Safety Data Sheet

According to Regulation (EC) No 1907/2006

Sun Optimum All in 1 Professional Capsules

Revision: 2024-10-15 **Version:** 01.0

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

1.1 Product identifier
Trade name: Sun Optimum All in 1 Professional Capsules
Sun is a registered trade mark and is used under licence of Unilever

UFI: UNDK-8163-R00M-NK9R

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

Product use:	Laundry detergent.
Uses advised against:	Uses other than those identified are not recommended.

SWED - Sector-specific worker exposure description :
PC35-Washing and cleaning products

1.3 Details of the supplier of the safety data sheet
Diversey Europe Operations BV, De Corridor 4, 3621ZB Breukelen [Maarssenbroeksedijk 2, 3542DN Utrecht], The Netherlands

Contact details
Diversey Ltd
Weston Favell Centre, Northampton NN3 8PD, United Kingdom
Tel: 01604 405311, Fax: 01604 406809
Regulatory Email: customerservice.uk@solenis.com

1.4 Emergency telephone number
Seek medical advice (show the label or safety data sheet where possible)
For medical or environmental emergency only:
call 0800 052 0185

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Eye irritation, Category 2 (H319)

2.2 Label elements

Signal word: Warning.

Contains 1,2-benzisothiazol-3(2H)-one (Benzisothiazolinone), amylase, alpha- (Amylase), subtilisin (Subtilisin)

Hazard statements:
H319 - Causes serious eye irritation.
EUH208 - May produce an allergic reaction.

Precautionary statements:
P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.

Further indications on the label:
Contains: preservative.

2.3 Other hazards
No other hazards known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Ingredient(s)	EC number	CAS number	REACH number	Classification	Notes	Weight percent
sodium carbonate	207-838-8	497-19-8	01-2119485498-19	Eye irritation, Category 2 (H319)		30-50
sodium percarbonate	239-707-6	15630-89-4	01-2119457268-30	Oxidising solids, Category 3 (H272) Acute toxicity - Oral, Category 4 (H302) Serious eye damage, Category 1 (H318)		3-10
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)		501019-90-5	-	Eye irritation, Category 2 (H319) Chronic aquatic toxicity, Category 3 (H412)		3-10
diphenyl ether	202-981-2	101-84-8	01-2119472545-33	Eye irritation, Category 2 (H319) Acute aquatic toxicity, Category 1 M=1 (H400) Chronic aquatic toxicity, Category 3 (H412)		0.1-1
amylase, alpha-	232-565-6	9000-90-2	01-2119938627-26	Respiratory sensitisation, Category 1 (H334)		0.1-1
subtilisin	232-752-2	9014-01-1	01-2119480434-38	Acute toxicity - Oral, Category 4 (H302) Specific target organ toxicity - Single exposure, Category 3 (H335) Skin irritation, Category 2 (H315) Serious eye damage, Category 1 (H318) Respiratory sensitisation, Category 1 (H334) Acute aquatic toxicity, Category 1 M=1 (H400) Chronic aquatic toxicity, Category 2 (H411)		0.1-1
1,2-benzisothiazol-3(2H)-one	220-120-9	2634-33-5	[6]	Acute toxicity - Inhalation, Category 2 (H330) Acute toxicity - Oral, Category 4 (H302) Skin irritation, Category 2 (H315) Serious eye damage, Category 1 (H318) Skin sensitisation, Sub-category 1A (H317) Acute aquatic toxicity, Category 1 M=1 (H400) Chronic aquatic toxicity, Category 1 M=1 (H410)		0.01-0.1

Specific concentration limits
sodium percarbonate:
• Serious eye damage, Category 1 (H318) >= 25% > Eye irritation, Category 2 (H319) >= 7.5%

Workplace exposure limit(s), if available, are listed in subsection 8.1.
ATE, if available, are listed in section 11.
[6] Exempted: biocidal active. See Article 15(2) of Regulation (EC) No 1907/2006.
For the full text of the H and EUH phrases mentioned in this Section, see Section 16..

SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation: Get medical attention or advice if you feel unwell.

Skin contact: Wash skin with plenty of lukewarm, gently flowing water. If skin irritation occurs: Get medical advice or attention.

