

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

1.1. Product identifier

Trade name or designation of the mixture	MACLEANS TOOTHPASTE
Registration number	-
Synonyms	MFC00870 MACLEANS MULTICARE HEALTH WHITENING * TP-NS-0038/38 MACLEANS FRESH GEL * MFC00933 EXTREME CLEAN WHITENING STRIPPED TOOTHPASTE * MFC00130 MACLEANS MILK TEETH * MFC02295 MACLEANS LITTLE TEETH * MFC03496 MACLEANS FRESHMINT * MFC03077 MACLEANS ICE WHITENING * MFC03721 MACLEANS COOLMINT * SODIUM FLUORIDE, FORMULATED PRODUCT
Issue date	27-March-2013
Version number	06
Revision date	25-January-2016
Supersedes date	28-July-2015

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

Identified uses	Oral Care
Uses advised against	No other uses are advised.

1.3. Details of the supplier of the safety data sheet

GlaxoSmithKline UK
980 Great West Road
Brentford, Middlesex TW8 9GS UK
UK General Information (normal business hours): +44-20-8047-5000

Email Address: msds@gsk.com
Website: www.gsk.com

1.4. Emergency telephone number

TRANSPORT EMERGENCIES:
UK In-country toll call: +(44)-870-8200418
International toll call: +1 703 527 3887
available 24 hrs/7 days; multi-language response

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Directive 67/548/EEC or 1999/45/EC as amended

Exempt from requirements - product regulated as a medicinal product, cosmetic product or medical device.

Classification according to Regulation (EC) No 1272/2008 as amended

Exempt from requirements - product regulated as a medicinal product, cosmetic product or medical device.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Exempt from requirements - product regulated as a medicinal product, cosmetic product or medical device.

2.3. Other hazards

Assume that this product is capable of sustaining combustion.
See section 11 for additional information on health hazards.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
GLYCERIN	<40	56-81-5 200-289-5	-	-	
Classification:	-				
D-SORBITOL	0 - 30	50-70-4 200-061-5	-	-	
Classification:	-				
SODIUM TRIPOLYPHOSPHATE	0 - 7.5	7758-29-4 231-838-7	-	-	
Classification:	Skin Irrit. 2;H315, Eye Irrit. 2;H319, Aquatic Chronic 3;H412				
SODIUM LAURETH SULFATE	1 - < 3	9004-82-4 -	-	-	
Classification:	Acute Tox. 4;H302, Eye Irrit. 2;H319, Aquatic Chronic 2;H411				
TP8938 LEMON/LIME BLAST FLAVOUR	0 - 3	Unassigned -	-	-	
Classification:	Flam. Liq. 3;H226, Asp. Tox. 1;H304, Skin Irrit. 2;H315, Aquatic Chronic 2;H411				
Titanium dioxide	0 - 2	13463-67-7 236-675-5	-	-	
Classification:	Carc. 2;H351				
XANTHAN GUM	0 - 2	11138-66-2 234-394-2	-	-	
Classification:	-				
ALUMINA	0 - 1.5	1344-28-1 215-691-6	-	-	
Classification:	-				
FLAVOUR TP 15994 JADE (GIVAUDAN)	0 - 1.2	Unassigned -	-	-	
Classification:	Skin Irrit. 2;H315, Skin Sens. 1;H317, Aquatic Chronic 3;H412				
FLAVOUR TP 16491 ORIENT	0 - 1.1	Unassigned -	-	-	
Classification:	Skin Irrit. 2;H315, Skin Sens. 1;H317, Eye Irrit. 2;H319, Aquatic Chronic 3;H412				
MINT FLAVOUR	0 - 1	Unassigned -	-	-	
Classification:	Acute Tox. 4;H302, Skin Irrit. 2;H315, Skin Sens. 1;H317, Aquatic Chronic 2;H411				
OIL OF SPEARMINT	0 - 1	8008-79-5 -	-	-	
Classification:	Flam. Liq. 3;H226, Acute Tox. 4;H302, Asp. Tox. 1;H304, Skin Irrit. 2;H315, Skin Sens. 1;H317, Eye Irrit. 2;H319, Aquatic Chronic 2;H411				
PEPPERMINT OIL	0 - 1	8006-90-4 -	-	-	
Classification:	Skin Irrit. 2;H315, Skin Sens. 1;H317, Aquatic Chronic 2;H411				
SPEARMINT OIL TERPENELESS	< 1	68917-46-4 -	-	-	
Classification:	Asp. Tox. 1;H304, Skin Irrit. 2;H315, Skin Sens. 1;H317, Eye Irrit. 2;H319, STOT SE 3;H335, Aquatic Chronic 3;H412				
COCOAMIDOPROPYL BETAINE	0 - 0.65	61789-40-0 263-058-8	-	-	
Classification:	Aquatic Acute 1;H400, Aquatic Chronic 1;H410				

