

SAFETY DATA SHEET



Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

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 the United States and may not meet the regulatory requirements in other countries.

SECTION 1. IDENTIFICATION

Product name : Surmount®

Manufacturer or supplier's details

COMPANY IDENTIFICATION

Manufacturer/importer : CORTEVA AGRISCIENCE LLC
9330 ZIONSVILLE RD
INDIANAPOLIS, IN, 46268-1053
UNITED STATES

Customer Information Number : 800-992-5994

E-mail address : customerinformation@corteva.com

Emergency telephone : INFOTRAC (CONTRACT 84224).
800-992-5994 or 317-337-6009

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 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage : Category 1

Carcinogenicity : Category 2

GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H318 Causes serious eye damage.
H351 Suspected of causing cancer.

™ ® Trademarks of Corteva Agriscience and its affiliated companies.

SAFETY DATA SHEET



Surmount®

Version 1.1 Revision Date: 04/18/2022 SDS Number: 800080003073 Date of last issue: 04/18/2022
Date of first issue: 04/18/2022

Precautionary Statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

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

Storage:
P405 Store locked up.

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

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Picloram triisopropanolamine salt	6753-47-5	13.24
fluroxypyr-meptyl (ISO)	81406-37-3	10.64
Alcohols, C11-14-iso-, C13-rich, ethoxylated	78330-21-9	>= 20 - < 25
Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified	64742-94-5	>= 10 - < 20
Dipropylene glycol monomethyl ether	34590-94-8	>= 10 - < 20
2-Methylnaphthalene	91-57-6	>= 3 - < 10
1,1',1'-nitrilotripropan-2-ol	122-20-3	>= 1 - < 3
naphthalene	91-20-3	>= 1 - < 3
1-Methylnaphthalene	90-12-0	>= 1 - < 3

Actual concentration 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.

SAFETY DATA SHEET



Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

- | | |
|---|---|
| In case of skin contact | : Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. |
| 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 | : 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 | : Maintain adequate ventilation and oxygenation of the patient. May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help. Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. If hemolysis is suspected, monitor hemoglobin, hematocrit, plasma free hemoglobin, and urinalysis. Whole blood or packed RBC transfusion may be required in severe cases. Alkalinization of urine with bicarbonate may prevent renal damage. Administer 100% oxygen to relieve headache and a general sense of weakness. Determine methemoglobin concentration of blood every 3 to 6 hours for first 24 hours. It should return to normal within 24 hours. The treatment of toxic methemoglobinemia may include the intravenous administration of methylene blue. If methemoglobin >10-20% consider methylene blue 1-2 mg/kg body weight as 1% solution intravenously over 5 minutes followed by 15-30 cc flush (Price D, Methemoglobinemia, Goldfrank Toxicologic Emergencies, 5th ed., 1994). Also provide 100% oxygen. 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. Excessive exposure may aggravate preexisting liver and kidney disease. Repeated excessive exposure may aggravate preexisting lung disease. |

SECTION 5. FIRE-FIGHTING MEASURES

SAFETY DATA SHEET



Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

-
- | | | |
|--|---|---|
| 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. Do not allow run-off from fire fighting to enter drains or water courses. |
| 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:
Nitrogen oxides (NOx)
Carbon oxides |
| 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. |
| Further information | : | 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. |
| Special protective equipment for fire-fighters | : | In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment. |

SECTION 6. ACCIDENTAL RELEASE MEASURES

- | | | |
|---|---|--|
| Personal precautions, protective equipment and emergency procedures | : | Use personal protective equipment.
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.
Prevent from entering into soil, ditches, sewers, underwater.
See Section 12, Ecological Information. |
| 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 contain- |

SAFETY DATA SHEET



Surmount®

Version 1.1 Revision Date: 04/18/2022 SDS Number: 800080003073 Date of last issue: 04/18/2022
Date of first issue: 04/18/2022

ment 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.
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.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : To avoid spills during handling keep bottle on a metal tray.
Do not breathe vapors/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.
Avoid inhalation of vapor or mist.
Do not swallow.
Do not get in eyes.
Avoid contact with skin and eyes.
Avoid prolonged or repeated contact with skin.
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.
- Conditions for safe storage : Store in a closed container.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep in properly labeled 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

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified	64742-94-5	TWA	100 mg/m3	Corteva OEL
		STEL	300 mg/m3	Corteva OEL

