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

1.1 Product Identifier: **Christmas Spiced Hand Wash**
0729802

1.2 Uses: Hand Wash

1.3 Supplier: Marks and Spencer plc
PO Box 3339
Chester
CH99 9QS
UK

Telephone: 01342 870900

1.4 Emergency telephone: 01342 870900

2. SECTION 2: Hazards Identification

2.1 Classification of the mixture

GHS/CLP classification according to EC 1272/2008

Eye irritant, category 2.	H319:	Causes serious eye irritation.
	EUH208:	Contains 3-Phenylacrylaldehyde. May produce an allergic reaction.

2.2 Label Elements

Label elements according to EC 1272/2008

2.2.1	Hazard Pictograms:		
2.2.2	Signal Word:	Warning.	
2.2.3	Named Substances:	None required.	
2.2.4	Hazard Statements:	H319:	Causes serious eye irritation.
		EUH208:	Contains 3-Phenylacrylaldehyde. May produce an allergic reaction.
2.2.5	Precautionary Statements:	P280:	Wear eye protection.
		P305+P351+P338:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P337+P313:	If eye irritation persists: Get medical advice/attention.
2.2.6	Supplemental Hazard Statements:	None required.	

2.3 Other Hazards: Does not contain any materials classified as PBT or vPvB in accordance with Annex XIII of EC 1907/2006.

3. SECTION 3: Composition/Information on Ingredients

Description of the mixture:

Component	CAS- No.	EC-No.	Index No.	RRN	% w/w	Classification (EC 1272/2008)
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	68891-38-3	500-234-8		01-2119488639-16	8.40000	Skin Irrit. 2: H315 Eye Dam. 1: H318 Aquatic Chronic 3: H412
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	-	931-296-8		01-2119488533-30	2.00000	Eye Dam. 1: H318 Aquatic Chronic 3: H412
4-Hydroxy-2-methoxy-5-(oxo-phenylmethyl)benzenesulfonic acid	4065-45-6	223-772-2			0.15000	Skin Irrit. 2: H315 Eye Irrit. 2: H319 STOT SE 3 RTI: H335
2-Methyl-3-phenylpropan-2-yl butyrate	10094-34-5	233-221-8			<0.10000	Aquatic Chronic 2: H411
alpha-Hexylcinnamaldehyde	101-86-0	202-983-3		01-2119533092-50	<0.10000	Skin Sens. 1B: H317 Aquatic Acute 1: H400 Aquatic Chronic 2: H411
3-Phenylacrylaldehyde	104-55-2	203-213-9			<0.10000	Acute Tox. 4: H302 Skin Irrit. 2; H315 Skin Sens. 1A: H317 Eye Irrit. 2: H319
Benzyl acetate	140-11-4	205-399-7		01-2119638272-42	<0.10000	Aquatic Chronic 3: H412

4-Isopropenyl-1-methylcyclohexene	5989-27-5	227-813-5	601-029-00-7	01-2119529223-47	<0.10000	Flam. Liq. 3: H226 Asp. Tox. 1: H304 Skin Irrit. 2: H315 Skin Sens. 1B: H317 Aquatic Acute 1: H400 Aquatic Chronic 1: H410
4,11,11-Trimethyl-8-methylenebicyclo[7.2.0]undec-4-ene	87-44-5	201-746-1			<0.10000	Asp. Tox. 1: H304
2-tert-Butylcyclohexyl acetate	88-41-5	201-828-7		01-2119970713-33	<0.10000	Aquatic Chronic 2: H411
4-Allyl-2-methoxyphenol	97-53-0	202-589-1		01-2119971802-33	<0.10000	Skin Sens. 1B: H317 Eye Irrit. 2: H319
disodium dihydrogen ethylenediaminetetraacetate	139-33-3	205-358-3			0.05000	Acute Tox. 4: H332
Sodium hydroxide	1310-73-2	215-185-5		01-2119457892-27	0.01250	Skin Corr. 1A: H314
Ethyl butyrate	105-54-4	203-306-4			<0.01000	Flam. Liq. 3: H226
Decanal	112-31-2	203-957-4		01-2119967771-26	<0.01000	Eye Irrit. 2: H319
4-Methyl-8-methylenetricyclo[3.3.1.1.(3.7)]decan-2-ol	122760-84-3	406-330-5	603-123-00-3	01-0000015588-59	<0.01000	Skin Irrit. 2: H315 Skin Sens. 1: H317 Aquatic Chronic 2: H411
A mixture of branched and linear C7-9 alkyl 3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]propionates	127519-17-9	407-000-3	607-281-00-4	01-2120060379-51	<0.01000	Aquatic Chronic 2: H411
2-Hydroxy-4-Methoxybenzophenone	131-57-7	205-031-5		01-2119976330-39	<0.01000	Skin Irrit. 2: H315 Eye Irrit. 2: H319 STOT SE 3 RTI: H335
2-Propenyl cyclohexylpropionate	2705-87-5	220-292-5		01-2119976355-27	<0.01000	Acute Tox. 4: H302 Acute Tox. 4: H312 Skin Sens. 1B: H317 Acute Tox. 4: H332 Aquatic Chronic 1: H410
Allyl (3-methylbutoxy)acetate	67634-00-8	266-803-5			<0.01000	Acute Tox. 4: H302 Skin Irrit. 2: H315
2H-Chromen-2-one	91-64-5	202-086-7		01-2119949300-45	<0.01000	Acute Tox. 4: H302 Skin Sens. 1B: H317 STOT RE 2: H373
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	129757-67-1	406-750-9		01-0000015625-69	<0.01000	Aquatic Chronic 4: H413
1,4-dioxacycloheptadecane-5,17-dione	105-95-3	203-347-8			<0.00100	Aquatic Chronic 2: H411
6,6-Dimethyl-2-methylenebicyclo[3.1.1]heptane	127-91-3	204-872-5		01-2119519230-54	<0.00100	Flam. Liq. 3: H226 Asp. Tox. 1: H304 Skin Irrit. 2: H315 Skin Sens. 1B: H317
Ethanol	64-17-5	200-578-6	603-002-00-5	01-2119457610-43	<0.00100	Fl. Liq. 2: H225 Eye Irrit. 2: H319
2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene	80-56-8	201-291-9			<0.00100	Flam. Liq. 3: H226 Asp. Tox. 1: H304 Skin Irrit. 2: H315 Skin Sens. 1B: H317
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) and 2-methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)	55965-84-9		613-167-00-5		0.00045	Acute Tox. 3: H301 Acute Tox. 3: H311 Skin Corr. 1B: H314 Skin Sens. 1: H317 Acute Tox. 3: H331 Aquatic Acute 1: H400 Aquatic Chronic 1: H410