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Sodium fluoride	<0.5	7681-49-4 231-667-8	-	009-004-00-7	#
Classification:	Acute Tox. 3;H301, Skin Irrit. 2;H315, Eye Irrit. 2;H319				
L-CARVONE, 97+%, FCC	< 0.3	6485-40-1 229-352-5	-	-	
Classification:	Acute Tox. 4;H302, Skin Sens. 1;H317				
Zinc chloride	0 - 0.3	7646-85-7 231-592-0	-	030-003-00-2	
Classification:	Acute Tox. 4;H302, Skin Corr. 1B;H314, STOT SE 3;H335, Aquatic Acute 1;H400, Aquatic Chronic 1;H410				
DRAGOCO BASE 9/692262	< 0.2	Unassigned -	-	-	
Classification:	Acute Tox. 4;H302, Skin Sens. 1;H317, Aquatic Chronic 3;H412				
METHYL PARABEN	0 - 0.2	99-76-3 202-785-7	-	-	
Classification:	Skin Irrit. 2;H315				
SODIUM HYDROXIDE	< 0.2	1310-73-2 215-185-5	-	011-002-00-6	
Classification:	Acute Tox. 3;H301, Acute Tox. 4;H312, Skin Corr. 1A;H314				
Limonene	0 - 0.1	138-86-3 205-341-0	-	601-029-00-7	
Classification:	Flam. Liq. 3;H226, Skin Irrit. 2;H315, Skin Sens. 1;H317, Aquatic Acute 1;H400, Aquatic Chronic 1;H410				

Other components below reportable levels >58.0

SECTION 4: First aid measures

General information In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

Skin contact Immediately flush skin with plenty of water. Take off contaminated clothing and wash before reuse. Get medical attention if symptoms occur.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Ingestion If swallowed, rinse mouth with water (only if the person is conscious). If ingestion of a large amount does occur, call a poison control centre immediately. Do not induce vomiting without advice from poison control center.

4.2. Most important symptoms and effects, both acute and delayed Direct contact with eyes may cause temporary irritation.

4.3. Indication of any immediate medical attention and special treatment needed No specific antidotes are recommended. Treat according to locally accepted protocols. For additional guidance, refer to the current prescribing information or to the local poison control information centre.

SECTION 5: Firefighting measures

General fire hazards Assume that this product is capable of sustaining combustion.

5.1. Extinguishing media

Suitable extinguishing media Water. Carbon dioxide (CO₂). Dry powder. Foam.

Unsuitable extinguishing media None known.

5.2. Special hazards arising from the substance or mixture None expected under normal conditions.

5.3. Advice for firefighters

Special protective equipment for firefighters

Wear suitable protective equipment.

Special fire fighting procedures

Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Local authorities should be advised if significant spillages cannot be contained. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Wear appropriate personal protective equipment. Ensure adequate ventilation. Keep out of low areas.

For emergency responders

Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Stop the flow of material, if this is without risk. Following product recovery, flush area with water.

