SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.

ZYPAR™

Version	Revision Date:	SDS Number:	Date of last issue: 17.01.2024
1.1	09.04.2024	800080002802	Date of first issue: 17.01.2024

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

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

1.1 Product identifier

Trade name : ZYPAR™

Unique Formula Identifier (UFI) : 40A7-T0DN-S002-N4HU

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

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

1.3 Details of the supplier of the safety data sheet

COMPANY IDENTIFICATION
Manufacturer/importer
Corteva Agriscience UK Limited
Melbourn Science Park - Cambridge Road - Unit H4, Building H
Melbourn Cambridgeshire - SG8 6HB
UNITED KINGDOM

Customer Information Number : +44 8006 89 8899
E-mail address : SDS@corteva.com

1.4 Emergency telephone number

SGS : +353 818 663 627

National Poisons Information Centre (Beaumont Hospital): 01 809 2166 (8 AM - 10 PM)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Skin sensitisation, Sub-category 1B	H317: May cause an allergic skin reaction.

Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Warning

Hazard statements :
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P261 Avoid breathing mist or vapours or spray.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P391 Collect spillage.

Disposal:

P501 Dispose of contents/container to a licensed waste disposal contractor or collection site except for empty clean triple rinsed containers which can be disposed of as non-hazardous waste.

Additional Labelling

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

2.3 Other hazards

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

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

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. REACH Registration number	Classification	Concentration (% w/w)
Halauxifen-methyl	943831-98-9	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 _____ M-Factor (Acute aquatic toxicity): 1,000 M-Factor (Chronic aquatic toxicity): 1,000	0.68
Cloquintocet-mexyl	99607-70-2 01-2119381871-32-0002, 01-2119381871-32-0003, 01-2119403579-35-0000	Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	0.66
florasulam (ISO)	145701-23-1 613-230-00-7	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 _____ M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 100	0.53
Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts	68953-96-8 273-234-6 01-2119964467-24	Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Dam. 1; H318 Aquatic Chronic 2; H411	>= 3 - < 10
Hydrocarbons, C10, aromatics, <1% naphthalene	1189173-42-9 918-811-1 01-2119463583-34-0008, 01-	STOT SE 3; H336 (Central nervous system) Asp. Tox. 1; H304	>= 2.5 - < 3

	2119463583-34-0009, 01-2119463583-34-0010	Aquatic Chronic 2; H411	
propylene carbonate	108-32-7 203-572-1 607-194-00-1 01-2119537232-48	Eye Irrit. 2; H319	>= 1 - < 3

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

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

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

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.
Suitable emergency safety shower facility should be available in work area.

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

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : No specific antidote.
Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.
Have the Safety Data Sheet, and if available, the product con-

tainer or label with you when calling a poison control center or doctor, or going for treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Water spray Alcohol-resistant foam
Unsuitable extinguishing media	:	None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting	:	Exposure to combustion products may be a hazard to health.
Hazardous combustion products	:	Carbon oxides Nitrogen oxides (NOx)

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary. Equipment should conform to EN 12942
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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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

6.2 Environmental precautions

Environmental precautions	:	If the product contaminates rivers and lakes or drains inform respective authorities. Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

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

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

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.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in a closed container. Keep in properly labelled containers. Store in accordance with the particular national regulations.

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

Packaging material : Unsuitable material: None known.

7.3 Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

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

Substance name	End Use	Exposure routes	Potential health effects	Value
propylene carbonate	Workers	Inhalation	Long-term systemic effects	176 mg/m3
	Workers	Inhalation	Long-term local effects	20 mg/m3
	Workers	Skin contact	Long-term systemic effects	50 mg/kg bw/day
	Consumers	Skin contact	Long-term systemic effects	25 mg/kg bw/day
	Consumers	Inhalation	Long-term local effects	10 mg/m3
	Consumers	Inhalation	Long-term systemic effects	43.5 mg/m3
	Consumers	Ingestion	Long-term systemic effects	25 mg/kg bw/day

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

Substance name	Environmental Compartment	Value
propylene carbonate	Sewage treatment plant	7400 mg/l
	Fresh water	0.9 mg/l
	Marine water	0.09 mg/l
	Intermittent use/release	9 mg/l
	Soil	0.81 mg/kg

8.2 Exposure controls

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

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

Hand protection

Remarks : Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Poly-

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

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

Respiratory protection : Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	Liquid.
Colour	:	Off-white
Odour	:	Solvent
Odour Threshold	:	No test data available
Melting point/range	:	Not applicable