See section 16 for full text of classifications.

4. SECTION 4: First Aid Measures

4.1 Description of first aid measures

Inhalation: Remove victim to fresh air and keep warm.
Eye Contact: Rinse eyes immediately with water. Remove contact lenses, if present and easy to do. Continue rinsing with water. Get medical attention if irritation persists.
Skin contact: Rinse area thoroughly with water. Get medical attention if irritation persists.
Ingestion: Give water to drink. Do not induce vomiting. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation: No damage to health is expected.
Eye Contact: Irritation, redness and weeping; transient effects only.
Skin Contact: Irritation and possible sensitisation with repeated contact.
Ingestion: Irritation of the gastro-intestinal tract.

4.3 Indication of any immediate medical attention and special treatment needed

Inhalation:	See section 4.1
Eye Contact:	See section 4.1
Skin Contact:	See section 4.1
Ingestion:	See section 4.1

5. SECTION 5: Fire fighting measures

5.1	Extinguishing media:	Water, carbon dioxide, foam or powder.
5.2	Special hazards:	Avoid inhaling fumes from combustion.
5.3	Advice for fire-fighters:	No special precautions required.

6. SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedure:
Avoid inhalation and contact with skin and eyes. Use suitable personal protective equipment.

6.2 Environmental precautions:
Inform fire brigade of large spillages. Keep away from drains, surface and ground water, and soil. Spillages should be contained immediately by use of sand or inert powder and disposed of in accordance with local regulations,

6.3 Methods and material for containment and cleaning up:
Rapidly recover the product. To do so wear suitable personal protective equipment. If possible collect the product for re-use or disposal. Do not allow the material to enter the drainage systems.

6.4 Reference to other sections:
See section 8 and section 13.

7. SECTION 7: Handling and storage

7.1 Precautions for safe handling:
Apply good manufacturing and industrial hygiene practices and adequate ventilation.

7.2 Conditions for safe storage:

Storage conditions:	Store in well-fitted and tightly closed containers; protect from heat and light.
Storage premises:	Store in a cool, dry and ventilated area.
Incompatible materials:	None known.

7.3 Specific end use: Personal use.

8. SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Substance	WEL-STEL mg/m^3	WEL-STEL ppm	WEL_TWA mg/m^3	WEL-TWA ppm
6,6-Dimethyl-2-methylenebicyclo[3.1.1]heptane	300	50	140	25
Ethanol			1920	1000
2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene	300	50	140	25

DNELs/DMELs

Substance	Type	Exposure	Value	Population	Effects
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	DNEL	Long term inhalation	44 mg/m^3	Workers	Systemic
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	DNEL	Long term dermal	12.5 mg/kg	Workers	Systemic
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	DNEL	Long term oral	7.5 mg/kg	Consumers	Systemic
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	DNEL	Long term dermal	7.5 mg/kg	Consumers	Systemic