SAFETY DATA SHEET



Surmount®

Version 1.1 Revision Date: 04/18/2022 SDS Number: 800080003073 Date of last issue: 04/18/2022
Date of first issue: 04/18/2022

		TWA	200 mg/m3 (total hydrocarbon vapor)	ACGIH
Dipropylene glycol monome- thyl ether	34590-94-8	TWA	10 ppm	Dow IHG
		STEL	30 ppm	Dow IHG
		TWA	100 ppm 600 mg/m3	OSHA Z-1
		STEL	150 ppm 900 mg/m3	OSHA P0
		TWA	100 ppm 600 mg/m3	OSHA P0
fluroxypyr-meptyl (ISO)	81406-37-3	TWA	10 mg/m3	Dow IHG
2-Methylnaphthalene	91-57-6	TWA	0.5 ppm	ACGIH
1,1',1'-nitritripropan-2-ol	122-20-3	TWA	10 mg/m3	Dow IHG
naphthalene	91-20-3	TWA	10 ppm	Dow IHG
		STEL	15 ppm	Dow IHG
		TWA	10 ppm	ACGIH
		TWA	10 ppm 50 mg/m3	OSHA Z-1
		TWA	10 ppm 50 mg/m3	OSHA P0
		STEL	15 ppm 75 mg/m3	OSHA P0
1-Methylnaphthalene	90-12-0	TWA	0.5 ppm	ACGIH

Engineering measures : Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations.
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, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.

Hand protection

Remarks : Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. 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. 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

SAFETY DATA SHEET



Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

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.

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.
Color	: Tan to brown
Odor	: Amine.
Odor Threshold	: No data available
pH	: 7.4 (77 °F / 25 °C) Method: pH Electrode
Melting point/range	: Not applicable
Freezing point	: No data available
Boiling point/boiling range	: No data available
Flash point	: > 212 °F / > 100 °C Method: 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
Vapor pressure	: No data available
Relative vapor density	: No data available
Density	: 1.083 g/cm ³ (68 °F / 20 °C) Method: Pyknometer
Solubility(ies) Water solubility	: emulsifiable
Autoignition temperature	: No data available

SAFETY DATA SHEET



Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

Viscosity	
Viscosity, dynamic	: 77.2 mPa.s (68 °F / 20 °C)
Viscosity, kinematic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

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. None known.
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: Nitrogen oxides (NOx) Carbon oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	: LD50 (Rat, male and female): > 5,000 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	: LC50 (Rat): > 5.56 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	: LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 402

Components:

Picloram triisopropanolamine salt:

Acute oral toxicity	: LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity	: Remarks: Vapors are unlikely due to physical properties.

Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

No adverse effects are anticipated from single exposure to dust.
Excessive exposure may cause irritation to upper respiratory tract (nose and throat).

LC50 (Rat): > 0.07 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Symptoms: The LC50 value is greater than the Maximum Attainable Concentration., No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,000 mg/kg
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute dermal toxicity

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

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

Acute oral toxicity : LD50 (Rat): 500 - 2,000 mg/kg

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

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

Acute inhalation toxicity : Remarks: Prolonged excessive exposure to mist may cause adverse effects.
Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs.
Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

LC50 (Rat): > 4.8 mg/l
Exposure time: 4 h

SAFETY DATA SHEET



Surmount®

Version 1.1	Revision Date: 04/18/2022	SDS Number: 800080003073	Date of last issue: 04/18/2022 Date of first issue: 04/18/2022
----------------	------------------------------	-----------------------------	---

Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

LC50 (Rat): > 0.2 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Symptoms: No deaths occurred following exposure to a saturated atmosphere.
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: For similar material(s):

Dipropylene glycol monomethyl ether:

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

Acute inhalation toxicity : LC50 (Rat): 3.35 mg/l
Exposure time: 7 h
Test atmosphere: vapor
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): 9,510 mg/kg

2-Methylnaphthalene:

Acute oral toxicity : Remarks: Low toxicity if swallowed.
Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

LD50 (Rat): 1,630 mg/kg

1,1',1'-nitriлотripropan-2-ol:

Acute oral toxicity : LD50 (Rat): 4,000 mg/kg

Acute inhalation toxicity : (Rat): Exposure time: 8 h
Symptoms: No deaths occurred following exposure to a saturated atmosphere.
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

naphthalene:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg

Lethal Dose (Humans): 5 - 15 grams

Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

Method: Estimated.
Remarks: Excessive exposure may cause hemolysis, thereby impairing the blood's ability to transport oxygen.
Ingestion of naphthalene by humans has caused hemolytic anemia.
Toxicity from swallowing may be greater in humans than in animals.
In humans, symptoms may include:
Confusion.
Lethargy.
Muscle spasms or twitches.
Convulsions.
Coma.