Eye contact: Hold eyelids apart and flush eyes with plenty of lukewarm water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation occurs and persists, get medical attention.

Ingestion: Rinse mouth. Immediately drink 1 glass of water. Never give anything by mouth to an unconscious person. Get medical attention or advice if you feel unwell.

Self-protection of first aider: Consider personal protective equipment as indicated in subsection 8.2.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation: No known effects or symptoms in normal use.

Skin contact: No known effects or symptoms in normal use.

Eye contact: Causes severe irritation.

Ingestion: No known effects or symptoms in normal use.

4.3 Indication of any immediate medical attention and special treatment needed

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Carbon dioxide. Dry powder. Water spray jet. Fight larger fires with water spray jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture

No special hazards known.

5.3 Advice for firefighters

As in any fire, wear self contained breathing apparatus and suitable protective clothing including gloves and eye/face protection.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear eye/face protection.

6.2 Environmental precautions
Do not allow to enter drainage system, surface or ground water.

6.3 Methods and material for containment and cleaning up
Collect mechanically. Do not place spilled materials back into the original container. Collect in closed and suitable containers for disposal.

6.4 Reference to other sections
For personal protective equipment see subsection 8.2. For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Measures to prevent fire and explosions:
No special precautions required.
Measures required to protect the environment:
For environmental exposure controls see subsection 8.2.
Advice on general occupational hygiene:
Follow general hygiene considerations recognised as common good workplace practices. Keep away from food, drink and animal feeding stuffs. Keep out of reach of children. Do not mix with other products unless advised by Diversey. Wash face, hands and any exposed skin thoroughly after handling. Avoid contact with eyes. Use only with adequate ventilation. See chapter 8.2, Exposure controls / Personal protection.

7.2 Conditions for safe storage, including any incompatibilities
Store in accordance with local and national regulations. Store in a closed container. Keep only in original packaging. Keep out of reach of children.
For conditions to avoid see subsection 10.4. For incompatible materials see subsection 10.5.

7.3 Specific end use(s)
No specific advice for end use available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Workplace exposure limits

Air limit values, if available:

Ingredient(s)	UK - Long term value(s)	UK - Short term value(s)
diphenyl ether	1 ppm 7 mg/m³	2 ppm 14 mg/m³
subtilisin	0.00004 mg/m³	0.00012 mg/m³

Biological limit values, if available:

Recommended monitoring procedures, if available:

Additional exposure limits under the conditions of use, if available:

DNEL/DMEL and PNEC values
Human exposure
DNEL/DMEL oral exposure - Consumer (mg/kg bw)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
sodium carbonate	-	-	-	-
sodium percarbonate	-	-	-	-
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	No data available	No data available	No data available	No data available
diphenyl ether	No data available	No data available	No data available	No data available
amylase, alpha-	-	-	-	-
subtilisin	-	3.6	-	1.8
1,2-benzisothiazol-3(2H)-one	-	-	-	-

DNEL/DMEL dermal exposure - Worker

Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
sodium carbonate	-	-	No data available	-
sodium percarbonate	12.8 mg/cm² skin	-	12.8 mg/cm² skin	-
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	No data available	No data available	No data available	No data available
diphenyl ether	No data available	No data available	No data available	No data available
amylase, alpha-	-	-	-	-
subtilisin	0.2 %	-	-	-
1,2-benzisothiazol-3(2H)-one	-	-	-	-

DNEL/DMEL dermal exposure - Consumer

Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
sodium carbonate	No data available	-	No data available	-
sodium percarbonate	6.4 mg/cm² skin	-	6.4 mg/cm² skin	-
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	No data available	No data available	No data available	No data available
diphenyl ether	No data available	No data available	No data available	No data available
amylase, alpha-	-	-	No data available	-
subtilisin	0.2 %	-	-	-
1,2-benzisothiazol-3(2H)-one	-	-	-	-

DNEL/DMEL inhalatory exposure - Worker (mg/m³)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
sodium carbonate	-	-	10	-
sodium percarbonate	-	-	5	-
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	No data available	No data available	No data available	No data available
diphenyl ether	No data available	No data available	No data available	No data available
amylase, alpha-	-	-	0.00006	-
subtilisin	-	-	0.00006	-
1,2-benzisothiazol-3(2H)-one	-	-	-	-