alpha-Hexylcinnamaldehyde	DNEL	Short term dermal	0.525 mg/cm^2	Workers	Local
alpha-Hexylcinnamaldehyde	DNEL	Short term inhalation	6.28 mg/m^3	Workers	Local
alpha-Hexylcinnamaldehyde	DNEL	Long term dermal	18.2 mg/kg bw/day	Workers	Systemic
alpha-Hexylcinnamaldehyde	DNEL	Long term inhalation	0.078 mg/m^3	Workers	Systemic
alpha-Hexylcinnamaldehyde	DNEL	Long term dermal	0.525 mg/cm^2	Workers	Local
alpha-Hexylcinnamaldehyde	DNEL	Long term inhalation	0.019 mg/m^3	Consumers	Systemic
alpha-Hexylcinnamaldehyde	DNEL	Short term inhalation	4.7 mg/m^3	Consumers	Local
alpha-Hexylcinnamaldehyde	DNEL	Long term dermal	9 mg/kg bw/day	Consumers	Systemic
alpha-Hexylcinnamaldehyde	DNEL	Long term dermal	0.079 mg/cm^2	Consumers	Local
alpha-Hexylcinnamaldehyde	DNEL	Short term dermal	0.079 mg/kg bw/day	Consumers	Local
alpha-Hexylcinnamaldehyde	DNEL	Long term oral	0.056 mg/kg bw/day	Consumers	Systemic
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	DNEL	Long term inhalation	5.3 mg/m^3	Workers	Systemic
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	DNEL	Long term dermal	1.9 mg/kg bw/day	Workers	Systemic
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	DNEL	Long term inhalation	1.3 mg/m^3	Consumers	Systemic
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	DNEL	Long term dermal	0.9 mg/kg bw/day	Consumers	Systemic
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	DNEL	Long term oral	0.9 mg/kg bw/day	Consumers	Systemic
Sodium hydroxide	DNEL	Long term inhalation	1 mg/m^3	Workers	Local
Sodium hydroxide	DNEL	Long term inhalation	1 mg/m^3	Consumers	Local
Benzyl acetate	DNEL	Long term inhalation	21.9 mg/m^3	Workers	Systemic
Benzyl acetate	DNEL	Short term inhalation	43.8 mg/m^3	Workers	Systemic
Benzyl acetate	DNEL	Long term dermal	6.25 mg/kg bw/day	Workers	Systemic
Benzyl acetate	DNEL	Short term dermal	12.5 mg/kg bw/day	Workers	Systemic
Benzyl acetate	DNEL	Long term inhalation	5.5 mg/m^3	Consumers	Systemic
Benzyl acetate	DNEL	Short term inhalation	11 mg/m^3	Consumers	Systemic
Benzyl acetate	DNEL	Long term dermal	3.125 mg/kg bw/day	Consumers	Systemic
Benzyl acetate	DNEL	Short term dermal	6.25 mg/kg bw/day	Consumers	Systemic

Benzyl acetate	DNEL	Long term oral	3.125 mg/kg bw/day	Consumers	Systemic
Benzyl acetate	DNEL	Short term oral	6.25 mg/kg bw/day	Consumers	Systemic
Ethanol	DNEL	Short term inhalation	1900 mg/m^3	Workers	Local
Ethanol	DNEL	Long term dermal	343 mg/kg bw/day	Workers	Systemic
Ethanol	DNEL	Long term inhalation	950 mg/m^3	Workers	Systemic
Ethanol	DNEL	Short term inhalation	950 mg/m^3	Consumers	Local
Ethanol	DNEL	Long term dermal	206 mg/kg bw/day	Consumers	Systemic
Ethanol	DNEL	Long term inhalation	114 mg/m^3	Consumers	Systemic
Ethanol	DNEL	Long term oral	87 mg/kg bw/day	Consumers	Systemic
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	DNEL	Long term dermal	2750 mg/kg	Workers	Systemic
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	DNEL	Long term inhalation	175 mg/m^3	Workers	Systemic
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	DNEL	Long term dermal	1650 mg/kg	Consumers	Systemic
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	DNEL	Long term inhalation	52 mg/m^3	Consumers	Systemic
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	DNEL	Long term oral	15 mg/kg	Consumers	Systemic
2H-Chromen-2-one	DNEL	Long term inhalation	6.78 mg/m^3	Workers	Systemic
2H-Chromen-2-one	DNEL	Long term dermal	0.39 mg/kg bw/day	Consumers	Systemic
2H-Chromen-2-one	DNEL	Long term inhalation	1.69 mg/m^3	Consumers	Systemic
2H-Chromen-2-one	DNEL	Long term oral	0.39 mg/kg bw/day	Consumers	Systemic
4-Allyl-2-methoxyphenol	DNEL	Long term inhalation	21.2 mg/m^3	Workers	Systemic
4-Allyl-2-methoxyphenol	DNEL	Long term dermal	6 mg/kg bw/day	Workers	Systemic
4-Allyl-2-methoxyphenol	DNEL	Long term inhalation	5.22 mg/m^3	Consumers	Systemic
4-Allyl-2-methoxyphenol	DNEL	Long term dermal	3 mg/kg bw/day	Consumers	Systemic
4-Allyl-2-methoxyphenol	DNEL	Long term oral	3 mg/kg bw/day	Consumers	Systemic

PNECs

Substance	Compartment Detail	Value	Method Detail
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	Fresh water	0.0135 mg/l	
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	Marine water	0.00135 mg/l	
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	Sewage Treatment Plant	3000 mg/l	
alpha-Hexylcinnamaldehyde	Fresh water	3 mg/l	
alpha-Hexylcinnamaldehyde	Marine water	0.003 mg/l	
alpha-Hexylcinnamaldehyde	Sewage Treatment Plant	10 mg/l	
alpha-Hexylcinnamaldehyde	Sediment, fresh water	4.7 mg/l	
alpha-Hexylcinnamaldehyde	Sediment, marine water	4.77 mg/l	
alpha-Hexylcinnamaldehyde	Soil	9.51 mg/l	
alpha-Hexylcinnamaldehyde	Secondary poisoning	6.6 mg/l	
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-	Marine water	0.046 mg/l	Assessment factors

octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane			
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	Fresh water	0.046 mg/l	Assessment factors
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	Intermittent release	0.046 mg/l	Assessment factors
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	Sewage Treatment Plant	100 mg/l	Assessment factors
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	Sediment, fresh water	46000000 mg/kg dwt	Partition coefficient
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	Sediment, marine water	46000000 mg/kg dwt	Partition coefficient
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	Soil	9170000 mg/kg dwt	Partition coefficient
Benzyl acetate	Fresh water	0.004 mg/l	
Benzyl acetate	Marine water	0.0004 mg/l	
Benzyl acetate	Intermittent release	0.04 mg/l	
Benzyl acetate	Sewage Treatment Plant	8.55 mg/l	
Benzyl acetate	Sediment, fresh water	0.114 mg/kg	
Benzyl acetate	Sediment, marine water	0.0114 mg/kg	
Benzyl acetate	Soil	0.0205 mg/kg	
Ethanol	Fresh water	0.96 mg/l	
Ethanol	Marine water	0.79 mg/l	
Ethanol	Sediment	3.6 mg/kg	
Ethanol	Soil	0.63 mg/kg	
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	Fresh water	0.24 mg/l	
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	Marine water	0.024 mg/l	
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	Intermittent release	0.071 mg/l	
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	Sewage Treatment Plant	10000 mg/l	
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	Sediment, fresh water	5.45 mg/kg	
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	Sediment, marine water	0.545 mg/kg	
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	Soil	0.946 mg/kg	
2H-Chromen-2-one	Fresh water	19 µg/l	Assessment factors
2H-Chromen-2-one	Marine water	1.9 µg/l	Assessment factors
2H-Chromen-2-one	Intermittent release	14.5 µg/l	Assessment factors
2H-Chromen-2-one	Sediment, fresh water	0.15 mg/kg dwt	
2H-Chromen-2-one	Sediment, marine water	0.015 mg/kg dwt	
2H-Chromen-2-one	Soil	0.018 mg/kg dwt	
2H-Chromen-2-one	Sewage Treatment Plant	6.4 mg/l	
4-Allyl-2-methoxyphenol	Fresh water	1.13 µg/l	
4-Allyl-2-methoxyphenol	Marine water	0.113 µg/l	
4-Allyl-2-methoxyphenol	Intermittent release	11.3 µg/l	
4-Allyl-2-methoxyphenol	Sediment, fresh water	0.081	

		mg/kg	
4-Allyl-2-methoxyphenol	Sediment, marine water	0.0081 mg/kg	
4-Allyl-2-methoxyphenol	Soil	0.0155 mg/kg dwt	

8.2 Exposure controls

Precautionary measures:	Give adequate ventilation to the premises where the product is stored and/or handled.
Protection for respiratory tract:	Use a suitable air-purifying or air-fed respirator if anticipated exposure levels indicate a possible hazard or exceed safe working limits.
Protection for hands:	Avoid prolonged or repeated exposure. Use chemically resistant gloves as needed e.g. butyl rubber or nitrile rubber protective index 6.
Protection for eyes:	Avoid contact. Wear safety glasses.
Protection for skin:	Avoid contact. Use suitable protective clothing as needed.

9. SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Uncoloured/straw yellow liquid.
Odour:	Spiced citrus
pH:	6.0
Melting point:	Not determined
Initial boiling point and boiling range:	Not determined.
Flash point:	Not determined.
Evaporation rate:	Not determined.
Vapour pressure:	Not determined.
Density:	1.03 g/ml at 20°C
Solubility in water:	Fully miscible.
Partition co-efficient: n-octanol/water:	Not determined.
Auto ignition temperature:	Not determined.
Viscosity:	4500 cPs
Explosive properties:	Not applicable.
Oxidising properties:	Not applicable.

9.2 Other information

None

10. SECTION 10: Stability and reactivity

10.1	Reactivity:	None known.
10.2	Chemical stability:	Stable under normal conditions.
10.3	Possibility of hazardous reactions:	None known.
10.4	Conditions to avoid:	Keep away from excessive heat.
10.5	Incompatible materials:	None known.
10.6	Hazardous decomposition products:	Combustion may produce carbon monoxide and unidentified organic compounds.

11. SECTION 11: Toxicological information

This preparation has not been subject to toxicological testing as an entity; therefore no specific LD50/LC50 values have been determined. The toxicological information available relating to the ingredients and their concentrations enables the evaluation of this preparation.

11.1 Information on toxicological effects

Acute toxicity

Substance	Result	Species	Dose	Exposure
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	LD_{50} Oral	Rat	>2000 mg/kg	
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	LD_{50} Dermal	Rat	>2000 mg/kg	
alpha-Hexylcinnamaldehyde	LC_{50} Inhalation Dusts and mists	Rat	>2100 mg/m^3	8 hours

