SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Revision date 03/05/2024 **Revision Number** 1

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

1.1. Product identifier

Product Code(s) C2045

Safety data sheet number 0000052

Product Name Astonish Toilet Fresh Ocean

Pure substance/mixture Mixture

Formula 2045F1V1

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

Recommended use Cleaning toilet bowls and removing limescale.

Uses advised against

1.3. Details of the supplier of the safety data sheet

Manufacturer
The London Oil Refining Company Ltd
Astonish House
Unit 8 Thornbury Ind. Est.
Woodhall Road
Bradford BD3 7AF, UK
Tel: +44 1274 767440 (8am-4pm Mon-Fri)
www.astonish.co.uk

For further information, please contact

E-mail address info@astonish.co.uk

1.4. Emergency telephone number

Emergency Telephone UK - Emergency Telephone: +44 (0) 1274 767440 (8am-4pm Mon-Fri).

Alternatively in UK: Contact NHS 111 Telephone 111 (24 hours a day, 7days a week): Website 111.nhs.uk or a doctor

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Serious eye damage/eye irritation	Category 2 - (H319)

2.2. Label elements

Signal word
Warning

Hazard statements
H319 - Causes serious eye irritation

Precautionary statements
P264 - Wash face, hands and any exposed skin thoroughly after handling
P280 - Wear eye protection/ face protection
P337 + P313 - If eye irritation persists: Get medical advice/attention
P101 - If medical advice is needed, have product container or label at hand
P102 - Keep out of reach of children
P103 - Read label before use
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Unknown aquatic toxicity Contains 0.44538 % of components with unknown hazards to the aquatic environment.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)

				amended)			
Citric Acid Monohydrate 5949-29-1	1 - <2.5%	201-069-1	-	Eye Irrit. 2 (H319)	-	-	-
Monopropylene Glycol 57-55-6	1 - <2.5%	200-338-0	-	-	-	-	-
Amines, C12-18(even numbered)-alkyldimethyl, N-oxides 68955-55-5	0.5 - <1%	931-341-1	-	Aquatic Chronic 2 (H411) Aquatic Acute 1 (H400) Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318)	-	-	-
Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides 68424-85-1	0.025 - <0.25%	270-325-2	-	Skin Corr. 1B (H314) Aquatic Chronic 1 (H410) Aquatic Acute 1 (H400) Acute Tox. 4 (H302) Eye Dam. 1 (H318)	-	-	-
Sodium Hydroxide 1310-73-2	<0.025%	(011-002-00-6) 215-185-5	-	Skin Corr. 1A (H314) Met. Corr. 1 (H290)	Eye Irrit. 2 :: 0.5%<=C<2% Skin Corr. 1A :: C>=5% Skin Corr. 1B :: 2%<=C<5% Skin Irrit. 2 :: 0.5%<=C<2%	-	-
2,6-di-tert-butyl-p-cresol 128-37-0	<0.025%	204-881-4	-	Aquatic Chronic 1 (H410) Aquatic Acute 1 (H400)	-	-	-

Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration >= 0.1% (UK REACH Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.

Skin contact Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Ingestion Rinse mouth. Do NOT induce vomiting.

Self-protection of the first aider Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	May cause redness and tearing of the eyes. Burning sensation. Prolonged contact may cause redness and irritation.
Effects of Exposure	See Section 11 for additional Toxicological Information.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	No information available.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.
Other information	Refer to protective measures listed in Sections 7 and 8.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions	See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Take up mechanically, placing in appropriate containers for disposal.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections	See section 8 for more information. See section 13 for more information.

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. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	United Kingdom
Monopropylene Glycol 57-55-6	TWA: 150 ppm TWA: 474 mg/m^3 TWA: 10 mg/m^3 STEL: 450 ppm STEL: 1422 mg/m^3 STEL: 30 mg/m^3
Sodium Hydroxide 1310-73-2	STEL: 2 mg/m^3
2,6-di-tert-butyl-p-cresol 128-37-0	TWA: 10 mg/m^3 STEL: 30 mg/m^3

Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
Monopropylene Glycol 57-55-6			168 mg/m^3 [4] [6] 10 mg/m^3 [5] [6]
Amines, C12-18(even numbered)-alkyldimethyl, N-oxides 68955-55-5		11 mg/kg bw/day [4] [6]	6.2 mg/m^3 [4] [6]
Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides 68424-85-1		5.7 mg/kg bw/day [4] [6]	3.96 mg/m^3 [4] [6]