Freezing point		No test data available
Boiling point/boiling range	:	No test data available
Flammability	:	No data available
Upper explosion limit / Upper flammability limit	:	No test data available
Lower explosion limit / Lower flammability limit	:	No test data available
Flash point	:	> 100 °C Method: PMCC, closed cup
Auto-ignition temperature	:	No test data available
pH	:	4.37 (24.2 °C) Method: pH Electrode (1% aqueous suspension)
Viscosity		
Viscosity, dynamic	:	Non-Newtonian fluid.
Viscosity, kinematic	:	Non-Newtonian fluid.
Solubility(ies)		
Water solubility	:	No test data available
Vapour pressure	:	No test data available
Density	:	0.929 g/cm3 (20 °C)
Relative vapour density	:	No test data available

9.2 Other information

Explosives	:	No
Oxidizing properties	:	No significant increase (>5C) in temperature.
Evaporation rate	:	Reference substance: Monoammonium phosphate No test data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

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

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : Strong acids
Strong bases

10.6 Hazardous decomposition products

Carbon oxides

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat, female): > 5,000 mg/kg
Method: OECD Test Guideline 425
Remarks: Information source: Internal study report

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 402
Remarks: Information source: Internal study report

Components:

Halauxifen-methyl:

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

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

Cloquintocet-mexyl:

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

Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.42 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

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

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

Acute oral toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD 401 or equivalent
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute oral toxicity
Remarks: For similar material(s):

Acute dermal toxicity : LD50 (Rat, male and female): > 1,000 - < 1,600 mg/kg
Method: OECD 402 or equivalent
Remarks: For similar material(s):

Hydrocarbons, C10, aromatics, <1% naphthalene:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Remarks: For similar material(s):

Acute inhalation toxicity : LC50 (Rat): > 4.688 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: For similar material(s):
Maximum attainable concentration.

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

propylene carbonate:

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

Acute dermal toxicity : LD50 (Rabbit): > 3,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Product:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Skin irritation
Remarks : Information source: Internal study report

Components:

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

Species : Rabbit
Result : Skin irritation

propylene carbonate:

Result : No skin irritation

Serious eye damage/eye irritation

Product:

Species : Rabbit
Method : OECD Test Guideline 405
Result : Mild eye irritation

Components:

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

Result : Corrosive

propylene carbonate:

Result : Eye irritation

Respiratory or skin sensitisation

Product:

Test Type	:	Local lymph node assay
Species	:	Mouse
Assessment	:	The product is a skin sensitiser, sub-category 1B.
Method	:	OECD Test Guideline 429
Remarks	:	Information source: Internal study report

Components:

Halauxifen-methyl:

Remarks	:	Did not demonstrate the potential for contact allergy in mice.
Remarks	:	For respiratory sensitization: No relevant data found.

Cloquintocet-mexyl:

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

florasulam (ISO):

Remarks	:	Did not cause allergic skin reactions when tested in guinea pigs.
Remarks	:	For respiratory sensitization: No relevant data found.

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

Remarks	:	For skin sensitization: For similar material(s): Did not cause allergic skin reactions when tested in guinea pigs.
Remarks	:	For respiratory sensitization: No relevant data found.

Hydrocarbons, C10, aromatics, <1% naphthalene:

Remarks	:	For similar material(s): Did not cause allergic skin reactions when tested in guinea pigs.
Remarks	:	For respiratory sensitization: No relevant data found.

propylene carbonate:

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

Remarks : For respiratory sensitization:
No relevant data found.

Germ cell mutagenicity

Components:

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

Cloquintocet-mexyl:
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.

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:
Germ cell mutagenicity- Assessment : For similar material(s):, In vitro genetic toxicity studies were negative., Animal genetic toxicity studies were negative.

Hydrocarbons, C10, aromatics, <1% naphthalene:
Germ cell mutagenicity- Assessment : For similar material(s):, In vitro genetic toxicity studies were negative., Animal genetic toxicity studies were negative.

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

Carcinogenicity

Components:

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

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

florasulam (ISO):
Carcinogenicity - Assessment : Did not cause cancer in laboratory animals.

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

Reproductive toxicity

Components:

Halauxifen-methyl:

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

Cloquintocet-mexyl:

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

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.