alpha-Hexylcinnamaldehyde	LD_{50} Oral	Rat	3100 mg/kg	
3-Phenylacrylaldehyde	LD_{50} Dermal	Rabbit	620 mg/kg	
3-Phenylacrylaldehyde	LD_{50} Oral	Rat	2220 mg/kg	
6,6-Dimethyl-2-methylenebicyclo[3.1.1]heptane	LD_{50} Dermal	Rabbit	>5000 mg/kg	
6,6-Dimethyl-2-methylenebicyclo[3.1.1]heptane	LD_{50} Oral	Rat	4700 mg/kg	
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	LD_{50} Oral	Rat	>2000 mg/kg	
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	LD_{50} Dermal	Rat	>2000 mg/kg	
2-Hydroxy-4-Methoxybenzophenone	LD_{50} Oral	Rat	7400 mg/kg	
2-Hydroxy-4-Methoxybenzophenone	LD_{50} Dermal	Rabbit	>16000 mg/kg	
disodium dihydrogen ethylenediaminetetraacetate	LD_{50} Oral	Rat	>2000 mg/kg	
Benzyl acetate	LD_{50} Dermal	Rabbit	>5 g/kg	
Benzyl acetate	LD_{50} Oral	Rat	2490 mg/kg	
2-Propenyl cyclohexylpropionate	LD_{50} Dermal	Rabbit	1600 mg/kg	
2-Propenyl cyclohexylpropionate	LD_{50} Oral	Rat	585 mg/kg	
4-Hydroxy-2-methoxy-5-(oxo-phenylmethyl)benzenesulfonic acid	LD_{50} Oral	Rat	>2000 mg/kg	
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) and 2-methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)	LD_{50} Dermal	Rabbit	>5000 mg/kg	
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) and 2-methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)	LD_{50} Oral	Rat	3810 mg/kg	
Ethanol	LD_{50} Oral	Rat	>2000 mg/kg	
Ethanol	LD_{50} Dermal	Rabbit	>2000 mg/kg	
Ethanol	LC_{50} Inhalation Vapour	Mouse	>20 mg/l	4 hours
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	LD_{50} Oral	Rat	>5000 mg/kg	
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	LD_{50} Dermal	Rat	>2000 mg/kg	
2-tert-Butylcyclohexyl acetate	LD_{50} Dermal	Rabbit	>5000 mg/kg	
2-tert-Butylcyclohexyl acetate	LD_{50} Oral	Rat	4600 mg/kg	
2H-Chromen-2-one	LD_{50} Oral	Rat	293 mg/kg	
4-Allyl-2-methoxyphenol	LD_{50} Oral	Guinea Pig	2130 mg/kg	
4-Allyl-2-methoxyphenol	LD_{50} Oral	Mouse	3 g/kg	
4-Allyl-2-methoxyphenol	LD_{50} Oral	Rat	2680 mg/kg	

Acute toxicity estimates

Route	ATE Value
Oral	>5000 mg/kg
Dermal	>5000 mg/kg
Inhalation	>10 mg/l/4h

Irritation/Corrosion

Substance	Result	Species	Score	Exposure	Observation
3-Phenylacrylaldehyde	Skin - Severe irritant	Human		48 hours 40 mg	
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-	Skin - Irritant	Rabbit	0	4 hours 0.5 ml	Not irritating

1,10-dioyl)piperidin-1-yl)oxy]octane					
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	Eye - Irritant	Rabbit	0	0.1 ml	Not irritating
Sodium hydroxide	Skin - Severe burns	Rabbit			
Sodium hydroxide	Eyes - Burns	Rabbit			
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) and 2-methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)	Skin - Severe irritant	Rabbit			
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) and 2-methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)	Eyes - Corrosive	Rabbit			
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	Skin - Irritant	Rabbit		-	
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	Eyes - Severe irritant	Rabbit		-	

Sensitization

Substance	Route of exposure	Species	Result
alpha-Hexylcinnamaldehyde	Skin	Mouse	Sensitizing
3-Phenylacrylaldehyde	Skin	Mouse	Sensitizing
3-Phenylacrylaldehyde	Skin	Guinea Pig	Sensitizing
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	Skin	Guinea Pig	Not sensitizing
2-Hydroxy-4-Methoxybenzophenone	Skin	Guinea Pig	Not sensitizing
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) and 2-methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)	Skin	Human	Sensitizing
Ethanol	Skin	Guinea Pig	Not sensitizing
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	Skin	Guinea Pig	Not sensitizing

Germ cell mutagenicity

Substance	Test	Experiment	Result
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	OECD 474 Mammalian erythrocyte micronucleus test	In vivo Mammalian-Animal	Negative
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	OECD 476 Mammalian Cell Gene Mutation Tests using the Hprt and xprt genes	In vitro Mammalian-Animal	Negative
alpha-Hexylcinnamaldehyde	OECD 471 Bacterial reverse mutation test	In vitro Bacteria	Negative
alpha-Hexylcinnamaldehyde	OECD 474 Mammalian erythrocyte micronucleus test	In vivo Mammalian-Animal	Negative
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	OECD 473 Mammalian chromosome aberration test	In vitro Mammalian-Animal	Negative
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-	OECD 471 Bacterial reverse mutation test	In vitro Bacteria	Negative

tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane			
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	OECD 474 Mammalian erythrocyte micronucleus test	In vivo Mammalian-Animal	Negative
Sodium hydroxide	OECD 474 Mammalian erythrocyte micronucleus test	In vivo Mammalian-Animal	Negative
Sodium hydroxide	OECD 471 Bacterial reverse mutation test	In vitro Bacteria	Negative
2-Hydroxy-4-Methoxybenzophenone	OECD 471 Bacterial reverse mutation test	In vitro Bacteria	Negative
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	OECD 471 Bacterial reverse mutation test	In vitro Bacteria	Negative

Carcinogenicity

Substance	Listed	Group	Result
No data available.			

Reproductive toxicity

Substance	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	-	-	Negative	Rat - Female	Oral 300mg/kg	
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	Negative	-	-	Rat - Female	Oral 1000 mg/kg	
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	Negative	-	Negative	Rat - Male, Female	Oral: 10 ml/kg	14 days

Specific target organ toxicity

Substance	Exposure	Category	Route	Target organs
Ethanol	Repeated	N/A	Oral	Not determined

Aspiration hazard

Substance	Result
6,6-Dimethyl-2-methylenebicyclo[3.1.1]heptane	Aspiration hazard - category 1

Potential chronic health effects

Substance	Result	Species	Dose	Exposure
alpha-Hexylcinnamaldehyde	Sub-acute NOAEL Oral	Rat	150mg/kg	-
alpha-Hexylcinnamaldehyde	Sub-acute LOAEL	Rat	125 mg/kg	-
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	Sub-acute NOAEL Oral	Rat	>100 mg/kg	28 days; 7 days/week

General:
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: No known significant effects or critical hazards.
Developmental effects: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.
Interactive effects: Not available.

