

Sun Professional All in 1 Eco Tablets

Revision: 2015-07-12

Version: 03.1

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

1.1 Product identifier

Trade name: Sun Professional All in 1 Eco Tablets

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

Identified uses:

AISE-P203 - Dishwash product. Semi-automatic process

AISE-C6 - Machine dishwashing (powder, liquid, tablet) for consumer use

Uses advised against: Uses other than those identified are not recommended

1.3 Details of the supplier of the safety data sheet

Diversey Europe Operations BV, Maarssenbroeksedijk 2, 3542DN Utrecht, The Netherlands

Contact details

Unilever UK Ltd., Freeport ADM1000, London SW1A 2XX

Tel: 0800 776647

Diversey Ltd

Weston Favell Centre, Northampton NN3 8PD, United Kingdom

Tel: 01604 405311, Fax: 01604 406809

Regulatory Email: MSDSinfoUK@sealedair.com

1.4 Emergency telephone number

For medical or environmental emergency only:

call 0800 052 0185

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The product has been classified and labelled in accordance with Regulation (EC) No 1272/2008.

Eye Irrit. 2 (H319)

Classification in accordance with Directive 1999/45/EC and corresponding national legislation

Indication of danger

Xi - Irritant

Risk phrases:

R41 - Risk of serious damage to eyes.

2.2 Label elements



Signal word: Warning.

Hazard statements:

H319 - Causes serious eye irritation.

Precautionary statements:

P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

2.3 Other hazards

No other hazards known. The product does not meet the criteria for PBT or vPvB in accordance with Regulation (EC) No 1907/2006, Annex XIII.

SECTION 3: Composition/information on ingredients**3.2 Mixtures**

Ingredient(s)	EC number	CAS number	REACH number	Classification	Classification (1999/45/EC)	Notes	Weight percent
sodium carbonate	207-838-8	497-19-8	01-2119485498-19	Eye Irrit. 2 (H319)	Xi;R36		30-50
Sodium citrate		6132-04-3	No data available	Eye Irrit. 2 (H319)			30-50
sodium percarbonate	239-707-6	15630-89-4	01-2119457268-30	Ox. Sol. 2 (H272) Acute Tox. 4 (H302) Eye Dam. 1 (H318)	O;R8 Xn;R22 Xi;R41		10-20
disodium disilicate	237-623-4	13870-28-5	01-2119485031-47	Eye Dam. 1 (H318)	Xi;R41		1-3
alkyl alcohol ethoxylate	Polymer*	68439-50-9	[4]	Acute Tox. 4 (H302) Eye Dam. 1 (H318) Aquatic Chronic 2 (H411)	Xn;R22 Xi;R41		1-3

* Polymer.

For the full text of the R, H and EUH phrases mentioned in this Section, see Section 16.

Workplace exposure limit(s), if available, are listed in subsection 8.1.

[1] Exempted: ionic mixture. See Regulation (EC) No 1907/2006, Annex V, paragraph 3 and 4. This salt is potentially present, based on calculation, and included for classification and labelling purposes only. Each starting material of the ionic mixture is registered, as required.

[2] Exempted: included in Annex IV of Regulation (EC) No 1907/2006.

[3] Exempted: Annex V of Regulation (EC) No 1907/2006.

[4] Exempted: polymer. See Article 2(9) of Regulation (EC) No 1907/2006.

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:

Immediately rinse eyes cautiously with lukewarm water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation occurs and persists, get medical attention.

Ingestion:

Immediately drink 1 glass of water. 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**

No special measures required.

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.

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.

Advices on general occupational hygiene:

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not mix with other products unless advised by Sealed Air. Wash hands before breaks and at the end of workday. Wash face, hands and any exposed skin thoroughly after handling. Take off immediately all contaminated clothing. Use personal protective equipment as required. Use only with adequate ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local and national regulations. Keep only in original container. Store in a closed container.

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:

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 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 citrate	No data available	No data available	No data available	No data available
sodium percarbonate	-	-	-	-
disodium disilicate	No data available	No data available	No data available	No data available
alkyl alcohol ethoxylate	No data available	No data available	No data available	No data available

DNEL 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	-	No data available	-
Sodium citrate	No data available	No data available	No data available	No data available
sodium percarbonate	12.8 mg/cm ² skin	-	12.8 mg/cm ² skin	-
disodium disilicate	No data available	No data available	No data available	No data available
alkyl alcohol ethoxylate	No data available	No data available	No data available	No data available

DNEL 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 citrate	No data available	No data available	No data available	No data available
sodium percarbonate	6.4 mg/cm ² skin	-	6.4 mg/cm ² skin	-
disodium disilicate	No data available	No data available	No data available	No data available
alkyl alcohol ethoxylate	No data available	No data available	No data available	No data available