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

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

Hydrocarbons, C10, aromatics, <1% naphthalene:

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

propylene carbonate:

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

STOT - single exposure

Product:

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

Components:

Halauxifen-methyl:

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

Cloquintocet-mexyl:

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

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

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

Hydrocarbons, C10, aromatics, <1% naphthalene:

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

propylene carbonate:

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

Repeated dose toxicity

Components:

Halauxifen-methyl:

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

Cloquintocet-mexyl:

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

florasulam (ISO):

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

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

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

Hydrocarbons, C10, aromatics, <1% naphthalene:

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

propylene carbonate:

Remarks : Repeated skin application to laboratory animals did not produce systemic toxicity.

Aspiration toxicity

Product:

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

Components:

Halauxifen-methyl:

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

Cloquintocet-mexyl:

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

florasulam (ISO):

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

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

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

Hydrocarbons, C10, aromatics, <1% naphthalene:

May be fatal if swallowed and enters airways.

propylene carbonate:

Based on available information, aspiration hazard could not be determined.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

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

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 81 mg/l Exposure time: 96 h Test Type: semi-static test Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 5.5 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	Remarks: Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species). EC50 (Lemna gibba): 0.086 mg/l End point: Number of fronds Exposure time: 7 d EC50 (Myriophyllum spicatum): 0.065 mg/l Exposure time: 14 d NOEC (Myriophyllum spicatum): 0.00298 mg/l Exposure time: 14 d
Toxicity to soil dwelling organisms	:	LC50: > 1,000 mg/kg Exposure time: 14 d End point: mortality Species: Eisenia fetida (earthworms)
Toxicity to terrestrial organisms	:	Remarks: Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg). oral LD50: > 2000 mg/kg bodyweight. End point: mortality Species: Colinus virginianus (Bobwhite quail) oral LD50: > 213.4 µg/bee Exposure time: 48 h End point: mortality Species: Apis mellifera (bees) Method: Other guidelines contact LD50: > 200 µg/bee Exposure time: 48 h End point: mortality Species: Apis mellifera (bees) Method: Other guidelines

Ecotoxicology Assessment

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

Components:

Halauxifen-methyl:

Toxicity to fish	:	Remarks: Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species). LC50 (Rainbow trout (Oncorhynchus mykiss)): 2.01 mg/l Exposure time: 96 h Test Type: static test LC50 (Pimephales promelas (fathead minnow)): > 3.22 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 2.12 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 3.0 mg/l Exposure time: 96 h ErC50 (Myriophyllum spicatum): 0.000393 mg/l End point: Growth rate inhibition Exposure time: 14 d
M-Factor (Acute aquatic toxicity)	:	1,000
Toxicity to microorganisms	:	EC50 (activated sludge): > 981 mg/l Exposure time: 1 d
Toxicity to fish (Chronic toxicity)	:	NOEC: 0.259 mg/l End point: Other Species: Pimephales promelas (fathead minnow) Test Type: flow-through test NOEC: 0.00272 mg/l Exposure time: 36 d Species: Cyprinodon variegatus (sheepshead minnow) Test Type: flow-through test
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 0.484 mg/l End point: number of offspring Exposure time: 21 d

Species: Daphnia magna (Water flea)
Test Type: semi-static test

M-Factor (Chronic aquatic toxicity) : 1,000

Toxicity to soil dwelling organisms : LC50: > 1,000 mg/kg
Exposure time: 14 d
End point: mortality
Species: Eisenia fetida (earthworms)

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

dietary LC50: > 5,620 ppm
Exposure time: 5 d
Species: Colinus virginianus (Bobwhite quail)
Method: Other guidelines

dietary LC50: > 5,620 ppm
Exposure time: 5 d
Species: Anas platyrhynchos (Mallard duck)
Method: Other guidelines

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

contact LD50: > 98.1 µg/bee
Exposure time: 48 h
End point: mortality
Species: Apis mellifera (bees)

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

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

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

Cloquintocet-mexyl:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.97 mg/l
Exposure time: 96 h
Test Type: flow-through test
Method: Method Not Specified.
Remarks: As the ester active substance.