Chemical name	Oral	Dermal	Inhalation
2,6-dimethyloct-7-en-2-ol 18479-58-8		20.8 mg/kg bw/day [4] [6]	73.5 mg/m^3 [4] [6]
p-(2-methylpropyl)-4-hydroxy-4-methyl tetrahydropyran 63500-71-0		41.7 mg/kg bw/day [4] [6]	44.1 mg/m^3 [4] [6]
Sodium Hydroxide 1310-73-2			1 mg/m^3 [5] [6]
Geraniol 106-24-1		12.5 mg/kg bw/day [4] [6] 11800 µg/cm2 [5] [6]	161.6 mg/m^3 [4] [6]
methyl 2,4-dihydroxy-3,6-dimethylbenzoate 4707-47-5		2500 µg/cm2 [5] [6]	
Linalyl acetate 115-95-7		2.5 mg/kg bw/day [4] [6] 236.2 µg/cm2 [5] [6] 236.2 µg/cm2 [5] [7]	2.75 mg/m^3 [4] [6]
2-propenyl(3-methylbutoxy)acetate 67634-00-8		1.4 mg/kg bw/day [4] [6]	4.93 mg/m^3 [4] [6]
2,6-di-tert-butyl-p-cresol 128-37-0		0.5 mg/kg bw/day [4] [6]	3.5 mg/m^3 [4] [6]
dl-Citronellol 106-22-9		327.4 mg/kg bw/day [4] [6] 2950 µg/cm2 [5] [7]	161.6 mg/m^3 [4] [6] 10 mg/m^3 [5] [6] 10 mg/m^3 [5] [7]
Linalool 78-70-6		2.5 mg/kg bw/day [4] [6] 5 mg/kg bw/day [4] [7] 3 mg/cm2 [5] [6] 3 mg/cm2 [5] [7]	2.8 mg/m^3 [4] [6] 16.5 mg/m^3 [4] [7]
Citral 5392-40-5		1.7 mg/kg bw/day [4] [6] 140 µg/cm2 [5] [6]	9 mg/m^3 [4] [6]

Notes

[4]	Systemic health effects.
[5]	Local health effects.
[6]	Long term.
[7]	Short term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
Monopropylene Glycol 57-55-6			50 mg/m^3 [4] [6] 10 mg/m^3 [5] [6]
Amines, C12-18(even numbered)-alkyldimethyl, N-oxides 68955-55-5	0.44 mg/kg bw/day [4] [6]		1.53 mg/m^3 [4] [6]
Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides 68424-85-1	3.4 mg/kg bw/day [4] [6]		1.64 mg/m^3 [4] [6]
2,6-dimethyloct-7-en-2-ol 18479-58-8	12.5 mg/kg bw/day [4] [6]		21.7 mg/m^3 [4] [6]
p-(2-methylpropyl)-4-hydroxy-4-methyl tetrahydropyran 63500-71-0	7.5 mg/kg bw/day [4] [6]		13 mg/m^3 [4] [6]
Acid Blue No.9 3844-45-9	6 mg/kg bw/day [4] [6]		
Sodium Hydroxide 1310-73-2			1 mg/m^3 [5] [6]
Geraniol	13.75 mg/kg bw/day [4] [6]	11800 µg/cm2 [5] [6]	47.8 mg/m^3 [4] [6]

Chemical name	Oral	Dermal	Inhalation
106-24-1			
methyl 2,4-dihydroxy-3,6-dimethylbenzoate 4707-47-5		1250 µg/cm2 [5] [6]	
Linalyl acetate 115-95-7	0.2 mg/kg bw/day [4] [6]	236.2 µg/cm2 [5] [6] 236.2 µg/cm2 [5] [7]	0.68 mg/m^3 [4] [6]
2-propenyl(3-methylbutoxy)acetate 67634-00-8	0.5 mg/kg bw/day [4] [6]		0.87 mg/m^3 [4] [6]
2,6-di-tert-butyl-p-cresol 128-37-0			0.86 mg/m^3 [4] [6]
dl-Citronellol 106-22-9	13.8 mg/kg bw/day [4] [6]	2950 µg/cm2 [5] [7]	47.8 mg/m^3 [4] [6] 10 mg/m^3 [5] [6] 10 mg/m^3 [5] [7]
Linalool 78-70-6	0.2 mg/kg bw/day [4] [6] 1.2 mg/kg bw/day [4] [7]	2.5 mg/kg bw/day [4] [6] 2.5 mg/kg bw/day [4] [7] 1.5 mg/cm2 [5] [6] 1.5 mg/cm2 [5] [7]	0.7 mg/m^3 [4] [6] 4.1 mg/m^3 [4] [7]
Citral 5392-40-5	0.6 mg/kg bw/day [4] [6]	140 µg/cm2 [5] [6]	2.7 mg/m^3 [4] [6]