DNEL 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 citrate	No data available	No data available	No data available	No data available
sodium percarbonate	-	-	5	-
disodium disilicate	No data available	No data available	No data available	No data available
alkyl alcohol ethoxylate	No data available	No data available	No data available	No data available

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DNEL 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 citrate	No data available	No data available	No data available	No data available
sodium percarbonate	-	-	-	-
disodium disilicate	No data available	No data available	No data available	No data available
alkyl alcohol ethoxylate	No data available	No data available	No data available	No data available

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 citrate	No data available	No data available	No data available	No data available
sodium percarbonate	0.035	0.035	0.035	16.24
disodium disilicate	No data available	No data available	No data available	No data available
alkyl alcohol ethoxylate	No data available	No data available	No data available	No data available

Environmental exposure - PNEC, continued

Ingredient(s)	Sediment, freshwater (mg/kg)	Sediment, marine (mg/kg)	Soil (mg/kg)	Air (mg/m ³)
sodium carbonate	-	-	-	-
Sodium citrate	No data available	No data available	No data available	No data available
sodium percarbonate	-	-	-	-
disodium disilicate	No data available	No data available	No data available	No data available
alkyl alcohol ethoxylate	No data available	No data available	No data available	No data available

8.2 Exposure controls

The following information applies for the uses indicated in subsection 1.2.

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: The product is intended to be used in closed systems.
Appropriate organisational controls: Avoid direct contact and/or splashes where possible. Train personnel.

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: No special requirements under normal use conditions.

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: White
Odour: Product specific
Odour threshold: Not applicable
pH:
Dilution pH: ≈ 11 (1%)
Melting point/freezing point (°C): Not determined
Initial boiling point and boiling range (°C): Not determined

Substance data, boiling point

Ingredient(s)	Value (°C)	Method	Atmospheric pressure (hPa)
sodium carbonate	1600	Method not given	1013
Sodium citrate	No data available		
sodium percarbonate	Product decomposes before boiling		
disodium disilicate	No data available		
alkyl alcohol ethoxylate	No data available		

Method / remark

Flash point (°C): Not applicable.
Sustained combustion: Not applicable.
Evaporation rate: Not determined
Flammability (solid, gas): Not determined
Upper/lower flammability limit (%): Not determined

Substance data, flammability or explosive limits, if available:

Method / remark

Vapour pressure: Not determined

Substance data, vapour pressure

Ingredient(s)	Value (Pa)	Method	Temperature (°C)
sodium carbonate	Negligible		
Sodium citrate	No data available		
sodium percarbonate	Negligible		
disodium disilicate	No data available		
alkyl alcohol ethoxylate	No data available		

Method / remark

Vapour density: Not determined
Relative density: Not determined
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 citrate	No data available		
sodium percarbonate	140	Method not given	20
disodium disilicate	No data available		
alkyl alcohol ethoxylate	Soluble	Method not given	

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

Method / remark

Autoignition temperature: Not determined
Decomposition temperature: Not applicable.
Viscosity: Not determined
Explosive properties: Not explosive.
Oxidising properties: Not oxidising

9.2 Other information

Surface tension (N/m): Not determined
Corrosion to metals: Not applicable to solids or gases

Substance data, dissociation constant, if 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

Reacts with acids.

10.6 Hazardous decomposition products

None known under normal storage and use conditions.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Mixture data:

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Relevant calculated ATE(s):

ATE - Oral (mg/kg): >2000

Eye irritation and corrosivity

Result: Eye irritant 2

Method: Weight of evidence

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)
sodium carbonate	LD ₅₀	2800	Rat	Method not given	-
Sodium citrate		No data available			
sodium percarbonate	LD ₅₀	1034	Rat	Method not given	
disodium disilicate		No data available			
alkyl alcohol ethoxylate	LD ₅₀	> 300 - 2000	Rat	Read across	

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
sodium carbonate	LD ₅₀	> 2000	Rabbit	Method not given	-
Sodium citrate		No data available			
sodium percarbonate	LD ₅₀	> 2000	Rabbit	OECD 402 (EU B.3)	
disodium disilicate		No data available			
alkyl alcohol ethoxylate		No data available			

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium carbonate	LC ₅₀	2.3 (dust)	Rat	OECD 403 (EU B.2)	2
Sodium citrate		No data available			
sodium percarbonate		No data available			
disodium disilicate		No data available			
alkyl alcohol ethoxylate		No data available			