Acute inhalation toxicity : Remarks: Excessive exposure may cause irritation to upper respiratory tract (nose and throat).
Excessive exposure may cause lung injury.
Signs and symptoms of excessive exposure may include:
Headache.
Confusion.
Sweating.
Nausea and/or vomiting.

LC50 (Rat): > 0.41 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Symptoms: The LC50 value is greater than the Maximum Attainable Concentration.
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat): > 2,500 mg/kg
Remarks: Human case reports suggest Naphthalene may be absorbed through the skin in toxic amounts, especially in children.

LD50 (Rabbit): > 2,500 mg/kg

1-Methylnaphthalene:

Acute oral toxicity : LD50 (Rat): 1,840 mg/kg

Acute dermal toxicity : LDLo (Rabbit): 7,500 mg/kg

Skin corrosion/irritation**Product:**

Species	: Rabbit
Method	: OECD Test Guideline 404
Result	: No skin irritation

Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

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

Species	:	Rabbit
Result	:	No skin irritation

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

Species	:	Rabbit
Result	:	No skin irritation

Dipropylene glycol monomethyl ether:

Species	:	Rabbit
Result	:	No skin irritation

1,1',1'-nitrilotripropan-2-ol:

Result	:	No skin irritation
--------	---	--------------------

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

Species	:	Rabbit
Result	:	Corrosive
Method	:	OECD Test Guideline 405

Components:**Alcohols, C11-14-iso-, C13-rich, ethoxylated:**

Species	:	Rabbit
Result	:	Corrosive

Dipropylene glycol monomethyl ether:

Species	:	Rabbit
Result	:	No eye irritation

1,1',1'-nitrilotripropan-2-ol:

Result	:	Eye irritation
--------	---	----------------

Respiratory or skin sensitization**Product:**

Species	:	Guinea pig
Assessment	:	Does not cause skin sensitization.
Method	:	OECD Test Guideline 406

Components:**Picloram triisopropanolamine salt:**

Assessment	:	The product is a skin sensitizer, sub-category 1B.
Remarks	:	Has caused allergic skin reactions when tested in guinea pigs.

SAFETY DATA SHEET



Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

Remarks : For respiratory sensitization:
No relevant data found.

fluroxypyr-meptyl (ISO):

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

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

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

Remarks : For respiratory sensitization:
No relevant data found.

Dipropylene glycol monomethyl ether:

Species : human
Result : Does not cause skin sensitization.

1,1',1'-nitritotripropan-2-ol:

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

Remarks : For respiratory sensitization:
No relevant data found.

naphthalene:

Assessment : Does not cause skin sensitization.
Remarks : Skin contact may cause an allergic skin reaction in a small proportion of individuals.
Did not cause allergic skin reactions when tested in guinea pigs.

Remarks : For respiratory sensitization:
No relevant data found.

Germ cell mutagenicity

Components:

Picloram triisopropanolamine salt:

Germ cell mutagenicity - Assessment : In vitro genetic toxicity studies were negative., The following information is based on limited data and/or screening studies., Animal genetic toxicity studies were negative.

fluroxypyr-meptyl (ISO):

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

Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

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

Dipropylene glycol monomethyl ether:

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

2-Methylnaphthalene:

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

1,1',1'-nitritotripropan-2-ol:

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

naphthalene:

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

Carcinogenicity**Components:****Picloram triisopropanolamine salt:**

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

fluroxypyr-meptyl (ISO):

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

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

Contains naphthalene which has caused cancer in some laboratory animals., In humans, there is limited evidence of cancer in workers involved in naphthalene production. Limited oral studies in rats were negative.

Dipropylene glycol monomethyl ether:

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

2-Methylnaphthalene:

Carcinogenicity - Assessment : Available data are inadequate to evaluate carcinogenicity.

SAFETY DATA SHEET



Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

1,1',1'-nitritotripropan-2-ol:

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

naphthalene:

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies
Has caused cancer in some laboratory animals., In humans, there is limited evidence of cancer in workers involved in naphthalene production. Limited oral studies in rats were negative.