DNEL/DMEL inhalatory exposure - Consumer (mg/m³)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
sodium carbonate	10	-	-	-
sodium percarbonate	-	-	-	-
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	No data available	No data available	No data available	No data available
diphenyl ether	No data available	No data available	No data available	No data available
amylase, alpha-	-	-	0.000015	-
subtilisin	-	-	0.000015	-
1,2-benzisothiazol-3(2H)-one	-	-	-	-

Environmental exposure

Environmental exposure - PNEC

Ingredient(s)	Surface water, fresh (mg/l)	Surface water, marine (mg/l)	Intermittent (mg/l)	Sewage treatment plant (mg/l)
sodium carbonate	-	-	-	-
sodium percarbonate	0.035	0.035	0.035	16.24
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	No data available	No data available	No data available	No data available
diphenyl ether	No data available	No data available	No data available	No data available
amylase, alpha-	0.0052	0.00052	-	65
subtilisin	0.00006	0.000006	-	65
1,2-benzisothiazol-3(2H)-one	0.0026	0.00026	-	0.055

Environmental exposure - PNEC, continued

Ingredient(s)	Sediment, freshwater (mg/kg)	Sediment, marine (mg/kg)	Soil (mg/kg)	Air (mg/m³)
sodium carbonate	-	-	-	-
sodium percarbonate	-	-	-	-
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	No data available	No data available	No data available	No data available
diphenyl ether	No data available	No data available	No data available	No data available
amylase, alpha-	-	-	-	-
subtilisin	-	-	-	-
1,2-benzisothiazol-3(2H)-one	0.0132	-	0.33	-

8.2 Exposure controls

The following information applies for the uses indicated in subsection 1.2 of the Safety Data Sheet.
If available, please refer to the product information sheet for application and handling instructions.
Normal use conditions are assumed for this section.

Recommended safety measures for handling the undiluted product:

Appropriate engineering controls: No special requirements under normal use conditions.
Appropriate organisational controls: Avoid direct contact and/or splashes where possible. Train personnel.

REACH use scenarios considered for the undiluted product:

	SWED - Sector-specific worker exposure description	LCS	PROC	Duration (min)	ERC
PC35-Washing and cleaning products	PC35-Washing and cleaning products	C		-	ERC8a

Personal protective equipment
Eye / face protection: No special requirements under normal use conditions.
Hand protection: No special requirements under normal use conditions.
Body protection: No special requirements under normal use conditions.
Respiratory protection: If exposure to dust cannot be avoided use: full-face mask (EN 136) with filter type HEPA (N100, Class H14) (EN 1822) or self-contained or compressed air breathing apparatus (EN 137 / EN 138) Consider specific local use conditions. In consultation with the supplier of respiratory protection equipment a different type providing similar protection may be chosen.

Environmental exposure controls: No special requirements under normal use conditions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
Information in this section refers to the product, unless it is specifically stated that substance data is listed

Method / remark

Physical state: Solid
Appearance: Tablets
Colour: Speckles , from White to Blue
Odour: Product specific
Odour threshold: Not applicable
Melting point/freezing point (°C): Not determined — Not relevant to classification of this product
Initial boiling point and boiling range (°C): Not determined — Not applicable to solids or gases

Substance data, boiling point

Ingredient(s)	Value (°C)	Method	Atmospheric pressure (hPa)
sodium carbonate	1600	Method not given	1013
sodium percarbonate	Product decomposes before boiling		
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	No data available		
diphenyl ether	No data available		
amylase, alpha-	No data available		
subtilisin	No data available		
1,2-benzisothiazol-3(2H)-one	No data available		

Method / remark

Flammability (solid, gas): Not determined
Flammability (liquid): Not applicable.
Flash point (°C): Not applicable.
Sustained combustion: Not applicable.
(UN Manual of Tests and Criteria, section 32, L.2)
Lower and upper explosion limit/flammability limit (%): Not determined — See substance data

Substance data, flammability or explosive limits, if available:

Ingredient(s)	Lower limit (% vol)	Upper limit (% vol)
subtilisin	-	-

Method / remark

Autoignition temperature: Not determined
Decomposition temperature: Not applicable.
pH: Not applicable
Dilution pH: ≈ 11 (10%)
Kinematic viscosity: Not applicable to solids or gases
Solubility in / Miscibility with water: Soluble

