Remarks: 10-day Window: Not applicable

Biochemical Oxygen Demand (BOD) : 69.000 %
Incubation time: 5 d

70.000 %
Incubation time: 10 d

86.000 %
Incubation time: 20 d

Chemical Oxygen Demand (COD) : 1.53 kg/kg

ThOD : 1.68 kg/kg

Photodegradation : Rate constant: 1.28E-11 cm³/s
Method: Estimated.

mesitylene:

Biodegradability : Result: Not biodegradable
Remarks: Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301C or Equivalent
Remarks: 10-day Window: Not applicable

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Biodegradation: 50 %
 Exposure time: 4.4 d
 Method: Calculated.
 Remarks: 10-day Window: Not applicable

Biochemical Oxygen Demand (BOD) : 3.1 %
 Incubation time: 5 d

ThOD : 3.19 kg/kg

Photodegradation : Test Type: Half-life (indirect photolysis)
 Sensitiser: OH radicals
 Concentration: 1,500,000 1/cm³
 Rate constant: 3.51E-11 cm³/s
 Method: Estimated.

cumene:

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

Biodegradation: 70 %
 Exposure time: 20 d
 Method: OECD Test Guideline 301D or Equivalent
 Remarks: 10-day Window: Pass

Biochemical Oxygen Demand (BOD) : 40%
 Incubation time: 5 d

62%
 Incubation time: 10 d

70%
 Incubation time: 20 d

ThOD : 3.20 kg/kg
 Method: Estimated.

Photodegradation : Test Type: Half-life (indirect photolysis)
 Sensitiser: OH radicals
 Concentration: 1,500,000 1/cm³
 Rate constant: 6.90E-12 cm³/s
 Method: Estimated.

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).

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florasulam (ISO):

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 0.8
Exposure time: 28 d
Temperature: 13 °C
Method: Measured

Partition coefficient: n-octanol/water :
log Pow: -1.22
pH: 7.0
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Partition coefficient: n-octanol/water : Remarks: For the major component(s):
Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
For the minor component(s):
Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

1,2,4-trimethylbenzene:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 33 - 275
Exposure time: 56 d
Concentration: 0.2 mg/l
Method: Measured

Partition coefficient: n-octanol/water : log Pow: 3.63
Method: Measured
Remarks: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Propylene glycol:

Bioaccumulation : Bioconcentration factor (BCF): 0.09
Method: Estimated.

Partition coefficient: n-octanol/water : log Pow: -1.07
Method: Measured
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

mesitylene:

Bioaccumulation : Species: Pimephales promelas (fathead minnow)
Bioconcentration factor (BCF): 161
Method: Measured

Partition coefficient: n-octanol/water : log Pow: 3.42
Method: Measured
Remarks: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

cumene:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 35.5
Method: Measured

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Partition coefficient: n-octanol/water : log Pow: 3.4 - 3.7
Method: Measured
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Balance:

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

Mobility in soil**Components:****fluroxypyr-meptyl (ISO):**

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

florasulam (ISO):

Distribution among environmental compartments : Koc: 4 - 54
Remarks: Potential for mobility in soil is very high (Koc between 0 and 50).

Stability in soil : Dissipation time: 0.7 - 4.5 d

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Distribution among environmental compartments : Remarks: For the major component(s):
Potential for mobility in soil is low (Koc between 500 and 2000).

1,2,4-trimethylbenzene:

Distribution among environmental compartments : Koc: 720
Method: Estimated.
Remarks: Potential for mobility in soil is low (Koc between 500 and 2000).

Propylene glycol:

Distribution among environmental compartments : Koc: < 1
Method: Estimated.
Remarks: 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.
Potential for mobility in soil is very high (Koc between 0 and 50).

mesitylene:

Distribution among environmental compartments : Koc: 741.65
Method: Estimated.
Remarks: Potential for mobility in soil is low (Koc between 500 and 2000).

cumene:

Distribution among environmental compartments : Koc: 800 - 2800
Method: Estimated.
Remarks: Potential for mobility in soil is low (Koc between 500 and 2000).

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Balance:

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

Other adverse effects**Components:****fluroxypyr-meptyl (ISO):**

Results of PBT and vPvB 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).

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

florasulam (ISO):

Results of PBT and vPvB 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).

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

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Results of PBT and vPvB 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).

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

1,2,4-trimethylbenzene:

Results of PBT and vPvB 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).

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

Propylene glycol:

Results of PBT and vPvB 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).

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

mesitylene:

Results of PBT and vPvB 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).

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

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cumene:

Results of PBT and vPvB assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

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

Balance:

Results of PBT and vPvB assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

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

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : 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

International Regulations

UNRTDG

UN number : UN 3082
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 (Fluroxypyr)
 Class : 9
 Packing group : III
 Labels : 9

IATA-DGR

UN/ID No. : UN 3082
 Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
 (Fluroxypyr)
 Class : 9
 Packing group : III
 Labels : Miscellaneous
 Packing instruction (cargo aircraft) : 964
 Packing instruction (passenger aircraft) : 964

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IMDG-Code

UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Fluroxypyr)
Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes(Fluroxypyr)
Remarks : Stowage category A

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

Not applicable for product as supplied.

National Regulations**TDG**

UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Fluroxypyr)
Class : 9
Packing group : III
Labels : 9
ERG Code : 171
Marine pollutant : yes(Fluroxypyr)

Further information

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.

For Canadian Ground transportation TDG Exemption: 1.45.1 Marine Pollutants (Part 3, Documentation, and Part 4, Dangerous Goods Safety Marks, do not apply if they are in transport solely on land by road vehicle or railway vehicle).

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.

SECTION 15. REGULATORY INFORMATION**The components of this product are reported in the following inventories:**

DSL : This product contains components that are not listed on the Canadian DSL nor NDSL.

Pest Control Products Act (PCPA) Registration Number : 34516

Read the PCPA label, authorized under the Pest Control Products Act, prior to using or handling this pest control product.

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This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act (PCPA). There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. Following is the hazard information required on the pest control products label:

PCPA Label Hazard Communications:

Read the label and booklet before using. Keep out of reach of children.

WARNING SKIN AND EYE IRRITANT
POTENTIAL SKIN SENSITIZER
HARMFUL IF SWALLOWED

This product is toxic to:
Non-target terrestrial plants
Aquatic organisms

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.

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
CA AB OEL	:	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
CA BC OEL	:	Canada. British Columbia OEL
CA ON OEL	:	Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.
CA QC OEL	:	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
Dow IHG	:	Dow Industrial Hygiene Guideline
ACGIH / TWA	:	8-hour, time-weighted average
CA AB OEL / TWA	:	8-hour Occupational exposure limit
CA BC OEL / TWA	:	8-hour time weighted average
CA BC OEL / STEL	:	short-term exposure limit
CA ON OEL / TWA	:	Time-Weighted Average Limit (TWA)
CA QC OEL / TWAEV	:	Time-weighted average exposure value
Dow IHG / TWA	:	Time Weighted Average (TWA):
Dow IHG / STEL	:	Short term exposure limit
Dow IHG / TWA	:	Time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); 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; ERG - Emergency Response Guide; 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 Or-

SAFETY DATA SHEET



STELLAR™ UNPACKED Herbicide

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ganisation 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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; 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; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

Revision Date : 04/25/2023
Date format : mm/dd/yyyy

Product code: GF-184

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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