6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

No special control measures required for the normal handling of this product. Normal room ventilation is expected to be adequate for routine handling of this product.

7.2. Conditions for safe storage, including any incompatibilities

Room temperature - normal conditions. Store in original tightly closed container.

7.3. Specific end use(s)

Oral Care

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

GSK

Components

Components	Type	Value	Note
COCOAMIDOPROPYL BETAINE (CAS 61789-40-0)	OHC	1	PROVISIONAL
Limonene (CAS 138-86-3)	OHC	3	SENSITISER
PEG 6 (CAS 2615-15-8)	OHC	2	
SODIUM TRIPOLYPHOSPHATE (CAS 7758-29-4)	OHC	1	
TP8938 LEMON/LIME BLAST FLAVOUR	OHC	2	PROVISIONAL

UK. EH40 Workplace Exposure Limits (WELs)

Components

Components	Type	Value	Form
ALUMINA (CAS 1344-28-1)	TWA	4 mg/m ³ 10 mg/m ³	Respirable dust. Inhalable dust.
GLYCERIN (CAS 56-81-5)	TWA	10 mg/m ³	Mist.
Sodium fluoride (CAS 7681-49-4)	TWA	2.5 mg/m ³	
SODIUM HYDROXIDE (CAS 1310-73-2)	STEL	2 mg/m ³	
Titanium dioxide (CAS 13463-67-7)	TWA	4 mg/m ³	Respirable.
Zinc chloride (CAS 7646-85-7)	STEL	10 mg/m ³ 2 mg/m ³	Inhalable Fume.
	TWA	1 mg/m ³	Fume.

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU

Components

Components	Type	Value
Sodium fluoride (CAS 7681-49-4)	TWA	2.5 mg/m ³

Biological limit values

No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures	Not available.
Derived no-effect level (DNEL)	Not available.
Predicted no effect concentrations (PNECs)	Not available.

8.2. Exposure controls

Appropriate engineering controls An Exposure Control Approach (ECA) is established for operations involving this material based upon the OEL/Occupational Hazard Category and the outcome of a site- or operation-specific risk assessment. General ventilation normally adequate.

Individual protection measures, such as personal protective equipment

General information	Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Follow all local regulations if personal protective equipment (PPE) is used in the workplace.
Eye/face protection	Not normally needed. If contact is likely, safety glasses with side shields are recommended. (e.g. EN 166).
Skin protection	
- Hand protection	Not normally needed. For prolonged or repeated skin contact use suitable protective gloves. Select suitable chemical resistant protective gloves (EN 374) with a protective index 6 (>480min permeation time).
- Other	Not normally needed. Wear suitable protective clothing as protection against splashing or contamination. (EN 14605 for splashes, EN ISO 13982 for dust).
Respiratory protection	No personal respiratory protective equipment normally required. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Where breathable aerosols/dust are formed, use suitable combination filter for gases/vapours of organic, inorganic, acid inorganic, alkaline compounds and toxic particles (eg. EN 14387).
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
Hygiene measures	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. For advice on suitable monitoring methods, seek guidance from a qualified environment, health and safety professional.

Environmental exposure controls

Hazard guidance and control recommendations	Not available.
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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state	Solid.
Form	Paste.
Colour	Not available.
Odour	Not available.
Odour threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.

Solubility (other)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.
9.2. Other information	No relevant additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity	Not available.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	None under normal conditions.
10.5. Incompatible materials	None expected under normal conditions of use.
10.6. Hazardous decomposition products	Irritating and/or toxic fumes and gases may be emitted upon the products decomposition.

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Inhalation	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Skin contact	Health injuries are not known or expected under normal use.
Eye contact	Health injuries are not known or expected under normal use. Direct contact with eyes may cause temporary irritation.
Ingestion	Health injuries are not known or expected under normal use. May be harmful if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

Symptoms Direct contact with eyes may cause temporary irritation.