Toxicokinetics

Absorption: Not available.
Distribution: Not available.
Metabolism: Not available.

Elimination: Not available.
Other information: Not available.

12. SECTION 12: Ecological information

This product has not been subjected to ecological testing as an entity; therefore no specific values have been determined. The ecological information available relating to the ingredients and their concentrations enables the evaluation of this preparation.

12.1 Toxicity

Substance	Result	Species	Exposure
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	Acute LC50 1.11 mg/l	Fish - Archosargus probatocephalus	96 hours
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	Acute EC_{50} 6.5 mg/l	Daphnia - Daphnia magna	48 hours
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	Acute EC_{50} 1.5 mg/l	Algae - Desmodesmus subspicatus	72 hours
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	Acute EC_{50} >3000 mg/l	Micro-organism	(Calculated)
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	Chronic NOEC 0.135 mg/l	Fish - Oncorhynchus mykiss	100 days
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	Chronic NOEC 0.32 mg/l	Daphnia - Daphnia magna	21 days
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	Chronic LOEC 0.56 mg/l	Daphnia - Daphnia magna	21 days
alpha-Hexylcinnamaldehyde	Acute EC_{50} 0.247 mg/l	Daphnia	48 hours
alpha-Hexylcinnamaldehyde	Acute EC_{50} 1.7 mg/l	Fish	96 hours
alpha-Hexylcinnamaldehyde	Chronic NOEC 0.065 mg/l	Algae	72 hours
alpha-Hexylcinnamaldehyde	Chronic NOEC 0.069 mg/l Fresh water	Daphnia	21 days
3-Phenylacrylaldehyde	Acute EC_{50} 7.05 ppm Fresh water	Daphnia - Daphnia magna	48 hours
3-Phenylacrylaldehyde	Acute LC_{50} >10 mg/l	Fish	96 hours
3-Phenylacrylaldehyde	Acute LC_{50} 1.67 ppm Fresh water	Fish - Oncorhynchus mykiss - Juvenile	96 hours
6,6-Dimethyl-2-methylenebicyclo[3.1.1]heptane	Chronic NOEC 320 µg/l Fresh Water	Fish - Oncorhynchus mykiss	60 days
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	Acute LC_{50} >58 mg/l Fresh water	Fish	48 hours
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	Acute EC_{50} >100 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	Chronic NOEC >10 mg/l	Daphnia - Daphnia magna	21 days
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	Acute EC_{50} >2 mg/l Fresh water	Algae	72 hours
reaction mass of: bis(2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-1,10-decanedioate 1,8-bis[(2,2,6,6-tetramethyl-4-((2,2,6,6-tetramethyl-1-octyloxypiperidin-4-yl)-decan-1,10-dioyl)piperidin-1-yl)oxy]octane	Acute IC_{50} >100 mg/l	Micro-organism	3 hours
Sodium hydroxide	Acute LC_{50} 125 mg/l	Fish - Gambusia affinis	96 hours
Sodium hydroxide	Acute EC_{50} 76 mg/l	Daphnia - Daphnia magna	24 hours

Sodium hydroxide	Acute EC_{50} 22 mg/l	Micro-organism - Photobacterium phosphoreum	15 minutes
2-Hydroxy-4-Methoxybenzophenone	Acute LC_{50} 20.4 mg/l	Fish	96 hours
2-Hydroxy-4-Methoxybenzophenone	Acute EC_{50} 12.9 mg/l	Daphnia	48 hours
2-Hydroxy-4-Methoxybenzophenone	Acute EC_{50} 1.4 mg/l	Algae	72 hours
2-Hydroxy-4-Methoxybenzophenone	Acute EC_{50} >10000 mg/l	Micro-organism	30 minutes
disodium dihydrogen ethylenediaminetetraacetate	Acute LC_{50} >500 mg/l	Fish	96 hours
Benzyl acetate	Acute EC_{50} 17 mg/l	Daphnia	48 hours
Benzyl acetate	Acute EC_{50} 855 mg/l	Micro-organsim	3 hours
Benzyl acetate	Acute IC_{50} 114 mg/l	Algae	72 hours
Benzyl acetate	Acute LC_{50} 4000 µg/l Fresh water	Fish - Oryzias latipes - Juvenile	96 hours
Benzyl acetate	Chronic NOEC 52 mg/l	Algae	72 hours
2-Propenyl cyclohexylpropionate	Acute EC_{50} 3.8 mg/l	Daphnia	48 hours
2-Propenyl cyclohexylpropionate	Acute LC_{50} 0.13 mg/l	Fish	96 hours
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) and 2-methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)	Acute LC_{50} 0.28 ppm	Fish - Lepomis macrochirus	
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) and 2-methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)	Acute LC_{50} 0.19 ppm	Fish - Salmo gairdneri	
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) and 2-methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)	Acute LC_{50} 0.3 ppm	Fish - Cyprinodon variegatus	
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) and 2-methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)	Acute LC_{50} 0.16 ppm	Daphnia - Daphnia magna	48 hours
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) and 2-methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)	Acute LC_{50} 14 ppb	Mollusc - Mytilus trossulus (larvae)	48 hours
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) and 2-methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)	Acute LC_{50} 28 ppb	Mollusc - Crassostrea virginica	48 hours
Ethanol	Acute LC_{50} >100 mg/l	Fish - Leuciscus idus	48 hours
Ethanol	Acute EC_{50} >100 mg/l	Daphnia - Daphnia magna	48 hours
Ethanol	Acute EC_{50} >100 mg/l	Algae - Selenastrum capricornutum	48 hours
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	Acute LC_{50} 10 - 100 mg/l	Fish - Leuciscus idus	
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	Acute EC_{50} 10 - 100 mg/l	Daphnia - Daphnia magna	
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	Acute EC_{50} 10 - 100 mg/l	Algae - Scenedesmus subspicatus	
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	Acute EC_{0} >100 mg/l	Micro-organism - Pseudomonas putida	
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	Chronic NOEC > 1-10 mg/l	Fish - Leuciscus idus	
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	Chronic NOEC > 0.1 - 1 mg/l	Daphnia - Daphnia magna	
2-tert-Butylcyclohexyl acetate	Acute EC_{50} 17 mg/l	Aquatic plants	72 hours
2-tert-Butylcyclohexyl acetate	Acute EC_{50} 17 mg/l	Daphnia	48 hours
2-tert-Butylcyclohexyl acetate	Acute LC_{50} 1.7 mg/l	Fish	96 hours

