SAFETY DATA SHEET
According to UK REACH and COSHH Regulations, and their amendments

MANHATTAN

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	11.12.2024	800080102235	Date of first issue: 11.12.2024

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 Great Britain 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 : MANHATTAN

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

Use of the Substance/Mixture : End use herbicide product

1.3 Details of the supplier of the safety data sheet

COMPANY IDENTIFICATION
Manufacturer/importer
Corteva Agriscience UK Ltd
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

+44 161 88 41235

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Eye irritation, Category 2	H319: Causes serious eye irritation.
Skin sensitisation, Category 1	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) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Hazard pictograms :

Signal word : Warning

Hazard statements :

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

Precautionary statements :

Prevention:

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

Response:

P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P305 + P310	IF IN EYES: Immediately call a POISON CENTER or doctor/ physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
P391	Collect spillage.

Disposal:

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

Hazardous components which must be listed on the label:

Pyroxsulam

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 Delegat-ed 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. Registration number	Classification	Concentration (% w/w)
Cloquintocet	88349-88-6 01-2120249233-62-0000	Aquatic Chronic 2; H411	26.6
Pyroxsulam	422556-08-9 613-327-00-4	Skin Sens. 1B; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 _____ M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 100	18.75
Halauxifen-methyl	943831-98-9	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 _____ M-Factor (Acute aquatic toxicity): 10,000 M-Factor (Chronic aquatic toxicity): 10,000	5.2
Florasulam	145701-23-1 613-230-00-7	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 _____ M-Factor (Acute	3.67

		aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 100	
Sodium lignosulfonate	8061-51-6	Eye Irrit. 2; H319	>= 10 - < 20
citric acid	77-92-9 201-069-1 607-750-00-3 01-2119457026-42	Eye Irrit. 2; H319	>= 3 - < 10
Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate	Not Assigned 939-538-4 01-2119976349-20, 01-2119976349-20-0003, 01-2119976349-20-0004, 01-2119976349-20-0005, 01-2119976349-20-0006, 01-2119976349-20-0007	Eye Irrit. 2; H319	>= 3 - < 10
Anatase	1317-70-0 215-280-1 022-006-00-2	Carc. 2; H351	>= 0.1 - < 0.3
Substances with a workplace exposure limit :			
Kaolin	1332-58-7 310-194-1		>= 3 - < 10

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 effects occur, consult a physician.

In case of skin contact : Wash off with plenty of water.

In case of eye contact : Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

If swallowed : No emergency medical treatment necessary.

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.

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 firefighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Nitrogen oxides (NOx)
Carbon oxides

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

Specific extinguishing methods : Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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

6.2 Environmental precautions

Environmental precautions : Discharge into the environment must be avoided.
Prevent further leakage or spillage if safe to do so.
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 : Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in.
Pick up and arrange disposal without creating dust.
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.
Sweep up and shovel.
Keep in suitable, closed containers for disposal.
Sweep up or vacuum up spillage and collect in suitable container for disposal.
See Section 13, Disposal Considerations, for additional information.

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : 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 : Strong oxidizing agents

Packaging material : Unsuitable material: None known.

7.3 Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Pyroxsulam	422556-08-9	Time Weighted Average (TWA):	5 mg/m3	Dow IHG
Kaolin	1332-58-7	Long-term exposure limit (8-hour TWA reference period) (Respirable dust)	2 mg/m3	GB EH40
		Long term exposure limit (Respirable dust)	0.1 mg/m3	2004/37/EC
	Further information: Carcinogens or mutagens			

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 safety glasses (with side shields).

Hand protection

Remarks : Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Polyvinyl chloride ("PVC" or "vinyl"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). 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, in dusty atmospheres, use an approved particulate respirator.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	granules
Colour	:	tan
Odour	:	mild
Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	Not applicable
Flash point	:	Not applicable
Evaporation rate	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	No data available
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Auto-ignition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available

9.2 Other information

Surface tension	:	No data available
Self-ignition	:	No 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
Nitrogen oxides (NOx)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Components:

Cloquintocet:

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): > 6.11 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

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

Pyroxsulam:

Acute oral toxicity	:	LD50 (Rat, female): > 5,000 mg/kg Symptoms: No deaths occurred at this concentration. Assessment: The substance or mixture has no acute oral toxicity
Acute inhalation toxicity	:	LC50 (Rat): > 5.42 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 436 Symptoms: No deaths occurred at this concentration. Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 (Rat, male and female): > 5,000 mg/kg Symptoms: No deaths occurred at this concentration. Assessment: The substance or mixture has no acute dermal toxicity

Halauxifen-methyl:

Acute oral toxicity	:	LD50 (Rat, female): > 5,000 mg/kg Method: OECD Test Guideline 423 Symptoms: No deaths occurred at this concentration.
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 5.39 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Symptoms: No deaths occurred at this concentration. Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 (Rat, male and female): > 5,000 mg/kg Method: OECD Test Guideline 402 Symptoms: No deaths occurred at this concentration.

Florasulam:

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

Sodium lignosulfonate:

Acute oral toxicity : LD50 (Rat, male and female): > 10,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0.48 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

citric acid:

Acute oral toxicity : LD50 (Mouse): 5,400 mg/kg
Assessment: The substance or mixture has no acute oral toxicity

LD50 (Rat): 3,000 - 12,000 mg/kg

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

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

Acute oral toxicity : LD50: > 4,000 mg/kg
Method: OECD Test Guideline 401
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute oral toxicity

Acute dermal toxicity : LD50: > 2,000 mg/kg
Method: OECD Test Guideline 402
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute dermal toxicity

Anatase:

Acute oral toxicity : LD50 (Rat): > 10,000 mg/kg

Acute inhalation toxicity : LC50 (Rat, male): > 6.82 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

Acute dermal toxicity : LD50 (Rabbit): 10,000 mg/kg

Kaolin:

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

Skin corrosion/irritation

Components:

Pyroxsulam:

Species	:	Rabbit
Result	:	No skin irritation

Halauxifen-methyl:

Species	:	Rabbit
Exposure time	:	4 h
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

citric acid:

Result	:	No skin irritation

Anatase:

Result	:	No skin irritation

Kaolin:

Species	:	Rabbit
Result	:	No skin irritation

Serious eye damage/eye irritation

Components:

Pyroxsulam:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	No eye irritation

Halauxifen-methyl:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	No eye irritation

Sodium lignosulfonate:

Result	:	Eye irritation

citric acid:

Result	:	Eye irritation

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

Result	:	Mild eye irritation

Anatase:

Result : No eye irritation

Kaolin:

Species : Rabbit
Result : No eye irritation

Respiratory or skin sensitisation

Product:

Test Type : Local lymph node assay (LLNA)
Species : Mouse
Assessment : Does not cause skin sensitisation.
Method : OECD Test Guideline 429
Remarks : Information source: Internal study report

Components:

Cloquintocet:

Species : Mouse
Result : Does not cause skin sensitisation.

Pyroxsulam:

Test Type : Maximisation Test
Species : Guinea pig
Result : The product is a skin sensitiser, sub-category 1B.

Test Type : Local lymph node assay (LLNA)
Species : Mouse
Result : Does not cause skin sensitisation.

Halauxifen-methyl:

Test Type : Local lymph node assay (LLNA)
Species : Mouse
Method : OECD Test Guideline 429
Result : Does not cause skin sensitisation.

Florasulam:

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

Sodium lignosulfonate:

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

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

Species : Mouse

Result : Does not cause skin sensitisation.

Anatase:

Species : Mouse
Result : Does not cause skin sensitisation.

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

Germ cell mutagenicity

Components:

Cloquintocet:

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

Pyroxsulam:

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

Halauxifen-methyl:

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

Florasulam:

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

Sodium lignosulfonate:

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

citric acid:

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

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

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

Anatase:

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

Carcinogenicity

Components:

Cloquintocet:

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

Pyroxsulam:

Carcinogenicity - Assessment	:	There was equivocal evidence of carcinogenic activity in long-term bioassays. These effects are not believed to be relevant to humans.

Halauxifen-methyl:

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

Florasulam:

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

citric acid:

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

Anatase:

Carcinogenicity - Assessment	:	Lung fibrosis and tumors have been observed in rats exposed to titanium dioxide in two lifetime inhalation studies. Effects are believed to be due to overloading of the normal respiratory clearance mechanisms caused by the extreme study conditions. Workers exposed to titanium dioxide in the workplace have not shown an unusual incidence of chronic respiratory disease or lung cancer. Titanium dioxide was not carcinogenic in laboratory animals in lifetime feeding studies.