IARC Group 2B: Possibly carcinogenic to humans
naphthalene 91-20-3

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP Reasonably anticipated to be a human carcinogen
naphthalene 91-20-3

Reproductive toxicity

Components:

Picloram triisopropanolamine salt:

Reproductive toxicity - Assessment : For similar active ingredient(s)., Picloram acid., 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.

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.

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

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

Dipropylene glycol monomethyl ether:

Reproductive toxicity - Assessment : For similar material(s)., In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.
Did not cause birth defects or any other fetal effects in laboratory animals.

1,1',1'-nitritotripropan-2-ol:

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

Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

naphthalene:

Reproductive toxicity - Assessment : Available data are inadequate to determine effects on reproduction.
Did not cause birth defects in laboratory animals.

STOT-single exposure**Product:**

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

Components:**Alcohols, C11-14-iso-, C13-rich, ethoxylated:**

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

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

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

Dipropylene glycol monomethyl ether:

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

2-Methylnaphthalene:

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

1,1',1'-nitrilotripropan-2-ol:

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

naphthalene:

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

1-Methylnaphthalene:

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

STOT-repeated exposure**Product:**

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

Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

Repeated dose toxicity**Components:****Picloram triisopropanolamine salt:**

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

fluroxypyr-meptyl (ISO):

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

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Remarks : In animals, effects have been reported on the following organs:
Lung.
Gastrointestinal tract.
Thyroid.
Urinary tract.
Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use.
Cataracts and other eye effects have been reported in humans repeatedly exposed to naphthalene vapor or dust.

Dipropylene glycol monomethyl ether:

Remarks : Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

2-Methylnaphthalene:

Remarks : In animals, effects have been reported on the following organs:
Lung.
However, the effects are species specific and are not relevant to humans.

1,1',1'-nitriлотripropan-2-ol:

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

naphthalene:

Remarks : Observations in animals include:
Respiratory effects.
Excessive exposure may cause hemolysis, thereby impairing the blood's ability to transport oxygen.
Cataracts and other eye effects have been reported in humans repeatedly exposed to naphthalene vapor or dust.
Ingestion of naphthalene by humans has caused hemolytic anemia.

SAFETY DATA SHEET



Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

1-Methylnaphthalene:

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

Aspiration toxicity

Product:

No aspiration toxicity classification

Components:

Picloram triisopropanolamine salt:

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

fluroxypyr-meptyl (ISO):

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

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

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

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

May be fatal if swallowed and enters airways.

Dipropylene glycol monomethyl ether:

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

2-Methylnaphthalene:

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

1,1',1'-nitrilotripropan-2-ol:

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

naphthalene:

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

1-Methylnaphthalene:

May be harmful if swallowed and enters airways.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish :
Remarks: Based on information for component(s):
Material is moderately toxic to aquatic organisms on an acute

SAFETY DATA SHEET



Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

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

Remarks: Toxicity to aquatic species occurs at concentrations above material's water solubility.

Toxicity to daphnia and other aquatic invertebrates :

Remarks: Toxicity to aquatic species occurs at concentrations above material's water solubility.

Toxicity to terrestrial organisms :

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

oral LD50 (*Apis mellifera* (bees)): > 200 micrograms/bee
Exposure time: 48 h
GLP: yes

oral LD50 (*Coturnix japonica* (Japanese quail)): > 2250 mg/kg bodyweight.

Ecotoxicology Assessment

Acute aquatic toxicity : Toxic to aquatic life.

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

Components:

Picloram triisopropanolamine salt:

Toxicity to fish : Remarks: Based on information for a similar material:
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)): 51 mg/l
Exposure time: 96 h
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : LC50 (*Daphnia magna* (Water flea)): 125 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae/aquatic plants : ErC50 (*Myriophyllum spicatum*): 0.558 mg/l
Exposure time: 14 d
Remarks: For similar material(s):

NOEC (*Myriophyllum spicatum*): 0.0095 mg/l
Exposure time: 14 d
Remarks: For similar material(s):

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : NOEC (*Pimephales promelas* (fathead minnow)): 7.19 mg/l
Exposure time: 28 d

SAFETY DATA SHEET



Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

M-Factor (Chronic aquatic toxicity) : 10

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

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

Very toxic to aquatic life with long lasting effects.