2H-Chromen-2-one	Acute EC_{50} 1.45 mg/l	Algae	72 hours
2H-Chromen-2-one	Acute LC_{50} 2.94 mg/l	Fish	96 hours
2H-Chromen-2-one	Acute LC_{50} 13500 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
4-Allyl-2-methoxyphenol	Acute EC_{50} 23 mg/l	Aquatic plants	72 hours
4-Allyl-2-methoxyphenol	Acute EC_{50} 1.05 mg/l	Daphnia	48 hours
4-Allyl-2-methoxyphenol	Acute LC_{50} 24000 µg/l Fresh water	Fish - Pimephales promelas - Juvenile	96 hours

12.2 Persistence and degradability

Substance	Test	Result	Dose	Inoculum
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	OECD 301B Ready Biodegradability - CO2 Evolution Test	92% - Readily - 28 days	20 mg/l	Aerobic activated sludge
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	OECD 311 Anaerobic Biodegradability of Organic Compounds in Digested Sludge: by Measurement of Gas Production	80-90% - Readily - 60 days	102.4 mg/l	Anaerobic activated sludge
alpha-Hexylcinnamaldehyde	OECD 301F Ready Biodegradability - Manometric Respirometry Test	97% - Readily - 28 days	-	-
3-Phenylacrylaldehyde	OECD 301E Ready Biodegradability - Modified OECD Screening Test	100% - Readily - 28 days	-	-
6,6-Dimethyl-2-methylenebicyclo[3.1.1]heptane	OECD 301D Ready Biodegradability - Closed bottle test	1% - Not readily - 28 days	-	-
Benzyl acetate	OECD 301B Ready Biodegradability - CO2 Evolution Test	92% - Readily - 28 days	-	-
2-Propenyl cyclohexylpropionate	OECD 301D Ready Biodegradability - Closed bottle test	86% - Readily - 28 days	-	-
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	OECD 301D Ready Biodegradability - Closed bottle test	>60% - Readily - 28 days	-	-
2-tert-Butylcyclohexyl acetate	OECD 301F Ready Biodegradability - Manometric Respirometry Test	43% - Not readily - 28 days	-	-
2H-Chromen-2-one	OECD 301F Ready Biodegradability - Manometric Respirometry Test	90% - Readily - 28 days	-	-
4-Allyl-2-methoxyphenol	OECD 301F Ready Biodegradability - Manometric Respirometry Test	97% - Readily - 28 days	-	-

12.3 Bioaccumulative potential

Substance	$LogP_{ow}$	BCF	Potential
alpha-Hexylcinnamaldehyde	5.3	6000	high
3-Phenylacrylaldehyde	1.83	8	low
6,6-Dimethyl-2-methylenebicyclo[3.1.1]heptane	4.425	1163	high
Benzyl acetate	1.49	8	low
2-Propenyl cyclohexylpropionate	4.28	861	high
Ethanol	-0.35	-	low
2H-Chromen-2-one	1.39	-	low
4-Allyl-2-methoxyphenol	2.27	-	low
alpha-Hexylcinnamaldehyde	5.3	6000	high

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}):	Not available.
Mobility:	Not available.

12.5 Results of PBT and vPvB assessment

PBT:	Not applicable.
vPvB:	Not applicable.

12.6 Other adverse effects: No known significant effects or critical hazards.

13. SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product:

Methods of disposal: The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of the environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contactor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste: The classification of the product may meet the criteria for a hazardous waste.

European waste catalogue (EWC)

Waste code	Waste designation
20 01 30	detergents other than those mentioned in 20 01 29

Packaging:

Methods of disposal: The generation of waste should be avoided or minimised where possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions: This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. SECTION 14: Transport information

14.1 ADR/RID

UN Number:	Not regulated for transport.
Class:	N/A
Shipping Name:	N/A
Packing Group:	N/A
Tunnel Code:	N/A

14.2 IMDG

Marine Pollutant:	No.
UN Number:	Not regulated for transport.
Class:	N/A
Shipping Name:	N/A
Packing Group:	N/A
Storage Category:	N/A

14.3 IATA

UN Number:	Not regulated for transport.
Class:	N/A
Shipping Name:	N/A
Label:	N/A
Packing Group:	N/A
S.P.:	N/A
ERG:	N/A

14.4 **Special precautions for user:** Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or a spillage.