11.1. Information on toxicological effects

Acute toxicity Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

Components	Species	Test results
COCOAMIDOPROPYL BETAINE (CAS 61789-40-0)		
Acute		
Oral		
LD50	Mouse	> 2000 mg/kg
D-SORBITOL (CAS 50-70-4)		
Acute		
Oral		
LD50	Rat	15.9 g/kg
GLYCERIN (CAS 56-81-5)		
Acute		
Oral		
LD50	Rat	> 2000 mg/kg
Limonene (CAS 138-86-3)		
Acute		
Oral		
LD50	Rat	4400 mg/kg
METHYL PARABEN (CAS 99-76-3)		
Acute		
Oral		
LD50	Mouse	> 8 g/kg

Components	Species	Test results
OIL OF SPEARMINT (CAS 8008-79-5)		
Acute		
Oral		
LD50	Rat	> 5000 mg/kg
PEPPERMINT OIL (CAS 8006-90-4)		
Acute		
Oral		
LD50	Rat	2426 mg/kg
SODIUM HYDROXIDE (CAS 1310-73-2)		
Acute		
Dermal		
LD50	Rabbit	1350 mg/kg
Oral		
LD50	Rat	104 - 340 mg/kg
SODIUM LAURETH SULFATE (CAS 9004-82-4)		
Acute		
Oral		
LD50	Rat	1288 mg/kg
SODIUM TRIPOLYPHOSPHATE (CAS 7758-29-4)		
Acute		
Oral		
LD50	Rat	3120 mg/kg
Titanium dioxide (CAS 13463-67-7)		
Acute		
Inhalation		
LC50	Rat	6820 mcg/m3
Oral		
LD50	Rat	> 24 g/kg
Chronic		
Inhalation		
LOEC	Rat	8.6 mg/m3, 1 years TiO2 accumulated in interstitial macrophages, aggregated interstitial cells and particle laden macrophages in lymphoid tissue.
NOAEC	Rat	250 mg/m3, 2 years Highest dose 5 mg/m3, 24 months
Subacute		
Inhalation		
LOEL	Rat	0.1 - 35 mg/m3, 4 weeks Mild macrophage hyperplasia, no change in bronchio-alveolar lavage fluid.
NOAEC	Guinea pig	26 mg/m3, 3 weeks No evidence of significant inflammation in respiratory tract.
Oral		
NOAEL	Rat	100000 ppm, 14 Day Dietary study, highest dose tested.
Subchronic		
Inhalation		
LOEC	Rat	3.2 - 20 mg/m3, 8 min Accumulation of TiO2 in macrophages and evidence of pulmonary inflammation.
XANTHAN GUM (CAS 11138-66-2)		
Acute		
Inhalation		
LC50	Rat	> 21 mg/l, 1 hour exposure