Notes

[4] Systemic health effects.
[5] Local health effects.
[6] Long term.
[7] Short term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
Monopropylene Glycol 57-55-6	260 mg/L	183 mg/L	26 mg/L		
Amines, C12-18(even numbered)-alkyldimethyl, N-oxides 68955-55-5	0.0335 mg/L	0.0335 mg/L	0.00335 mg/L		
2,6-dimethyloctan-2-ol 18479-57-7	0.0047 mg/L		0.00047 mg/L		
Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides 68424-85-1	0.0009 mg/L	0.00016 mg/L	0.00096 mg/L		
2,6-dimethyloct-7-en-2-ol 18479-58-8	27.8 µg/L	0.278 mg/L	2.78 µg/L		
p-(2-methylpropyl)-4-hydroxy-4-methyl tetrahydropyran 63500-71-0	0.094 mg/L	0.94 mg/L	0.0094 mg/L		
Geraniol 106-24-1	0.0108 mg/L	0.108 mg/L	0.00108 mg/L		
methyl 2,4-dihydroxy-3,6-dimethyl benzoate 4707-47-5	3.3 µg/L		0.33 µg/L		

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
Linalyl acetate 115-95-7	0.011 mg/L	0.11 mg/L	0.0011 mg/L		
2-propenyl(3-methylbutoxy)acetate 67634-00-8	0.77 µg/L	7.7 µg/L	77 ng/L	0.77 µg/L	
2,6-di-tert-butyl-p-cresol 128-37-0	0.199 µg/L	1.99 µg/L	0.0199 µg/L		
dl-Citronellol 106-22-9	0.0024 mg/L	0.024 mg/L	0.00024 mg/L		
Linalool 78-70-6	0.2 mg/L	2 mg/L	0.02 mg/L		
Citral 5392-40-5	0.00678 mg/L	0.0678 mg/L	0.000678 mg/L		

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
Monopropylene Glycol 57-55-6	572 mg/kg sediment dw	57.2 mg/kg sediment dw	20000 mg/L	50 mg/kg soil dw	
Amines, C12-18(even numbered)-alkyldimethyl, N-oxides 68955-55-5	5.24 mg/kg sediment dw	0.524 mg/kg sediment dw	24 mg/L	1.02 mg/kg soil dw	11.1 mg/kg food
2,6-dimethyloctan-2-ol 18479-57-7	1.78 mg/kg sediment dw	0.178 mg/kg sediment dw	10 mg/L	0.354 mg/kg soil dw	
Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides 68424-85-1	12.27 mg/kg sediment dw	13.09 mg/kg sediment dw	0.4 mg/L	7 mg/kg soil dw	
2,6-dimethyloct-7-en-2-ol 18479-58-8	0.594 mg/kg sediment dw	0.0594 mg/kg sediment dw	10 mg/L	0.103 mg/kg soil dw	111 mg/kg food
p-(2-methylpropyl)-4-hydroxy-4-methyl tetrahydropyran 63500-71-0	0.412 mg/kg sediment dw	0.0412 mg/kg sediment dw	10 mg/L	0.0902 mg/kg soil dw	
Geraniol 106-24-1	0.115 mg/kg sediment dw	0.0115 mg/kg sediment dw	0.7 mg/L	0.0167 mg/kg soil dw	
methyl 2,4-dihydroxy-3,6-dimethyl benzoate 4707-47-5	89 µg/kg sediment dw	8.9 µg/kg sediment dw	10 mg/L	16 µg/kg soil dw	
Linalyl acetate 115-95-7	0.609 mg/kg sediment dw	0.0609 mg/kg sediment dw	1 mg/L	0.115 mg/kg soil dw	
2-propenyl(3-methylbutoxy)acetate 67634-00-8	8.93 µg/kg sediment dw	0.893 µg/kg sediment dw		1.33 µg/kg soil dw	
2,6-di-tert-butyl-p-cresol 128-37-0	99.6 µg/kg sediment dw	9.96 µg/kg sediment dw	0.17 mg/L	47.69 µg/kg soil dw	8.33 mg/kg food
dl-Citronellol 106-22-9	0.0256 mg/kg sediment dw	0.00256 mg/kg sediment dw	580 mg/L	0.00371 mg/kg soil dw	
Linalool 78-70-6	2.22 mg/kg sediment dw	0.222 mg/kg sediment dw	10 mg/L	0.327 mg/kg soil dw	7.8 mg/kg food
Citral	0.125 mg/kg	0.0125 mg/kg	1.6 mg/L	0.0209 mg/kg soil	