Kaolin:

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

Reproductive toxicity

Components:

Cloquintocet:

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

Pyroxsulam:

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

tory animals.

Halauxifen-methyl:

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

Florasulam:

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.

citric acid:

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

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction.

STOT - single exposure

Product:

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

Components:

Cloquintocet:

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

Pyroxsulam:

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

Halauxifen-methyl:

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

citric acid:

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

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

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

Anatase:

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

Kaolin:

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

STOT - repeated exposure

Product:

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

Repeated dose toxicity

Components:

Cloquintocet:

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

Halauxifen-methyl:

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

Florasulam:

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

Sodium lignosulfonate:

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

citric acid:

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

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

Remarks : No relevant data found.

Anatase:

Remarks : Repeated excessive inhalation exposures to dusts may cause respiratory effects.
In animals, effects have been reported on the following organs:
Lung.

Kaolin:

Remarks : Repeated excessive exposure to crystalline silica may cause silicosis, a progressive and disabling disease of the lungs.

Aspiration toxicity

Product:

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

Components:

Cloquintocet:

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

Pyroxsulam:

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

Halauxifen-methyl:

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

Florasulam:

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

Sodium lignosulfonate:

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

citric acid:

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

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

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

Anatase:

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

Kaolin:

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

SECTION 12: Ecological information

12.1 Toxicity

Components:

Cloquintocet:

Toxicity to fish	:	LC50 (Sheepshead minnow (Cyprinodon variegatus)): > 120 mg/l Exposure time: 96 h Test Type: static test LC50 (Rainbow trout (Salmo gairdneri)): 89.7 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna): 9.7 mg/l Exposure time: 48 h Test Type: Static renewal test Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 66.5 mg/l Exposure time: 72 h Test Type: static test ErC50 (Skeletonema costatum (marine diatom)): 12.5 mg/l Exposure time: 96 h ErC50 (Anabaena flos-aquae (cyanobacterium)): 23.7 mg/l Exposure time: 96 h NOEC (Pseudokirchneriella subcapitata (green algae)): 12.6 mg/l Exposure time: 72 h Test Type: Growth inhibition
Toxicity to fish (Chronic toxicity)	:	NOEC: 0.143 mg/l Exposure time: 33 d Species: Pimephales promelas (fathead minnow) Test Type: flow-through test
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 0.437 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Test Type: semi-static test
Toxicity to terrestrial organisms	:	Remarks: Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).

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

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

Pyroxsulam:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 87.0 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)): > 100 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 or Equivalent
Toxicity to algae/aquatic plants	:	ErC50 (Lemna gibba): 0.00388 mg/l End point: Biomass Exposure time: 7 d Method: OECD 221. ErC50 (Freshwater algae (Anabaena fols-aquae)): 0.924 mg/l End point: Growth rate Exposure time: 72 h Test Type: Growth inhibition Method: OECD Test Guideline 201 NOEC (Lemna gibba): 0.000681 mg/l End point: Biomass Exposure time: 7 d Method: OECD 221. ErC50 (Myriophyllum spicatum): 0.0107 mg/l Exposure time: 14 d NOEC (Myriophyllum spicatum): 0.00305 mg/l Exposure time: 14 d
M-Factor (Acute aquatic toxicity)	:	100
Toxicity to microorganisms	:	EC50 (activated sludge): > 1,000 mg/l Exposure time: 3 h
Toxicity to fish (Chronic toxicity)	:	NOEC: 3.2 - 10.1 mg/l End point: survival Exposure time: 40 d Species: Pimephales promelas (fathead minnow) Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 10.4 mg/l End point: survival Exposure time: 21 d Species: Daphnia magna (Water flea) Test Type: static test
M-Factor (Chronic aquatic toxicity)	:	100
Toxicity to soil dwelling organisms	:	LC50: > 10,000 mg/kg Exposure time: 14 d Species: Eisenia fetida (earthworms)
Toxicity to terrestrial organisms	:	LC50: > 5000 mg/kg diet. Exposure time: 8 d Species: Colinus virginianus (Bobwhite quail) LD50: > 2000 mg/kg bodyweight. Species: Colinus virginianus (Bobwhite quail) oral LD50: > 107.4 micrograms/bee Exposure time: 48 h Species: Apis mellifera (bees) contact LD50: > 100 micrograms/bee Exposure time: 48 h Species: Apis mellifera (bees) dietary LC50: > 5000 mg/kg diet. Exposure time: 8 d Species: Anas platyrhynchos (Mallard duck) NOEC: 5000 mg/kg diet. Exposure time: 8 d Species: Anas platyrhynchos (Mallard duck)