Irritation and corrosivity

Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
sodium carbonate	Not irritant	Rabbit	Method not given	
Sodium citrate	No data available			
sodium percarbonate	Not irritant	Rabbit	Method not given	
disodium disilicate	No data available			
alkyl alcohol ethoxylate	Not irritant		Read across	

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
sodium carbonate	Irritant	Rabbit	Method not given	
Sodium citrate	No data available			
sodium percarbonate	Severe damage	Rabbit	EPA OPP 81-4	
disodium disilicate	No data available			
alkyl alcohol ethoxylate	Severe damage	Rabbit	Read across	

Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
sodium carbonate	No data available			
Sodium citrate	No data available			
sodium percarbonate	Irritating to respiratory tract	Mouse	Method not given	
disodium disilicate	No data available			
alkyl alcohol ethoxylate	No data available			

Sensitisation

Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
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sodium carbonate	Not sensitising		Method not given	-
Sodium citrate	No data available			
sodium percarbonate	Not sensitising	Guinea pig	OECD 406 (EU B.6) / Buehler test	
disodium disilicate	No data available			
alkyl alcohol ethoxylate	No data available			

Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
sodium carbonate	No data available			-
Sodium citrate	No data available			
sodium percarbonate	No data available			
disodium disilicate	No data available			
alkyl alcohol ethoxylate	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 citrate	No data available		No data available	
sodium percarbonate	No data available		No data available	
disodium disilicate	No data available		No data available	
alkyl alcohol ethoxylate	No evidence for mutagenicity, negative test results	Read across	No data available	

Carcinogenicity

Ingredient(s)	Effect
sodium carbonate	No evidence for carcinogenicity, weight-of-evidence
Sodium citrate	No data available
sodium percarbonate	No data available
disodium disilicate	No data available
alkyl alcohol ethoxylate	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 citrate			No data available				
sodium percarbonate			No data available				
disodium disilicate			No data available				
alkyl alcohol ethoxylate			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 citrate		No data available				
sodium percarbonate		No data available				
disodium disilicate		No data available				
alkyl alcohol ethoxylate		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 citrate		No data available				
sodium percarbonate		No data available				
disodium disilicate		No data available				
alkyl alcohol ethoxylate		No data available				

Sub-chronic inhalation toxicity

Ingredient(s)	Endpoint	Value	Species	Method	Exposure	Specific effects and organs
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		(mg/kg bw/d)			time (days)	affected
sodium carbonate		No data available			-	
Sodium citrate		No data available				
sodium percarbonate		No data available				
disodium disilicate		No data available				
alkyl alcohol ethoxylate		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 citrate			No data available					
sodium percarbonate			No data available					
disodium disilicate			No data available					
alkyl alcohol ethoxylate			No data available					

STOT-single exposure

Ingredient(s)	Affected organ(s)
sodium carbonate	No data available
Sodium citrate	No data available
sodium percarbonate	No data available
disodium disilicate	No data available
alkyl alcohol ethoxylate	No data available

STOT-repeated exposure

Ingredient(s)	Affected organ(s)
sodium carbonate	No data available
Sodium citrate	No data available
sodium percarbonate	No data available
disodium disilicate	No data available
alkyl alcohol ethoxylate	No data available

Aspiration hazard

Substances with an aspiration hazard (H304), if any, are listed in section 3. If relevant, see section 9 for dynamic viscosity and relative density of the product.

Potential adverse health effects and symptoms

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

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	<i>Lepomis macrochirus</i>	Method not given	96
Sodium citrate		No data available			
sodium percarbonate	LC ₅₀	70.7	<i>Pimephales promelas</i>	Method not given	96
disodium disilicate		No data available			
alkyl alcohol ethoxylate	LC ₅₀	1 - 10	<i>Brachydanio rerio</i>	Read across	96

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium carbonate	EC ₅₀	265	<i>Daphnia magna</i> Straus	Method not given	96
Sodium citrate		No data available			

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sodium percarbonate	EC ₅₀	4.9	<i>Daphnia pulex</i>	Method not given	48
disodium disilicate		No data available			
alkyl alcohol ethoxylate	EC ₅₀	1 - 10	<i>Not specified</i>	Method not given	48

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium carbonate		No data available			-
Sodium citrate		No data available			
sodium percarbonate		No data available			-
disodium disilicate		No data available			
alkyl alcohol ethoxylate	EC ₅₀	1 - 10	<i>Not specified</i>	DIN 38412, Part 9 OECD 201	-