Substance data, solubility in water

Ingredient(s)	Value (g/l)	Method	Temperature (°C)
sodium carbonate	210-215	Method not given	20
sodium percarbonate	140	Method not given	20
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	No data available		
diphenyl ether	No data available		
amylase, alpha-	Soluble		
subtilisin	No data available		
1,2-benzisothiazol-3(2H)-one	No data available		

Substance data, partition coefficient n-octanol/water (log Kow): see subsection 12.3

Method / remark

Vapour pressure: Not determined — See substance data

Substance data, vapour pressure

Ingredient(s)	Value (Pa)	Method	Temperature (°C)
sodium carbonate	Negligible		
sodium percarbonate	Negligible		
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	No data available		
diphenyl ether	No data available		
amylase, alpha-	No data available		
subtilisin	Not applicable		
1,2-benzisothiazol-3(2H)-one	No data available		

Method / remark

Relative density: ≈ 1.00 (20 °C) — OECD 109 (EU A.3)
Relative vapour density: No data available. — Not applicable to solids
Particle characteristics: Not determined. — Not relevant to classification of this product.

9.2 Other information
9.2.1 Information with regard to physical hazard classes
Explosive properties: Not explosive.
Oxidising properties: Not oxidising.
Corrosion to metals: Not determined — Not applicable to solids or gases

9.2.2 Other safety characteristics
No other relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity
No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability
Stable under normal storage and use conditions.

10.3 Possibility of hazardous reactions
No hazardous reactions known under normal storage and use conditions.

10.4 Conditions to avoid
None known under normal storage and use conditions.

10.5 Incompatible materials
None known under normal use conditions.

10.6 Hazardous decomposition products
None known under normal storage and use conditions.

SECTION 11: Toxicological information

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

Mixture data: .

Relevant calculated ATE(s):
ATE - Oral (mg/kg): >2000

Substance data, where relevant and available, are listed below:.

Acute toxicity

Acute oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)	ATE Oral (mg/kg)
sodium carbonate	LD_{50}	2800	Rat	OECD 401 (EU B.1)		Not established
sodium percarbonate	LD_{50}	1034	Rat	Method not given		1034
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	LD_{50}	> 2000		Method not given		Not established
diphenyl ether		No data available				Not established
amylase, alpha-	LD_{50}	> 2000		OECD 401 (EU B.1) OECD 420 (EU B.1 bis)		Not established
subtilisin	LD_{50}	1800	Rat	OECD 401 (EU B.1)		1800
1,2-benzisothiazol-3(2H)-one	LD_{50}	> 2000	Rat			450

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)	ATE Dermal (mg/kg)
sodium carbonate	LD_{50}	> 2000	Rabbit	Method not given		Not established
sodium percarbonate	LD_{50}	> 2000	Rabbit	OECD 402 (EU B.3)		Not established
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)		No data available				Not established
diphenyl ether		No data available				Not established
amylase, alpha-		No data available				Not established
subtilisin		No data available				Not established
1,2-benzisothiazol-3(2H)-one	LD_{50}	> 2000	Rat	OECD 402 (EU B.3)		Not established

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium carbonate	LC_{50}	> 2.3 (dust)		Weight of evidence	2
sodium percarbonate		No data available			
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)		No data available			
diphenyl ether		No data available			
amylase, alpha-		No data available			
subtilisin		-		Weight of evidence	
1,2-benzisothiazol-3(2H)-one		No data available			

Acute inhalative toxicity, continued

Ingredient(s)	ATE - inhalation, dust (mg/l)	ATE - inhalation, mist (mg/l)	ATE - inhalation, vapour (mg/l)	ATE - inhalation, gas (mg/l)
sodium carbonate	Not established	Not established	Not established	Not established
sodium percarbonate	Not established	Not established	Not established	Not established
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	Not established	Not established	Not established	Not established
diphenyl ether	Not established	Not established	Not established	Not established
amylase, alpha-	Not established	Not established	Not established	Not established
subtilisin	Not established	Not established	Not established	Not established
1,2-benzisothiazol-3(2H)-one	Not established	0.21	Not established	Not established