Halauxifen-methyl:

Toxicity to fish	:	LC50 (Rainbow trout (Oncorhynchus mykiss)): 2.01 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203
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): 0.000056 mg/l

End point: Growth rate inhibition
Exposure time: 14 d
Test Type: Static renewal test

ErC50 (blue-green algae): > 3.0 mg/l
Exposure time: 96 h

ErC50 (Lemna gibba (duckweed)): > 2.27 mg/l
Exposure time: 7 d

NOEC (Myriophyllum spicatum): 0.0000025 mg/l
End point: Growth rate inhibition
Exposure time: 14 d
Test Type: Static renewal test

ErC50 (Navicula pelliculosa (Freshwater diatom)): 1.50 mg/l
Exposure time: 72 h

NOEC (Lemna gibba (duckweed)): 0.121 mg/l
Exposure time: 7 d

M-Factor (Acute aquatic toxicity) : 10,000

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

Toxicity to fish (Chronic toxicity) : NOEC: 0.536 mg/l
Exposure time: 35 d
Species: Pimephales promelas (fathead minnow)
Test Type: flow-through test
Method: OECD Test Guideline 210

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) : 10,000

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 : 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)

Florasulam:

Toxicity to fish	:	Remarks: Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in the most sensitive species). LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203 or Equivalent
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 292 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 or Equivalent
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 0.00894 mg/l End point: Growth rate inhibition Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 or Equivalent EC50 (Myriophyllum spicatum): > 0.305 mg/l End point: Growth inhibition Exposure time: 14 d
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)

Sodium lignosulfonate:

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 (Pimephales promelas (fathead minnow)): 615 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202 or Equivalent
Remarks: For this family of materials:

citric acid:

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 (Lepomis macrochirus (Bluegill sunfish)): 1,516 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203 or Equivalent

LC50 (Leuciscus idus (Golden orfe)): 440 - 760 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)): > 1,535 mg/l
Exposure time: 24 h
Test Type: Static
Method: OECD Test Guideline 202 or Equivalent

Anatase:

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).

NOEC mortality (Leuciscus idus (Golden orfe)): > 1,000 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1,000 mg/l
Exposure time: 48 h
Test Type: static test

12.2 Persistence and degradability

Components:

Pyroxsulam:

Biodegradability : Test Type: aerobic
Result: Not biodegradable
Biodegradation: 20 - 30 %
Exposure time: 28 d
Method: OECD Test Guideline 301B or Equivalent
Remarks: 10-day Window: Fail

Halauxifen-methyl:

Biodegradability	:	Test Type: O2 consumption Result: Not biodegradable Biodegradation: 38.68 % Exposure time: 14 d Method: OECD Test Guideline 301D

Florasulam:

Biodegradability	:	Result: Not biodegradable 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.

Sodium lignosulfonate:

Biodegradability	:	Result: Not biodegradable Biodegradation: < 5 % Exposure time: 28 d Method: OECD Test Guideline 301E Remarks: 10-day Window: Fail
Photodegradation	:	Rate constant: 1.089E-10 cm3/s Method: Estimated.

citric acid:

Biodegradability	:	Test Type: aerobic Result: Readily biodegradable. Biodegradation: 97 % Exposure time: 28 d Method: OECD Test Guideline 301B or Equivalent Remarks: 10-day Window: Pass Test Type: aerobic Result: Readily biodegradable. Biodegradation: 98 % Exposure time: 7 d Method: OECD Test Guideline 302B or Equivalent Remarks: 10-day Window: Not applicable

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

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

Method: OECD Test Guideline 301D

Anatase:

Biodegradability : Remarks: Biodegradation is not applicable.

12.3 Bioaccumulative potential

Components:

Pyroxsulam:

Partition coefficient: n-octanol/water :

log Pow: -1.01
Method: Measured
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

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).

Florasulam:

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).