Components	Species	Test results
Oral LD50	Rat	> 5000 mg/kg
Zinc chloride (CAS 7646-85-7)		
Acute Oral LD50	Rat	350 mg/kg
* Estimates for product may be based on additional component data not shown.		
Skin corrosion/irritation	Health injuries are not known or expected under normal use.	
Corrosivity		
SODIUM HYDROXIDE	Literature search Result: Causes severe burns.	
PEPPERMINT OIL	Literature search Result: Positive	
Irritation Corrosion - Skin		
Titanium dioxide	0, Literature data Result: Non-irritant Species: Guinea pig 0, Literature data Result: Non-irritant Species: Human Acute dermal irritation; OECD 404, Literature data Result: Non-irritant Species: Rabbit	
Serious eye damage/eye irritation	Health injuries are not known or expected under normal use. Direct contact with eyes may cause temporary irritation.	
Eye		
SODIUM HYDROXIDE	Literature search Result: Causes severe burns.	
PEPPERMINT OIL	Literature search Result: Mild/moderate Irritant	
Titanium dioxide	OECD 405, Literature data Result: Mild irritant Species: Rabbit	
Respiratory sensitisation	No studies have been conducted.	
Skin sensitisation	None known. This product is not expected to cause skin sensitisation.	
Sensitisation		
Titanium dioxide	5 % Optimisation Test, Literature data - Vehicle: petrolatum Result: negative Species: Guinea pig Test Duration: 48 hour exposure	
Limonene	Literature search Result: Positive	
PEPPERMINT OIL	Literature search Result: Positive	
Titanium dioxide	Patch test, Literature data Result: negative Species: Human	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Mutagenicity		
Titanium dioxide	Ames, Literature data Result: negative Micronucleus Assay in vitro, CHO cells, Literature data Result: negative Micronucleus Assay in vitro, cultured human peripheral lymphocytes, Literature data Result: Positive Syrian Hamster Embryo (SHE) cell transformation assay Result: negative WIL2-NS HPRT/ t-Thioguanidine - Human B-Cell lymphoblastoid, Literature data Result: Positive	
Carcinogenicity	Health injuries are not known or expected under normal use. Titanium Dioxide produced carcinogenic effects in a lifetime study in mice. High concentrations or doses administered over an extended period of time were required to produce adverse effects.	

Carcinogenicity

Titanium dioxide

0.5 mg/m³, Literature data

Result: negative

Species: Rat

Test Duration: 24 months

0.72 - 14.8 mg/m³, Literature data

Result: negative

Species: Mouse

10 - 250 mg/m³, Dietary study - Literature data.

Result: Inflammation at all doses with alveolar/bronchiolar adenoma at the highest concentration.

Species: Rat

Test Duration: 24 months

25000 - 50000 ppm, Dietary study

Result: negative

Species: Mouse

25000 - 50000 ppm, Dietary study - Literature data.

Result: negative

Species: Rat

7.2 - 14.8 mg/m³, Literature data

Result: Lung tumour

Species: Rat

Test Duration: 24 months

IARC Monographs. Overall Evaluation of Carcinogenicity

Sodium fluoride (CAS 7681-49-4)

3 Not classifiable as to carcinogenicity to humans.

Titanium dioxide (CAS 13463-67-7)

2B Possibly carcinogenic to humans.

Reproductive toxicity	Contains no ingredient listed as toxic to reproduction.
Specific target organ toxicity - single exposure	None known.
Specific target organ toxicity - repeated exposure	None known.
Aspiration hazard	Not likely, due to the form of the product.
Mixture versus substance information	Not available.
Other information	Occupational exposure to the substance or mixture may cause adverse effects.

SECTION 12: Ecological information

12.1. Toxicity

No information is available about the potential of this product to produce adverse environmental effects. Contains a substance which causes risk of hazardous effects to the environment. The product contains a substance which may cause long-term adverse effects in the environment.

Components		Species	Test results
COCOAMIDOPROPYL BETAINE (CAS 61789-40-0)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Green algae (<i>Scenedesmus subspicatus</i>)	0.55 mg/l, 96 hours
	NOEC	Green algae (<i>Scenedesmus subspicatus</i>)	0.09 mg/l, 96 hours
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	6.5 mg/l, 48 hours
	NOEC	Water flea (<i>Daphnia magna</i>)	1.6 mg/l, 48 hours
Fish	EC50	Zebra fish (<i>Adult Brachydanio rerio</i>)	2 mg/l, 96 hours semi-static test conditions
	NOEC	Zebra fish (<i>Adult Brachydanio rerio</i>)	1.7 mg/l, 96 hours semi-static test conditions
Microtox	MIC	<i>Pseudomonas</i>	> 3000 mg/l, 16 hours
<i>Chronic</i>			
Crustacea	LOEC	Water flea (<i>Daphnia magna</i>)	3.6 mg/l, 21 days
	NOEC	Water flea (<i>Daphnia magna</i>)	0.9 mg/l, 21 days
Limonene (CAS 138-86-3)			
Aquatic			
<i>Acute</i>			
Algae	NOEC	Algae	> 4.08 mg/l, 96 hours Static test