Irritation and corrosivity

Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
sodium carbonate	Not irritant	Rabbit	OECD 404 (EU B.4)	
sodium percarbonate	Not irritant	Rabbit	Method not given	
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	No data available			
diphenyl ether	No data available			
amylase, alpha-	Not irritant		OECD 404 (EU B.4)	
subtilisin	Mild irritant	Rabbit	OECD 404 (EU B.4)	
1,2-benzisothiazol-3(2H)-one	Corrosive		Method not given	

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
sodium carbonate	Irritant	Rabbit	OECD 405 (EU B.5)	
sodium percarbonate	Severe damage	Rabbit	EPA OPP 81-4	
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	Irritant		Method not given	
diphenyl ether	No data available			
amylase, alpha-	Not corrosive or irritant		OECD 405 (EU B.5)	
subtilisin	Not corrosive or irritant	Rabbit	OECD 405 (EU B.5)	
1,2-benzisothiazol-3(2H)-one	Severe damage		Method not given	

Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
sodium carbonate	No data available			
sodium percarbonate	Irritating to respiratory tract	Mouse	Method not given	
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	No data available			
diphenyl ether	No data available			
amylase, alpha-	No data available			
subtilisin	Irritating to respiratory tract			
1,2-benzisothiazol-3(2H)-one	No data available			

Sensitisation

Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
sodium carbonate	Not sensitising		Method not given	
sodium percarbonate	Not sensitising	Guinea pig	OECD 406 (EU B.6) / Buehler test	
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	No data available			
diphenyl ether	No data available			
amylase, alpha-	No data available			
subtilisin	No data available			
1,2-benzisothiazol-3(2H)-one	Sensitising	Guinea pig		

Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
sodium carbonate	No data available			
sodium percarbonate	No data available			
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	No data available			
diphenyl ether	No data available			
amylase, alpha-	Sensitising		Weight of evidence	
subtilisin	Sensitising		Weight of evidence	
1,2-benzisothiazol-3(2H)-one	No data available			

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Mutagenicity

Ingredient(s)	Result (in-vitro)	Method (in-vitro)	Result (in-vivo)	Method (in-vivo)
sodium carbonate	No data available		No data available	
sodium percarbonate	No data available		No data available	
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified	No data available		No data available	

EO)				
diphenyl ether	No data available		No data available	
amylase, alpha-	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13) OECD 476 (Chinese Hamster Ovary)	No data available	
subtilisin	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13) OECD 473 OECD 476 (Chinese Hamster Ovary)	No data available	
1,2-benzisothiazol-3(2H)-one	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13)	No data available	

Carcinogenicity

Ingredient(s)	Effect
sodium carbonate	No evidence for carcinogenicity, weight-of-evidence
sodium percarbonate	No data available
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	No data available
diphenyl ether	No data available
amylase, alpha-	No data available
subtilisin	No data available
1,2-benzisothiazol-3(2H)-one	No data available

Toxicity for reproduction

Ingredient(s)	Endpoint	Specific effect	Value (mg/kg bw/d)	Species	Method	Exposure time	Remarks and other effects reported
sodium carbonate			No data available				
sodium percarbonate			No data available				
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)			No data available				
diphenyl ether			No data available				
amylase, alpha-			No data available				
subtilisin			No data available				
1,2-benzisothiazol-3(2H)-one			No data available				

Repeated dose toxicity

Sub-acute or sub-chronic oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
sodium carbonate		No data available				
sodium percarbonate		No data available				
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)		No data available				
diphenyl ether		No data available				
amylase, alpha-		No data available				
subtilisin		No data available				
1,2-benzisothiazol-3(2H)-one		No data available				

Sub-chronic dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
sodium carbonate		No data available				
sodium percarbonate		No data available				
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)		No data available				
diphenyl ether		No data				

		available				
amylase, alpha-		No data available				
subtilisin		No data available				
1,2-benzisothiazol-3(2H)-one		No data available				

Sub-chronic inhalation toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
sodium carbonate		No data available				
sodium percarbonate		No data available				
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)		No data available				
diphenyl ether		No data available				
amylase, alpha-		No data available				
subtilisin		No data available				
1,2-benzisothiazol-3(2H)-one		No data available				