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
5392-40-5	sediment dw	sediment dw		dw	

8.2. Exposure controls

Engineering controls No information available.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves.

Skin and body protection No special protective equipment required.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Liquid
Color blue
Odor Fresh ozonic.
Odor threshold Not applicable

Property	Values	Remarks • Method
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
pH	2.1 - 3.5	None known
pH (as aqueous solution)	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Vapor pressure	No data available	None known
Relative density	No data available	None known
Bulk density	No data available	

Liquid Density	0.985 - 1.015	
Relative vapor density	No data available	None known
Particle characteristics		
Particle Size		
Particle Size Distribution		
Explosive properties	No information available	
Oxidizing properties	No information available	

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Stable.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation No known effect based on information supplied.

Eye contact Causes serious eye irritation. May cause redness, itching, and pain.

Skin contact May cause irritation.

Ingestion No known effect based on information supplied.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms May cause redness and tearing of the eyes. Prolonged contact may cause redness and irritation. Irritating.

Acute toxicity .

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	202,702.70 mg/kg
ATEmix (dermal)	141,304.30 mg/kg
ATEmix (inhalation-gas)	99,999.00 ppm
ATEmix (inhalation-vapor)	99,999.00 mg/l
ATEmix (inhalation-dust/mist)	99,999.00 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Citric Acid Monohydrate	= 3 g/kg (Rat)	> 2000 mg/kg (Rat)	-
Monopropylene Glycol	= 20 g/kg (Rat)	= 20800 mg/kg (Rabbit)	-
Amines, C12-18(even numbered)-alkyldimethyl, N-oxides	-	> 2000 mg/kg (Rat)	-
Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides	= 426 mg/kg (Rat)	-	-
Sodium Hydroxide	= 325 mg/kg (Rat)	= 1350 mg/kg (Rabbit)	-
2,6-di-tert-butyl-p-cresol	> 2930 mg/kg (Rat)	> 2000 mg/kg (Rat)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation May cause skin irritation. Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT - single exposure Based on available data, the classification criteria are not met.

STOT - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

Other adverse effects

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Not considered to be harmful to aquatic life.

Unknown aquatic toxicity Contains 0.44538 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Citric Acid Monohydrate	-	LC50: =1516mg/L (96h, Lepomis macrochirus)	-	-
Monopropylene Glycol	EC50: =19000mg/L (96h, Pseudokirchneriella subcapitata)	LC50: =51600mg/L (96h, Oncorhynchus mykiss) LC50: 41 - 47mL/L (96h, Oncorhynchus mykiss) LC50: =51400mg/L (96h, Pimephales promelas) LC50: =710mg/L (96h, Pimephales promelas)	-	EC50: >1000mg/L (48h, Daphnia magna)
Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides	-	LC50: 0.223 - 0.46mg/L (96h, Lepomis macrochirus) LC50: 0.823 - 1.61mg/L (96h, Oncorhynchus mykiss) LC50: =2.4mg/L (96h, Oryzias latipes) LC50: =1.3mg/L (96h, Poecilia reticulata)	-	-
Sodium Hydroxide	-	LC50: =45.4mg/L (96h, Oncorhynchus mykiss)	-	-
2,6-di-tert-butyl-p-cresol	EC50: =6mg/L (72h, Pseudokirchneriella subcapitata) EC50: >0.42mg/L (72h, Desmodesmus subspicatus)	-	-	-

12.2. Persistence and degradability

Persistence and degradability None known.