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
sodium carbonate		No data available			-
Sodium citrate		No data available			
sodium percarbonate		No data available			-
disodium disilicate		No data available			
alkyl alcohol ethoxylate		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 citrate		No data available			
sodium percarbonate	EC ₅₀	466	<i>Activated sludge</i>	OECD 209	0.5 hour(s)
disodium disilicate		No data available			
alkyl alcohol ethoxylate		> 1000	<i>Activated sludge</i>	DEV-L2	

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 citrate		No data available				
sodium percarbonate	NOEC	7.4	<i>Pimephales promelas</i>	Method not given	96 hour(s)	
disodium disilicate		No data available				
alkyl alcohol ethoxylate		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 citrate		No data available				
sodium percarbonate	NOEC	2	<i>Daphnia pulex</i>	Method not given	48 hour(s)	
disodium disilicate		No data available				
alkyl alcohol ethoxylate		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 citrate		No data available				

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		available				
sodium percarbonate		No data available			-	
disodium disilicate		No data available				
alkyl alcohol ethoxylate		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			-	
sodium percarbonate		No data available			-	
alkyl alcohol ethoxylate		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			-	
sodium percarbonate		No data available			-	
alkyl alcohol ethoxylate		No data available			-	

Terrestrial toxicity - birds, if available:

Ingredient(s)	Endpoint	Value	Species	Method	Exposure time (days)	Effects observed
sodium carbonate		No data available			-	
sodium percarbonate		No data available			-	
alkyl alcohol ethoxylate		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			-	
sodium percarbonate		No data available			-	
alkyl alcohol ethoxylate		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			-	
sodium percarbonate		No data available			-	
alkyl alcohol ethoxylate		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 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:

Biodegradation

Ready biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT ₅₀	Method	Evaluation
sodium carbonate					Not applicable (inorganic)

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					substance)
Sodium citrate					No data available
sodium percarbonate					Not applicable (inorganic substance)
disodium disilicate					No data available
alkyl alcohol ethoxylate		CO ₂ production	> 60 % in 28 day(s)	OECD 301B	Readily biodegradable

Ready biodegradability - anaerobic and marine conditions, if available:

Degradation in relevant environmental compartments, if available:

The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log K_{ow})

Ingredient(s)	Value	Method	Evaluation	Remark
sodium carbonate	No data available		No bioaccumulation expected	
Sodium citrate	No data available			
sodium percarbonate	No data available			
disodium disilicate	No data available			
alkyl alcohol ethoxylate	No data available		No bioaccumulation expected	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
sodium carbonate	No data available			No bioaccumulation expected	
Sodium citrate	No data available				
sodium percarbonate	No data available				
disodium disilicate	No data available				
alkyl alcohol ethoxylate	No data available				

12.4 Mobility in soil

Adsorption/Desorption to soil or sediment

Ingredient(s)	Adsorption coefficient Log K _{oc}	Desorption coefficient Log K _{oc} (des)	Method	Soil/sediment type	Evaluation
sodium carbonate	No data available				Potential for mobility in soil, soluble in water
Sodium citrate	No data available				
sodium percarbonate	No data available				High potential for mobility in soil
disodium disilicate	No data available				
alkyl alcohol ethoxylate	No data available				Potential for adsorption to soil

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 Other adverse effects

No other adverse effects known.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

Waste from residues / unused products:

European Waste Catalogue:

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.
20 01 29* - detergents containing dangerous substances.

Empty packaging

Recommendation:

Dispose of observing national or local regulations.

SECTION 14: Transport information

ADR, RID, ADN, IMO/IMDG, ICAO/IATA

14.1 UN number: Non-dangerous goods

14.2 UN proper shipping name: Non-dangerous goods

14.3 Transport hazard class(es): Non-dangerous goods

Class: -

14.4 Packing group: Non-dangerous goods

14.5 Environmental hazards: Non-dangerous goods

Sun Professional All in 1 Eco Tablets

14.6 Special precautions for user: Non-dangerous goods

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: The product is not transported in bulk tankers.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

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

Ingredients according to EC Detergents Regulation 648/2004

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

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.

Full text of the R, H and EUH phrases mentioned in section 3:

- H272 - May intensify fire; oxidiser.
- H302 - Harmful if swallowed.
- H318 - Causes serious eye damage.
- H319 - Causes serious eye irritation.
- H411 - Toxic to aquatic life with long lasting effects.
- R 8 - Contact with combustible material may cause fire.
- R22 - Harmful if swallowed.
- R36 - Irritating to eyes.
- R41 - Risk of serious damage to eyes.

Abbreviations and acronyms:

- AISE - The International Association for Soaps, Detergents and Maintenance Products
- DNEL - Derived No Effect Limit
- EUH - CLP Specific hazard statement
- 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
- ATE - Acute Toxicity Estimate

End of Safety Data Sheet