Chronic toxicity

Ingredient(s)	Exposure route	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time	Specific effects and organs affected	Remark
sodium carbonate			No data available					
sodium percarbonate			No data available					
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)			No data available					
diphenyl ether			No data available					
amylase, alpha-			No data available					
subtilisin			No data available					
1,2-benzisothiazol-3(2H)-one			No data available					

STOT-single exposure

Ingredient(s)	Affected organ(s)
sodium carbonate	Not applicable
sodium percarbonate	No data available
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	No data available
diphenyl ether	No data available
amylase, alpha-	No data available
subtilisin	Respiratory tract
1,2-benzisothiazol-3(2H)-one	No data available

STOT-repeated exposure

Ingredient(s)	Affected organ(s)
sodium carbonate	Not applicable
sodium percarbonate	No data available
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	No data available
diphenyl ether	No data available
amylase, alpha-	No data available
subtilisin	No data available
1,2-benzisothiazol-3(2H)-one	No data available

Aspiration hazard
Substances with an aspiration hazard (H304), if any, are listed in section 3.

Potential adverse health effects and symptoms
Effects and symptoms related to the product, if any, are listed in subsection 4.2.

11.2 Information on other hazards
11.2.1 Endocrine disrupting properties
Endocrine disrupting properties - Human data, if available:

11.2.2 Other information
No other relevant information available.

SECTION 12: Ecological information

12.1 Toxicity

No data is available on the mixture .

Substance data, where relevant and available, are listed below:

Aquatic short-term toxicity
Aquatic short-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium carbonate	LC_{50}	300	*Lepomis macrochirus*	Method not given	96
sodium percarbonate	LC_{50}	70.7	*Pimephales promelas*	Method not given	96
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	LC_{50}	> 10-100	*Fish*	Method not given	96
diphenyl ether		No data available			
amylase, alpha-	LC_{50}	58.3 - 326.7	*Fish*	OECD 203 (EU C.1)	96
subtilisin	LC_{50}	8.2	*Fish*	OECD 203 (EU C.1)	96
1,2-benzisothiazol-3(2H)-one	LC_{50}	2.18	*Oncorhynchus mykiss*	OECD 203 (EU C.1)	

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium carbonate	EC_{50}	200-227	*Ceriodaphnia dubia*	Method not given	96
sodium percarbonate	EC_{50}	4.9	*Daphnia pulex*	Method not given	48
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)		No data available			
diphenyl ether		No data available			
amylase, alpha-	EC_{50}	31.7 - 457	*Daphnia*	OECD 202 (EU C.2)	48
subtilisin	EC_{50}	0.586	*Daphnia*	OECD 202 (EU C.2)	48
1,2-benzisothiazol-3(2H)-one	EC_{50}	2.94	*Daphnia*	OECD 202 (EU C.2)	48

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium carbonate	EC_{50}	> 800	*Selenastrum capricornutum*		72
sodium percarbonate	EC_{50}	2.5	*Chlorella vulgaris*	Read across	
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)		No data available			
diphenyl ether		No data available			
amylase, alpha-	$E_r C_{50}$	≥ 5.2	*Not specified*	OECD 201 (EU C.3)	72
subtilisin	$E_r C_{50}$	0.830	*Not specified*	OECD 201 (EU C.3)	72
1,2-benzisothiazol-3(2H)-one	$E_r C_{50}$	0.11		OECD 201 (EU C.3)	72

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
sodium carbonate		No data available			
sodium percarbonate		No data available			
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)		No data available			
diphenyl ether		No data available			
amylase, alpha-		No data			

		available			
subtilisin		No data available			
1,2-benzisothiazol-3(2H)-one		No data available			

Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
sodium carbonate		No data available			
sodium percarbonate	EC_{50}	466	*Activated sludge*	OECD 209	0.5 hour(s)
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)		No data available			
diphenyl ether		No data available			
amylase, alpha-		No data available			
subtilisin		No data available			
1,2-benzisothiazol-3(2H)-one	EC_{20}	3.3	*Activated sludge*	OECD 209	3 hour(s)

Aquatic long-term toxicity

Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
sodium carbonate		No data available				
sodium percarbonate	NOEC	7.4	*Pimephales promelas*	Method not given	96 hour(s)	
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)		No data available				
diphenyl ether		No data available				
amylase, alpha-		No data available				
subtilisin		No data available				
1,2-benzisothiazol-3(2H)-one		No data available				

Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
sodium carbonate		No data available				
sodium percarbonate	NOEC	2	*Daphnia pulex*	Method not given	48 hour(s)	
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)		No data available				
diphenyl ether		No data available				
amylase, alpha-		No data available				
subtilisin		No data available				
1,2-benzisothiazol-3(2H)-one		No data available				

Aquatic toxicity to other aquatic benthic organisms, including sediment-dwelling organisms, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw sediment)	Species	Method	Exposure time (days)	Effects observed
sodium carbonate		No data available				
sodium percarbonate		No data available				
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)		No data available				
diphenyl ether		No data available				
amylase, alpha-		No data available				
subtilisin		No data available				
1,2-benzisothiazol-3(2H)-one		No data				

		available				

Terrestrial toxicity

Terrestrial toxicity - soil invertebrates, including earthworms, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
sodium carbonate		No data available				

Terrestrial toxicity - plants, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
sodium carbonate		No data available				

Terrestrial toxicity - birds, if available:

Ingredient(s)	Endpoint	Value	Species	Method	Exposure time (days)	Effects observed
sodium carbonate		No data available				

Terrestrial toxicity - beneficial insects, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
sodium carbonate		No data available				

Terrestrial toxicity - soil bacteria, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
sodium carbonate		No data available				

12.2 Persistence and degradability

Abiotic degradation

Abiotic degradation - photodegradation in air, if available:

Ingredient(s)	Half-life time	Method	Evaluation	Remark
sodium carbonate	No data available			
sodium percarbonate	NA	Method not given		

Abiotic degradation - hydrolysis, if available:

Ingredient(s)	Half-life time in fresh water	Method	Evaluation	Remark
sodium carbonate	No data available		Rapidly hydrolysible	
sodium percarbonate	< 1 day(s)	Method not given	Hydrolysible	

Abiotic degradation - other processes, if available:

Ingredient(s)	Type	Half-life time	Method	Evaluation	Remark
sodium carbonate		No data available			

Biodegradation

Ready biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT_{50}	Method	Evaluation
sodium carbonate					Not applicable (inorganic substance)
sodium percarbonate					Not applicable (inorganic substance)
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)					No data available
diphenyl ether				OECD 301C	Not readily biodegradable.
amylase, alpha-				OECD 301B	Readily biodegradable
subtilisin				OECD 301B	Readily biodegradable
1,2-benzisothiazol-3(2H)-one	Adapted activated sludge	CO_2 production	62% in 4 day(s)	OECD 301C	Not readily biodegradable.

Ready biodegradability - anaerobic and marine conditions, if available:

Ingredient(s)	Medium & Type	Analytical	DT_{50}	Method	Evaluation

		method			
sodium carbonate					No data available

Degradation in relevant environmental compartments, if available:

Ingredient(s)	Medium & Type	Analytical method	DT_{50}	Method	Evaluation
sodium carbonate					No data available
1,2-benzisothiazol-3(2H)-one	Sewage treatment plant simulation	Primary degradation	> 90%	OECD 303A	Biodegradable

12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

Ingredient(s)	Value	Method	Evaluation	Remark
sodium carbonate	No data available		No bioaccumulation expected	
sodium percarbonate	No data available			
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	No data available			
diphenyl ether	No data available			
amylase, alpha-	< 0	Method not given	Not relevant, does not bioaccumulate	
subtilisin	< 0			
1,2-benzisothiazol-3(2H)-one	0.7	OECD 107	No bioaccumulation expected	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
sodium carbonate	No data available			No bioaccumulation expected	
sodium percarbonate	No data available				
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	No data available				
diphenyl ether	No data available				
amylase, alpha-	No data available				
subtilisin	-			Not relevant, does not bioaccumulate	
1,2-benzisothiazol-3(2H)-one	6.95		OECD 305		

12.4 Mobility in soil

Adsorption/Desorption to soil or sediment

Ingredient(s)	Adsorption coefficient Log Koc	Desorption coefficient Log Koc(des)	Method	Soil/sediment type	Evaluation
sodium carbonate	No data available				Potential for mobility in soil, soluble in water
sodium percarbonate	No data available				High potential for mobility in soil
alpha-epoxides, C10-alkyl, reaction products with oxo alcohol C11, ethoxylated (unspecified EO)	No data available				
diphenyl ether	No data available				
amylase, alpha-	No data available				
subtilisin	No data available				
1,2-benzisothiazol-3(2H)-one	No data available				

12.5 Results of PBT and vPvB assessment

Substances that fulfill the criteria for PBT/vPvB, if any, are listed in section 3.