12.3. Bioaccumulative potential

Bioaccumulation Not likely to bioaccumulate.

Component Information

Chemical name	Partition coefficient
Citric Acid Monohydrate	-1.72
Monopropylene Glycol	-1.07
Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides	2.75
2,6-di-tert-butyl-p-cresol	5.1

12.4. Mobility in soil

Mobility in soil Not determined.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB above the threshold of declaration.

Chemical name	PBT and vPvB assessment
Citric Acid Monohydrate	The substance is not PBT / vPvB
Monopropylene Glycol	The substance is not PBT / vPvB
Amines, C12-18(even numbered)-alkyldimethyl, N-oxides	The substance is not PBT / vPvB
Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides	The substance is not PBT / vPvB
Sodium Hydroxide	The substance is not PBT / vPvB
2,6-di-tert-butyl-p-cresol	The substance is not PBT / vPvB

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards Not applicable
14.6 Special precautions for user
Special Provisions None

IMDG

14.1 UN number or ID number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated

14.5 Environmental hazards Not applicable
14.6 Special precautions for user
Special Provisions None
14.7 Maritime transport in bulk according to IMO instruments Not regulated

RID
14.1 UN number or ID number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards Not applicable
14.6 Special precautions for user
Special Provisions None

ADR
14.1 UN number or ID number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards Not applicable
14.6 Special precautions for user
Special Provisions None

SECTION 15: Regulatory information

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

National regulations

Authorizations and/or restrictions on use:
This product does not contain substances subject to authorization (UK REACH - Annex XIV). This product does not contain substances subject to restriction (UK REACH - Annex XVII).

Persistent Organic Pollutants
Not applicable

Export Notification requirements
Not applicable

Named dangerous substances per COMAH Regulations 2015 (as amended)
Not applicable

The Ozone-Depleting Substances Regulations 2015
Not applicable

The Biocidal Products Regulations 2001 (as amended)

Chemical name	The Biocidal Products Regulations 2001 (as amended)
Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides - 68424-85-1	Product-type 2: Disinfectants and algaecides not intended for direct application to humans or animals Product-type 3: Veterinary hygiene Product-type 4: Food and feed area Product-type 8: Wood preservatives Product-type 1: Human hygiene Product-type 10: Construction material preservatives Product-type 11: Preservatives for liquid-cooling and processing systems Product-type 12: Slimicides Product-type 22: Embalming and taxidermist

	fluids

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)
Not applicable

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)

Chemical name	Poisons and Explosive Precursors
Sodium Hydroxide	Poison, Reportable 12 % of total caustic alkalinity

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDSL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report A Chemical Safety Assessment has not been carried out for this mixture

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3
H290 - May be corrosive to metals
H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H315 - Causes skin irritation
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
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

Legend
SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitizers		

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapor	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	On basis of test data
Respiratory sensitization	Calculation method
Skin sensitization	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 03/05/2024

Reason for revision Created

This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended) Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Disclaimer

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.

End of Safety Data Sheet

UK SDS version information - XGHS

UL release:
GHS Revision 7
2022 Q1

United Kingdom Partial process, including GHS Wizard, NO TW

Full text of H-Statements referred to under section 3: H290 - May be corrosive to metals H302 - Harmful if swallowed H314 - Causes severe skin burns and eye damage H315 - Causes skin irritation H318 - Causes serious eye damage H319 - Causes serious eye irritation 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

Chemical name	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)
Citric Acid Monohydrate	Eye Irrit. 2 (H319)	
Amines, C12-18(even numbered)-alkyldimethyl, N-oxides	Aquatic Chronic 2 (H411) Aquatic Acute 1 (H400) Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318)	
Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides	Skin Corr. 1B (H314) Aquatic Chronic 1 (H410) Aquatic Acute 1 (H400) Acute Tox. 4 (H302) Eye Dam. 1 (H318)	
Sodium Hydroxide	Skin Corr. 1A (H314) Met. Corr. 1 (H290)	Eye Irrit. 2 :: 0.5%<=C<2% Skin Corr. 1A :: C>=5% Skin Corr. 1B :: 2%<=C<5% Skin Irrit. 2 :: 0.5%<=C<2%
2,6-di-tert-butyl-p-cresol	Aquatic Chronic 1 (H410) Aquatic Acute 1 (H400)	