Components		Species	Test results
Crustacea	EC50	Water flea (Daphnia magna)	28.2 mg/l, 48 hours Flow-through test
Fish	EC50	Fathead minnow (Adult Pimephales promelas)	38.5 mg/l, 96 hours Flow-through test
		Golden ide/orfe (Adult Leuciscus idus)	32 mg/l, 48 hours
METHYL PARABEN (CAS 99-76-3)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	11.2 mg/l, 48 hours
Fish	LC50	Medaka, high-eyes (Oryzias latipes)	59.5 mg/l, 96 hours
<i>Chronic</i>			
Crustacea	NOEC	Water flea (Daphnia magna)	0.2 mg/l, 21 days OECD 211
Sodium fluoride (CAS 7681-49-4)			
<i>Acute</i>			
	IC50	Activated sludge	2930 mg/l, 3 hours
Aquatic			
<i>Acute</i>			
Algae	EC50	Green algae (Selenastrum capricornutum)	272 mg/l, 96 hours
Crustacea	EC50	Water flea (Daphnia magna)	340 mg/l, 48 hours Static test
Fish	EC50	Fathead minnow (Juvenile Pimephales promelas)	180 mg/l, 96 hours Static renewal test
		Mosquito fish (Adult Gambusia affinis)	418 mg/l, 96 hours Static test
		Rainbow trout (Juvenile Oncorhyncus mykiss)	108 mg/l, 96 hours Static test
SODIUM HYDROXIDE (CAS 1310-73-2)			
Aquatic			
<i>Acute</i>			
Fish	EC50	Mosquito fish (Adult Gambusia affinis)	125 mg/l, 96 hours Static test
		Rainbow trout (Adult Oncorhyncus mykiss)	45.4 mg/l, 96 hours Static test
SODIUM LAURETH SULFATE (CAS 9004-82-4)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	3.12 mg/l, 48 hours
SODIUM TRIPOLYPHOSPHATE (CAS 7758-29-4)			
<i>Acute</i>			
	IC50	Activated sludge	> 1000 mg/l, 3 hours
Aquatic			
<i>Acute</i>			
Algae	EC50	Algae	60 - 120 mg/l
Crustacea	EC50	Water flea (Daphnia magna)	1089 mg/l, 50 hours
Fish	EC50	Golden ide/orfe (Adult Leuciscus idus)	1650 mg/l, 48 hours
		Orange-red killfish (Adult Oryzias latipes)	590 mg/l, 48 hours Static test
Titanium dioxide (CAS 13463-67-7)			
Aquatic			
Fish	LC50	Mummichog (Fundulus heteroclitus)	> 1000 mg/l, 96 hours
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	> 1000 mg/l, 48 hours Static test
XANTHAN GUM (CAS 11138-66-2)			
Aquatic			
<i>Acute</i>			
Fish	EC50	Rainbow trout (Adult Oncorhyncus mykiss)	420 mg/l, 96 hours Static test

Components	Species	Test results
Zinc chloride (CAS 7646-85-7)		
<i>Acute</i>		
	IC50	Activated sludge 30 mg/l
Aquatic		
<i>Acute</i>		
Algae	EC50	Green algae (Selenastrum capricornutum) 136 µg/l, 72 hours OECD 201
Crustacea	EC50	Water flea (Ceriodaphnia dubia) 169 µg/l, 48 hours
Fish	EC50	Bluegill sunfish (Adult Lepomis macrochirus) 2.86 - 3.78 mg/l, 96 hours
		Fathead minnow (Adult Pimephales promelas) 0.55 mg/l, 96 hours
		Guppy (Juvenile Poecilia reticulata) 3.25 mg/l, 96 hours
		Rainbow trout (Adult Oncorhynchus mykiss) 0.066 mg/l, 96 hours
<i>Chronic</i>		
Algae	NOEC	Green algae (Pseudokirchneriella subcapitata) 24 µg/l, 3 days OECD 201

* Estimates for product may be based on additional component data not shown.