14.5 **Transport of bulk according to Annex II of MARPOL 73/78 and the IBC Code:** Not applicable.

15. Regulatory information

15.1 **Safety, health and environmental regulations/legislation**

EU Regulation (EC) No. 1907/2006 (REACH)
Annex XIV – List of substances subject to authorisation

Annex XIV:	None of the components are listed.
Substances of very high concern:	None of the components are listed.

Annex XVII – Restrictions on manufacture, placing on the market and use of certain dangerous substances, mixtures and articles
Not applicable

EU Regulation (EC) No. 1223/2009 on Cosmetic Products

This product has been formulated, tested and manufactured in accordance with the above regulation.
This product has undergone a safety assessment in compliance with article 10 of the above regulation.

Registration status

Australian inventory (AICS):	All components are listed.
China inventory (IECSC):	All components are listed.
Japan inventory:	All components are listed.
Philippines inventory (PICCS):	All components are listed.
United States inventory (TSCA 8b):	All components are listed.
Europe inventory (EINECS/ELINCS/NLP):	All components are listed.
Canada inventory (DSL):	All components are listed.

15.2 **Chemical safety assessment**
No chemical safety assessment has been carried out for this mixture.

16. Other information

Abbreviations and acronyms:

ADR	–	Accord européen sur le transport des marchadises dangereuses par Route (European agreement concerning the International Carriage of Dangerous Goods by Road)
ATE	–	Acute Toxicity Estimate
CAS	–	Chemical Abstracts Service
CLP	–	Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL	–	Derived Minimal Effect Level
DNEL	–	Derived No Effect Level
IATA	–	International Air Transport Association
IMDG	–	International Maritime Code for Dangerous Goods
NAOEL	–	No Observable Adverse Effect Level
PBT	–	Persistent, Bioaccumulative and Toxic
PNEC	–	Predicted No Effect Concentration
REACH	–	Registration, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006]
RID	–	Règlement international concernant le transport des marchadises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
vPvB	–	Very Persistent and Very Bioaccumulative

Classification Procedure:

Classification according to Regulation (EC) No. 1272/2008	Classification procedure
Eye irritant, category 2. H319	Calculation method
EUH208	Calculation method

Full text of hazard statements (EC 1272/2008) referred to in section 3:

Acute Tox. 3: H301	Acute toxicity, oral, category 3.
Acute Tox. 3: H311	Acute toxicity, dermal, category 3.
Acute Tox. 3: H331	Acute toxicity, inhalation, category 3.
Acute Tox. 4: H302	Acute toxicity, oral, category 4.
Acute Tox. 4: H332	Acute toxicity, inhalation, category 4.
Aquatic Acute 1: H410	Hazardous for the aquatic environment, acute, category 1.
Aquatic Chronic 1: H410	Hazardous for the aquatic environment, chronic, category 1.
Aquatic Chronic 2: H411	Hazardous for the aquatic environment, chronic, category 2.
Aquatic Chronic 3: H412	Hazardous for the aquatic environment, chronic, category 3.
Aquatic Chronic 4: H413	Hazardous for the aquatic environment, chronic, category 4.
Asp. Tox. 1: H304	Aspiration hazard, category 1.
Eye Dam. 1: H318	Eye damage, category 1.
Eye Irrit. 2: H319	Eye irritation, category 2.
Flam. Liq. 2: H225	Flammable liquid and vapour, category 2.
Flam. Liq. 3: H226	Flammable liquid and vapour, category 3.
Skin Corr. 1A: H314	Skin corrosion, category 1A.
Skin Corr. 1B: H314	Skin corrosion, category 1B.
Skin Irrit.2: H315	Skin irritation, category 2.
Skin Sens. 1A: H317	Skin sensitizer, category 1A.
Skin Sens. 1B: H317	Skin sensitizer, category 1B.
STOT RE 2: H373	Specific target organ toxicity, repeated exposure, category 2.
STOT SE 3RTI: H335	Specific target organ toxicity, single exposure, category 3, respiratory tract irritation.

Full text of classifications (EC 1272/2008) referred to in section 3:

H225:	Highly flammable liquid and vapour.
H226:	Flammable liquid and vapour.
H301:	Toxic if swallowed.
H302:	Harmful if swallowed.
H304:	May be fatal if swallowed and enters airways.
H311:	Toxic in contact with skin.
H314:	Causes severe skin burns and eye damage.
H315:	Causes skin irritation.
H317:	May cause an allergic skin reaction.
H318:	Causes serious eye damage.
H319:	Causes serious eye irritation.
H331:	Toxic if inhaled.
H332:	Harmful if inhaled.
H335:	May cause respiratory irritation.
H373:	May cause damage to organs through prolonged or repeated exposure.
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.

Issue number: **1**

Changes from previous issue: **New**

The information given in this safety data sheet is based on the present state of knowledge and experiences but no guarantee can be given that the information is complete. It is in the customer's own interest to make sure that the information is sufficient for the purpose which the product shall be used. It is the responsibility of the user to fulfil any requirements according to current legislation.

End of Safety Data Sheet