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

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

M-Factor (Acute aquatic toxicity) : 10

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

M-Factor (Chronic aquatic toxicity) : 1

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).

Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

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.

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

Toxicity to fish : LC50 (*Leuciscus idus* (Golden orfe)): > 1 - 10 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia*): > 1 - 10 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (*Algae*): > 1 - 10 mg/l
Exposure time: 72 h

Solvent naphtha (petroleum), heavy arom.; Kerosine — 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)): 3.0 mg/l
Exposure time: 96 h
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 1.1 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae/aquatic plants : EC50 (*Pseudokirchneriella subcapitata* (green algae)): 7.9 mg/l
Exposure time: 72 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (*Daphnia pulex* (Water flea)): 5.2 mg/l
End point: mortality
Exposure time: 21 d
Method: Method Not Specified.

Toxicity to terrestrial organisms : Remarks: Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm)., Material is practically non-toxic to

Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

birds on an acute basis (LD50 > 2000 mg/kg).

dietary LC50 (*Colinus virginianus* (Bobwhite quail)): > 6,500 ppm
Exposure time: 5 d

oral LD50 (*Colinus virginianus* (Bobwhite quail)): > 2,250 mg/kg

Ecotoxicology Assessment

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

Dipropylene glycol monomethyl ether:

Toxicity to fish : LC50 (*Poecilia reticulata* (guppy)): > 1,000 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203 or Equivalent

Toxicity to daphnia and other aquatic invertebrates : LC50 (*Daphnia magna* (Water flea)): 1,919 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202 or Equivalent

LC50 (*Crangon crangon* (shrimp)): > 1,000 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 202 or Equivalent

LC50 (copepod *Acartia tonsa*): 2,070 mg/l
Exposure time: 48 h
Test Type: static test
Method: ISO TC147/SC5/WG2

Toxicity to algae/aquatic plants : ErC50 (*Pseudokirchneriella subcapitata* (green algae)): > 969 mg/l
End point: Biomass
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 201 or Equivalent

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (*Daphnia magna* (Water flea)): > 0.5 mg/l
Exposure time: 22 d
Test Type: flow-through test
Method: OECD Test Guideline 211 or Equivalent

LOEC (*Daphnia magna* (Water flea)): > 0.5 mg/l
Exposure time: 22 d
Test Type: flow-through test
Method: OECD Test Guideline 211 or Equivalent

MATC (Maximum Acceptable Toxicant Level) (*Daphnia magna* (Water flea)): > 0.5 mg/l
Exposure time: 22 d
Test Type: flow-through test

Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

Method: OECD Test Guideline 211 or Equivalent

Toxicity to microorganisms : EC10 (*Pseudomonas putida*): 4,168 mg/l
Exposure time: 18 h

Ecotoxicology Assessment

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

2-Methylnaphthalene:

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)): 1.5 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 1.5 mg/l
Exposure time: 48 h

1,1',1'-nitritotripropan-2-ol:

Toxicity to fish : Remarks: Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

LC50 (*Leuciscus idus* (Golden orfe)): 3,158.4 mg/l
Exposure time: 96 h
Test Type: static test
Method: DIN 38412

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): > 500 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202 or Equivalent

Toxicity to algae/aquatic plants : EC50 (alga *Scenedesmus* sp.): 710 mg/l
End point: Growth rate inhibition
Exposure time: 72 h
Test Type: static test
Method: EU Method C.3 (Algal Inhibition test)

Toxicity to microorganisms : EC10 (activated sludge): > 1,195 mg/l
Exposure time: 30 min

naphthalene:

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)): 0.11 mg/l
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (*Daphnia magna* (Water flea)): 1.6 - 24.1 mg/l

SAFETY DATA SHEET



Surmount®

Version 1.1	Revision Date: 04/18/2022	SDS Number: 800080003073	Date of last issue: 04/18/2022 Date of first issue: 04/18/2022
----------------	------------------------------	-----------------------------	---

aquatic invertebrates	Exposure time: 48 h Test Type: static test
Toxicity to algae/aquatic plants	: ErC50 (Skeletonema costatum (marine diatom)): 0.4 mg/l Exposure time: 72 h Test Type: Growth rate inhibition
M-Factor (Acute aquatic toxicity)	: 1
Toxicity to fish (Chronic toxicity)	: NOEC (Other): 0.37 mg/l End point: mortality Exposure time: 40 d Test Type: flow-through
M-Factor (Chronic aquatic toxicity)	: 1