12.2. Persistence and degradability

Photolysis

Half-life (Photolysis-atmospheric)

Limonene < 3 Hours Estimated

Biodegradability

Percent degradation (Aerobic biodegradation-inherent)

COCOAMIDOPROPYL BETAINE 97 %, 28 days Modified Zahn-Wellens, DOC removal., Activated sludge
99 %, 28 days Modified Zahn-Wellens, DOC removal., Activated sludge

Percent degradation (Aerobic biodegradation-ready)

COCOAMIDOPROPYL BETAINE 100 %, 20 Days Modified Sturm test., Activated sludge
84 %, 30 days Closed Bottle test, Activated sludge
Limonene 41 - 98 %, 14 days Modified MITI test, Activated sludge
> 93.8 %, 14 days Coupled Unit test (OECD 303A), Activated sludge
METHYL PARABEN 89 %, 28 days, OECD 301B
SODIUM LAURETH SULFATE 100 % River die away, River water

12.3. Bioaccumulative potential

Partition coefficient

n-octanol/water (log Kow)

D-SORBITOL -2.2
GLYCERIN -1.76
Limonene 4.232
METHYL PARABEN 1.96

Bioconcentration factor (BCF)

D-SORBITOL 1 Estimated
Limonene 246 - 262 Calculated
Sodium fluoride 2.3 Measured
Zinc chloride > 1000 Measured

12.4. Mobility in soil

Adsorption

Soil/sediment sorption - log Koc

D-SORBITOL 0.3 Estimated
Limonene 3.01 - 3.68 Estimated

Mobility in general

Volatility

Henry's law

D-SORBITOL 0 atm m³/mol Estimated
Limonene 0.0319 atm m³/mol, 25 C Estimated

12.5. Results of PBT and vPvB assessment	Not available.
12.6. Other adverse effects	Not available.
12.7. Additional information	None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container.

SECTION 14: Transport information

ADR	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	MARPOL Annex II applies to liquids used in a ship's operation that pose a threat to the marine environment. These materials may not be transported in bulk.

SECTION 15: Regulatory information

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

EU regulations

- Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended**
Not listed.
- Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended**
Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended**
Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended**
Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended**
Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended**
Not listed.
- Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended**
Not listed.
- Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA**
Not listed.

Authorisations

- Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended**
Not listed.

Restrictions on use

- Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended**
Zinc chloride (CAS 7646-85-7)
- Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended**
Not listed.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding, as amended

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances

Limonene (CAS 138-86-3)

Zinc chloride (CAS 7646-85-7)

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work, as amended

Limonene (CAS 138-86-3)

Sodium fluoride (CAS 7681-49-4)

SODIUM HYDROXIDE (CAS 1310-73-2)

Zinc chloride (CAS 7646-85-7)

Directive 94/33/EC on the protection of young people at work, as amended

Limonene (CAS 138-86-3)

Sodium fluoride (CAS 7681-49-4)

SODIUM HYDROXIDE (CAS 1310-73-2)

Zinc chloride (CAS 7646-85-7)

Other regulations

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

National regulations

Not available.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

Not available.

References

GSK Hazard Determination

Information on evaluation method leading to the classification of mixture

Not available.

Full text of any H-statements not written out in full under Sections 2 to 15

H226 Flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
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.
H412 Harmful to aquatic life with long lasting effects.

Revision information

Product and Company Identification: Synonyms
Composition / Information on Ingredients: Disclosure Overrides
Regulatory Information: United States

Training information

Not available.

Disclaimer

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create any warranty, express or implied. It is the responsibility of the user to determine the applicability of this information and the suitability of the material or product for any particular purpose.