12.6 Endocrine disrupting properties

Endocrine disrupting properties - Environmental effects, if available:

12.7 Other adverse effects

No other adverse effects known.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste from residues / unused products:

The concentrated contents or contaminated packaging should be disposed of by a certified handler or according to the site permit. Release of waste to sewers is discouraged. The cleaned packaging material is suitable for energy recovery or recycling in line with local legislation.

Empty packaging
Recommendation: Dispose of observing national or local regulations.

SECTION 14: Transport information

Land transport (ADR/RID), Sea transport (IMDG), Air transport (ICAO-TI / IATA-DGR)
14.1 UN number or ID number: Non-dangerous goods
14.2 UN proper shipping name: Non-dangerous goods
14.3 Transport hazard class(es): Non-dangerous goods
14.4 Packing group: Non-dangerous goods
14.5 Environmental hazards: Non-dangerous goods
14.6 Special precautions for user: Non-dangerous goods
14.7 Maritime transport in bulk according to IMO instruments: Non-dangerous goods

SECTION 15: Regulatory information

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

National regulations :
• Control of Poisons and Explosives Precursors Regulations 2015
• Regulation (EC) 1907/2006 - REACH (UK amended)
• Regulation (EC) 1272/2008 - CLP (UK amended)
• Regulation (EC) 648/2004 - Detergents regulation (UK amended)
• Delegated Regulation (EU) 2017/2100 and Regulation (EU) 2018/605 (UK amended)
• Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)
• International Maritime Dangerous Goods (IMDG) Code

Authorisations or restrictions (Regulation (EC) No 1907/2006, Title VII respectively Title VIII): Not applicable.

Ingredients according to Detergents Regulation

oxygen-based bleaching agents	5 - 15 %
non-ionic surfactants, polycarboxylates, phosphonates	< 5 %
enzymes, perfumes , Benzisothiazolinone	

The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) 648/2004 on detergents (UK amended). Data to support this assertion are held at the disposal of the competent authorities of the UK and will be made available to them, at their direct request or at the request of a detergent manufacturer.

Comah - classification: Not classified

15.2 Chemical safety assessment
A chemical safety assessment has not been carried out on the mixture

SECTION 16: Other information

The information in this document is based on our best present knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally binding contract

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Classification procedure
The classification of the mixture is in general based on calculation methods using substance data, as required by Regulation (EC) No 1272/2008. If for certain classifications data on the mixture is available or for example bridging principles or weight of evidence can be used for classification, this will be indicated in the relevant sections of the Safety Data Sheet. See section 9 for physical chemical properties, section 11 for toxicological information and section 12 for ecological information.

Abbreviations and acronyms:
• AISE - The international Association for Soaps, Detergents and Maintenance Products
• ATE - Acute Toxicity Estimate
• DNEL - Derived No Effect Limit
• EC50 - effective concentration, 50%
• ERC - Environmental release categories
• EUH - CLP Specific hazard statement

• LC50 - Lethal Concentration, 50% / Median Lethal Concentration
• LCS - Life cycle stage
• LD50 - Lethal Dose, 50% / Median Lethal dose
• NOAEL - No observed adverse effect level
• NOEL - No observed effect level
• OECD - Organisation for Economic Cooperation and Development
• PBT - Persistent, Bioaccumulative and Toxic
• PNEC - Predicted No Effect Concentration
• REACH number - REACH registration number, without supplier specific part
• vPvB - very Persistent and very Bioaccumulative
• H272 - May intensify fire; oxidiser.
• H302 - Harmful if swallowed.
• H315 - Causes skin irritation.
• H317 - May cause an allergic skin reaction.
• H318 - Causes serious eye damage.
• H319 - Causes serious eye irritation.
• H330 - Fatal if inhaled.
• H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
• H335 - May cause respiratory 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.
• H412 - Harmful to aquatic life with long lasting effects.

End of Safety Data Sheet