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): > 0.82 mg/l

aquatic invertebrates		Exposure time: 48 h Test Type: flow-through test Method: Method Not Specified.
Toxicity to algae/aquatic plants	:	EbC50 (alga Scenedesmus sp.): 0.63 mg/l End point: Biomass Exposure time: 96 h Method: Method Not Specified. EbC50 (Lemna minor (duckweed)): > 0.42 mg/l End point: Biomass Exposure time: 14 d Method: Method Not Specified.
Toxicity to soil dwelling organisms	:	LC50: > 1,000 mg/kg Species: Eisenia fetida (earthworms)
Toxicity to terrestrial organisms	:	oral LD50: > 2000 mg/kg bodyweight. Species: Anas platyrhynchos (Mallard duck) dietary LC50: > 5200 mg/kg diet. Exposure time: 8 d Species: Anas platyrhynchos (Mallard duck) oral LD50: > 100 micrograms/bee Exposure time: 48 h Species: Apis mellifera (bees) contact LD50: > 100 micrograms/bee Exposure time: 48 h Species: Apis mellifera (bees)

Ecotoxicology Assessment

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

florasulam (ISO):

Toxicity to fish	:	Remarks: Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species). LC50 (Oncorhynchus mykiss (rainbow trout)): > 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
M-Factor (Acute aquatic toxicity)	:	100
Toxicity to fish (Chronic toxicity)	:	NOEC: 119 mg/l End point: mortality Exposure time: 28 d Species: Oncorhynchus mykiss (rainbow trout) Test Type: flow-through test NOEC: > 2.9 mg/l End point: Other Exposure time: 33 d Species: Pimephales promelas (fathead minnow) Test Type: flow-through test
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 38.90 mg/l End point: growth Exposure time: 21 d Species: Daphnia magna (Water flea) Test Type: semi-static test MATC (Maximum Acceptable Toxicant Level): 50.2 mg/l End point: growth Exposure time: 21 d Species: Daphnia magna (Water flea) Test Type: semi-static test
M-Factor (Chronic aquatic toxicity)	:	100
Toxicity to soil dwelling organisms	:	LC50: > 1,320 mg/kg Exposure time: 14 d Species: Eisenia fetida (earthworms)
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: 1047 mg/kg bodyweight. Species: Coturnix japonica (Japanese quail) dietary LC50: > 5,000 ppm

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

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

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

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

Toxicity to fish	:	Remarks: Material is harmful to aquatic organisms (LC50/EC50/IC50 between 10 and 100 mg/L in the most sensitive species). LC50 (zebra fish (Brachydanio rerio)): 31.6 mg/l Exposure time: 96 h Remarks: For similar material(s):
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 62 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Selenastrum capricornutum (green algae)): 29 mg/l End point: Growth rate inhibition Exposure time: 96 h Remarks: For similar material(s):
Toxicity to microorganisms	:	EC50 (activated sludge): 550 mg/l End point: Respiration rates. Exposure time: 3 h Remarks: For similar material(s):
Toxicity to fish (Chronic toxicity)	:	NOEC: 0.23 mg/l End point: survival Exposure time: 72 d Species: Rainbow trout (Salmo gairdneri) Remarks: For similar material(s):
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 1.18 mg/l End point: number of offspring Exposure time: 21 d Species: Daphnia magna (Water flea) Remarks: For similar material(s):

Hydrocarbons, C10, aromatics, <1% naphthalene:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 2 - 5 mg/l Exposure time: 96 h Remarks: For similar material(s):
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna): 3 - 10 mg/l Exposure time: 48 h

Remarks: For similar material(s):

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

Ecotoxicology Assessment

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

propylene carbonate:

Toxicity to fish : Remarks: Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).

LC50 (Cyprinus carpio (Carp)): > 1,000 mg/l
Exposure time: 96 h
Test Type: semi-static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1,000 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202 or Equivalent

Toxicity to algae/aquatic plants : EC50 (alga Scenedesmus sp.): > 900 mg/l
End point: Biomass
Exposure time: 72 h
Method: Method Not Specified.

Toxicity to microorganisms : EC50 (activated sludge): > 800 mg/l
Exposure time: 30 min
Method: OECD 209 Test

12.2 Persistence and degradability

Components:

Halauxifen-methyl:

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

Biodegradation: 7.7 %
Exposure time: 28 d
Method: OECD Test Guideline 310 or Equivalent
Remarks: 10-day Window: Not applicable

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.

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

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

Biodegradation: 2.9 %
Exposure time: 28 d
Method: OECD Test Guideline 301E or Equivalent
Remarks: 10-day Window: Fail

Hydrocarbons, C10, aromatics, <1% naphthalene:

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

propylene carbonate:

Biodegradability : Result: Readily biodegradable.
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).