Ecotoxicology Assessment

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

1-Methylnaphthalene:

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)): 9 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 1.2 - 1.4 mg/l Exposure time: 48 h

Persistence and degradability

Components:

Picloram triisopropanolamine salt:

Biodegradability : Result: Not readily biodegradable.
Remarks: For similar active ingredient(s).
Picloram.
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 may occur under aerobic conditions (in the presence of oxygen).
Surface photodegradation is expected with exposure to sunlight.

fluroxypyr-meptyl (ISO):

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

Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

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

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

Biodegradability : Result: Readily biodegradable.
Biodegradation: > 90 %
Exposure time: 28 d
Method: OECD Test Guideline 301E or Equivalent
Remarks: 10-day Window: Pass

Result: Readily biodegradable.
Biodegradation: > 60 %
Exposure time: 28 d
Method: OECD Test Guideline 301B or Equivalent
Remarks: 10-day Window: Pass

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Biodegradability : Remarks: Biodegradation may occur under aerobic conditions (in the presence of oxygen).
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: 30 - 41 %
Exposure time: 28 d
Method: OECD Test Guideline 301D or Equivalent
Remarks: 10-day Window: Fail

Dipropylene glycol monomethyl ether:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 75 %
Exposure time: 28 d
Remarks: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

aerobic
Method: OECD Test Guideline 301F or Equivalent
Remarks: 10-day Window: Pass

Biochemical Oxygen Demand (BOD) : 0 %
Incubation time: 5 d
0 %

SAFETY DATA SHEET



Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

Incubation time: 10 d

31.6 %

Incubation time: 20 d

Chemical Oxygen Demand (COD) : 2.02 kg/kg
Method: Dichromate

ThOD : 2.06 kg/kg

Photodegradation : Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Rate constant: 5.00E-05 cm³/s
Method: Estimated.

2-Methylnaphthalene:

Biodegradability : Result: Not readily biodegradable.
Remarks: Expected to degrade slowly in the environment.

1,1',1'-nitritotripropan-2-ol:

Biodegradability : Remarks: Biodegradation under aerobic static laboratory conditions is high (BOD₂₀ or BOD₂₈/ThOD > 40%).
Biodegradation rate may increase in soil and/or water with acclimation.
Material is not readily biodegradable according to OECD/EEC guidelines.

aerobic

Result: Not biodegradable

Biodegradation: 0 %

Exposure time: 28 d

Method: OECD Test Guideline 301F or Equivalent

Remarks: 10-day Window: Fail

ThOD : 2.35 kg/kg

Photodegradation : Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Rate constant: 1.2E-10 cm³/s
Method: Estimated.

naphthalene:

Biodegradability : Remarks: Biodegradation under aerobic static laboratory conditions is high (BOD₂₀ or BOD₂₈/ThOD > 40%).

Biochemical Oxygen Demand (BOD) : 57.000 %
Incubation time: 5 d

71.000 %

Incubation time: 10 d

71.000 %

Incubation time: 20 d

SAFETY DATA SHEET



Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

ThOD : 3.00 kg/kg

Photodegradation : Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Concentration: 1,500,000 1/cm³
Rate constant: 2.16E-11 cm³/s
Method: Estimated.

1-Methylnaphthalene:

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: 0 - 2 %
Exposure time: 28 d
Method: OECD Test Guideline 301C or Equivalent
Remarks: 10-day Window: Not applicable

Bioaccumulative potential

Components:

Picloram triisopropanolamine salt:

Partition coefficient: n-octanol/water : Remarks: No data available for this product.
For similar active ingredient(s).
Picloram.
Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

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).

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

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

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 61 - 159

Partition coefficient: n-octanol/water : log Pow: 2.9 - 6.1
Method: Measured

Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

Remarks: Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).