Sodium lignosulfonate:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 3.2

Partition coefficient: n-octanol/water : log Pow: -3.45
Method: Estimated.
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

citric acid:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 0.01
Method: Measured

Partition coefficient: n-octanol/water : log Pow: -1.72 (20 °C)
Method: Measured
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

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

Anatase:

Partition coefficient: n-octanol/water : Remarks: Partitioning from water to n-octanol is not applicable.

12.4 Mobility in soil

Components:

Pyroxsulam:

Distribution among environmental compartments : Koc: 7.4 ml/g
Method: OECD Test Guideline 106
Remarks: Potential for mobility in soil is very high (Koc between 0 and 50).

Halauxifen-methyl:

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

Florasulam:

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

Sodium lignosulfonate:

Distribution among environmental compartments : Koc: > 99999
Method: Estimated.

Remarks: Expected to be relatively immobile in soil (Koc > 5000).

citric acid:

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

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

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

Anatase:

Distribution among environmental compartments : Remarks: No data available.

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:

Cloquintocet:

Assessment : Substance is not persistent, bioaccumulative, and toxic (PBT).. Substance is not very persistent and very bioaccumulative (vPvB).

Pyroxsulam:

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

Halauxifen-methyl:

Assessment : Substance is not persistent, bioaccumulative, and toxic (PBT).. Substance is not very persistent and very bioaccumulative (vPvB).

Florasulam:

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).

Sodium lignosulfonate:

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

citric acid:

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

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

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

Anatase:

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

Kaolin:

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

12.6 Other adverse effects

Product:

Endocrine disrupting potential : This substance/mixture does not contain components considered to have endocrine disrupting properties for environment according to UK REACH Article 57(f).

Components:

Cloquintocet:

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

Pyroxsulam:

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

Halauxifen-methyl:

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

Florasulam:

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

Sodium lignosulfonate:

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

citric acid:

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

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

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

Anatase:

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

Kaolin:

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

ADR : UN 3077

RID : UN 3077

IMDG : UN 3077

IATA : UN 3077

14.2 UN proper shipping name

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

(Halauxifen-methyl, Pyroxsulam)

RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Halauxifen-methyl, Pyroxsulam)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Halauxifen-methyl, Pyroxsulam)

IATA : Environmentally hazardous substance, solid, n.o.s.
(Halauxifen-methyl, Pyroxsulam)

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	:	M7
Hazard Identification Number	:	90
Labels	:	9
Tunnel restriction code	:	(-)

RID

Packing group	:	III
Classification Code	:	M7
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)	:	956
Packing instruction (LQ)	:	Y956
Packing group	:	III
Labels	:	Miscellaneous

IATA (Passenger)

Packing instruction (passenger aircraft)	:	956
Packing instruction (LQ)	:	Y956
Packing group	:	III
Labels	:	Miscellaneous

14.5 Environmental hazards

ADR
Environmentally hazardous : yes

RID
Environmentally hazardous : yes

IMDG
Marine pollutant : yes(Halauxifen-methyl, Pyroxsulam)

14.6 Special precautions for user

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

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

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation	:	Not applicable
The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain)	:	Not applicable
Regulation (EC) on substances that deplete the ozone layer	:	Not applicable
UK REACH List of substances subject to authorisation (Annex XIV)	:	Not applicable

Registration Number : 21091

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

Full text of H-Statements

H317	:	May cause an allergic skin reaction.
H319	:	Causes serious eye irritation.
H351	:	Suspected of causing cancer if inhaled.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Irrit.	:	Eye irritation
Skin Sens.	:	Skin sensitisation
2004/37/EC	:	Europe. Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work
Dow IHG	:	Dow Industrial Hygiene Guideline
GB EH40	:	UK. EH40 WEL - Workplace Exposure Limits
2004/37/EC / TWA	:	Long term exposure limit
Dow IHG / TWA	:	Time Weighted Average (TWA):
GB EH40 / TWA	:	Long-term exposure limit (8-hour TWA reference period)

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 Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - not otherwise specified; 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.

Further information

Classification of the mixture:		**Classification procedure:**
Eye Irrit. 2	H319	Calculation method
Skin Sens. 1	H317	Calculation method
Aquatic Acute 1	H400	Calculation method
Aquatic Chronic 1	H410	Calculation method

Product code: GF-3706

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.

GB / 6N