Biodegradation: 94 %
Exposure time: 28 d
Method: OECD Test Guideline 301E or Equivalent
Remarks: 10-day Window: Pass

Biodegradation: > 97 %
Exposure time: 28 d
Method: OECD Test Guideline 302B or Equivalent
Remarks: 10-day Window: Not applicable

12.3 Bioaccumulative potential

Components:

Halauxifen-methyl:

Bioaccumulation	:	Species: Lepomis macrochirus (Bluegill sunfish) Exposure time: 42 d Temperature: 21.8 °C Concentration: 0.00194 mg/l Bioconcentration factor (BCF): 233
Partition coefficient: n-octanol/water	:	log Pow: 3.76 Remarks: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Cloquintocet-mexyl:

Bioaccumulation	:	Species: Fish Bioconcentration factor (BCF): 122 - 621
Partition coefficient: n-octanol/water	:	log Pow: 5.2 (25 °C) pH: 7

florasulam (ISO):

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

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

Partition coefficient: n-octanol/water	:	log Pow: 4.6 Method: OECD Test Guideline 107 or Equivalent Remarks: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Hydrocarbons, C10, aromatics, <1% naphthalene:

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

propylene carbonate:

Partition coefficient: n-octanol/water : Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Potential for mobility in soil is very high (Koc between 0 and 50).
Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

log Pow: -0.41
Method: Measured
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

12.4 Mobility in soil

Components:

Halauxifen-methyl:

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

Cloquintocet-mexyl:

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

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

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

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

Hydrocarbons, C10, aromatics, <1% naphthalene:

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

propylene carbonate:

Distribution among environmental compartments : Koc: 15
Method: Estimated.
Remarks: Potential for mobility in soil is very high (Koc between 0 and 50).
Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

12.5 Results of PBT and vPvB assessment

Product:

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

Components:

Halauxifen-methyl:

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

Cloquintocet-mexyl:

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

florasulam (ISO):

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

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

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

Hydrocarbons, C10, aromatics, <1% naphthalene:

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

propylene carbonate:

Assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

12.6 Endocrine disrupting properties

Product:

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

12.7 Other adverse effects

Components:

Halauxifen-methyl:

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

Cloquintocet-mexyl:

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

florasulam (ISO):

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

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

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

Hydrocarbons, C10, aromatics, <1% naphthalene:

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

propylene carbonate:

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

SECTION 14: Transport information

14.1 UN number or ID number

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

14.2 UN proper shipping name

ADR	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Halauxifen-methyl, CLOQUINTOCET-MEXYL)
RID	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Halauxifen-methyl, CLOQUINTOCET-MEXYL)
IMDG	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Halauxifen-methyl, Cloquintocet-mexyl)
IATA	:	Environmentally hazardous substance, liquid, n.o.s. (Halauxifen-methyl, Cloquintocet-mexyl)

14.3 Transport hazard class(es)

		Class	Subsidiary risks
ADR	:	9	
RID	:	9	
IMDG	:	9	
IATA	:	9	

14.4 Packing group

ADR

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

RID

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

IMDG

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

Remarks : Stowage category A

IATA (Cargo)

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

IATA (Passenger)

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

14.5 Environmental hazards

ADR
Environmentally hazardous : yes

RID
Environmentally hazardous : yes

IMDG
Marine pollutant : yes(Halauxifen-methyl, Cloquintocet-mexyl)

14.6 Special precautions for user

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

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
REACH - List of substances subject to authorisation	:	Not applicable

(Annex XIV)

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	E1	ENVIRONMENTAL HAZARDS

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.
The mixture is evaluated within the frame of the provisions of Regulation (EC) No. 1107/2009.
Refer to the label for exposure assessment information.

SECTION 16: Other information

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

Full text of H-Statements

H304	:	May be fatal if swallowed and enters airways.
H312	:	Harmful in contact with skin.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H319	:	Causes serious eye irritation.
H336	:	May cause drowsiness or dizziness.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Asp. Tox.	:	Aspiration hazard
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT SE	:	Specific target organ toxicity - single exposure

ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; ASTM - American Society for the Testing of Materials; ECx - Concentration associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; 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; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; LC50 - Lethal Con-

centration 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; NOEC - Non-Observed Effective Concentration; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; (Q)SAR - (Quantitative) Structure Activity Relationship; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SDS - Safety Data Sheet; UN - United Nations.
EC-Number - European Community number REACH - Regulation (EC) No 1907/2006 of the European Parliament and of Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals.

Further information

Classification of the mixture:		**Classification procedure:**
Skin Irrit. 2	H315	Based on product data or assessment
Eye Irrit. 2	H319	Based on product data or assessment
Skin Sens. 1B	H317	Based on product data or assessment
Aquatic Acute 1	H400	Based on product data or assessment
Aquatic Chronic 1	H410	Based on product data or assessment

Product code: GF-2644

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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