Dipropylene glycol monomethyl ether:

Partition coefficient: n-octanol/water : log Pow: 1.01
Method: Measured
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

2-Methylnaphthalene:

Partition coefficient: n-octanol/water : log Pow: 3.86
Method: Estimated.
Remarks: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

1,1',1'-nitritotripropan-2-ol:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): < 0.57
Exposure time: 42 d
Method: Measured

Partition coefficient: n-octanol/water : log Pow: -0.015 (73 °F / 23 °C)
Method: Measured
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

naphthalene:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 40 - 300
Exposure time: 28 d
Method: Measured

Partition coefficient: n-octanol/water : log Pow: 3.3
Method: Measured
Remarks: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

1-Methylnaphthalene:

Partition coefficient: n-octanol/water : log Pow: 3.87
Method: Estimated.
Remarks: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Mobility in soil**Components:****Picloram triisopropanolamine salt:**

Distribution among environmental compartments : Remarks: For similar active ingredient(s).
Picloram.
Potential for mobility in soil is very high (Koc between 0 and

Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

50).

fluroxypyr-meptyl (ISO):

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

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Distribution among environmental compartments : Remarks: No data available.

Dipropylene glycol monomethyl ether:

Distribution among environmental compartments : Koc: 0.28
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).

2-Methylnaphthalene:

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

1,1',1'-nitriolotripropan-2-ol:

Distribution among environmental compartments : Koc: 10
Method: Estimated.
Remarks: Potential for mobility in soil is very high (Koc between 0 and 50).

naphthalene:

Distribution among environmental compartments : Koc: 240 - 1300
Method: Measured
Remarks: Potential for mobility in soil is medium (Koc between 150 and 500).

Other adverse effects**Components:****Picloram triisopropanolamine salt:**

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.

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).

Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

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

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

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), heavy arom.; Kerosine — unspecified:

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.

Dipropylene glycol monomethyl ether:

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 : Regulation: (Update: 11/22/2010 KS 11/25/2010 LMK)
Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

2-Methylnaphthalene:

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

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

1,1',1'-nitrilotripropan-2-ol:

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.

naphthalene:

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.

Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

1-Methylnaphthalene:

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, Naphthalene)
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, Naphthalene)
Class	: 9
Packing group	: III
Labels	: Miscellaneous
Packing instruction (cargo aircraft)	: 964
Packing instruction (passenger aircraft)	: 964

SAFETY DATA SHEET



Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

IMDG-Code

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

Domestic regulation

49 CFR

UN/ID/NA number	: UN 3082
Proper shipping name	: Environmentally hazardous substance, liquid, n.o.s. (Naphthalene)
Class	: 9
Packing group	: III
Labels	: CLASS 9
ERG Code	: 171
Marine pollutant	: no
Reportable Quantity	: Naphthalene

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 5L 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.

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

SARA 311/312 Hazards	: Carcinogenicity Serious eye damage or eye irritation
-----------------------------	---

SARA 313	: The following components are subject to reporting levels established by SARA Title III, Section 313:
-----------------	--

naphthalene	91-20-3	>= 1 - < 5 %
-------------	---------	--------------

SAFETY DATA SHEET



Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

US State Regulations

Pennsylvania Right To Know

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified	64742-94-5
Dipropylene glycol monomethyl ether	34590-94-8
1,1',1'-nitritotripropan-2-ol	122-20-3
naphthalene	91-20-3
1-Methylnaphthalene	90-12-0

California Prop. 65

WARNING: This product can expose you to chemicals including naphthalene, sulphuric acid, Silica, hexachlorobenzene, which is/are known to the State of California to cause cancer, and N-methyl-2-pyrrolidone, hexachlorobenzene, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

The ingredients of this product are reported in the following inventories:

TSCA : Product contains substance(s) not listed on TSCA inventory.

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

Federal Insecticide, Fungicide and Rodenticide Act

EPA Registration Number : 62719-480

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

DANGER

Corrosive
Causes irreversible eye damage

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)
Corteva OEL	: Corteva Occupational Exposure Limit
Dow IHG	: Dow Industrial Hygiene Guideline
OSHA P0	: USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
OSHA Z-1	: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

SAFETY DATA SHEET



Surmount®

Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2022
1.1	04/18/2022	800080003073	Date of first issue: 04/18/2022

ACGIH / TWA	:	8-hour, time-weighted average
Corteva OEL / STEL	:	Short term exposure limit
Corteva OEL / TWA	:	Time weighted average
Dow IHG / TWA	:	Time Weighted Average (TWA):
Dow IHG / STEL	:	Short term exposure limit
Dow IHG / TWA	:	Time weighted average
OSHA P0 / TWA	:	8-hour time weighted average
OSHA P0 / STEL	:	Short-term exposure limit
OSHA Z-1 / TWA	:	8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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; HMIS - Hazardous Materials Identification System; 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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; 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

Revision Date : 04/18/2022

Product code: LAF-4

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.

US / EN