

Sun Professional Powder

Revision: 2015-05-29

Version: 01.0

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

1.1 Product identifier

Trade name: Sun Professional Powder

Sun is a registered trade mark and is used under licence of Unilever

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

Identified uses:

For professional use only.

AISE-P203 - Dishwash product. Semi-automatic process

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 Ireland, No.20 Riverwalk, National Digital Park, Citywest, Dublin 24

Tel: 1850 445555

Diversey Hygiene Sales Limited
Jamestown Road, Finglas, Dublin 11, Ireland
Tel: 01 8081808 (9am - 5pm Mon-Fri)
Email: dublin.orders@sealedair.com

1.4 Emergency telephone number

Tel: 01 8081808 (9am - 5pm Mon-Fri)

After hours: National Poisons Centre, Beaumont Hospital, Dublin 9

Tel: 01 8379964

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.

EUH031

Skin Corr. 1B (H314)

EUH071

STOT SE 3 (H335)

Aquatic Chronic 3 (H412)

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

Indication of danger

C - Corrosive

Risk phrases:

R31 - Contact with acids liberates toxic gas.

R34 - Causes burns.

R37 - Irritating to respiratory system.

R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2 Label elements



Signal word: Danger.

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Contains disodium metasilicate pentahydrate (Sodium Metasilicate).

Hazard statements:

EUH031 - Contact with acids liberates toxic gas.
 H314 - Causes severe skin burns and eye damage.
 EUH071 - Corrosive to the respiratory tract.
 H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements:

P260 - Do not breathe dust.
 P280 - Wear protective gloves, protective clothing and eye or face protection.
 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 - Immediately call a POISON CENTRE, doctor or physician.

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
disodium metasilicate pentahydrate	600-279-4	10213-79-3	01-2119449811-37	Skin Corr. 1B (H314) STOT SE 3 (H335) Met. Corr. 1 (H290)	C;R34 Xi;R37		50-75
sodium carbonate	207-838-8	497-19-8	01-2119485498-19	Eye Irrit. 2 (H319)	Xi;R36		10-20
sodium dichloroisocyanurate, dihydrate	220-767-7	51580-86-0	01-2119489371-33	EUH031 Acute Tox. 4 (H302) STOT SE 3 (H335) Eye Irrit. 2 (H319) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	Xn;R22 R31 Xi;R36/37 N;R50/53		1-3
tetrasodium (1-hydroxy ethylidene)bisphosphonate	223-267-7	3794-83-0	No data available	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	Xn;R22 Xi;R36/38		1-3
alkyl alcohol alkoxyolate	Polymer*	120313-48-6	[4]	Skin Irrit. 2 (H315) Aquatic Acute 1 (H400) Aquatic Chronic 2 (H411)	Xi;R38 N;R50		0.1-1

* 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****General Information:**

Symptoms of intoxication may even occur after several hours. It is recommended to continue medical observation for at least 48 hours after the incident. If breathing is irregular or stopped, administer artificial respiration.

Inhalation

Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTRE, doctor or physician.

Skin contact:

Wash skin with plenty of lukewarm, gently flowing water for at least 30 minutes. Take off immediately all contaminated clothing and wash it before re-use. Immediately call a POISON CENTRE, doctor or physician.

Eye contact:

Immediately rinse eyes cautiously with lukewarm water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE, doctor or physician.

Ingestion:

Rinse mouth. Immediately drink 1 glass of water. Do NOT induce vomiting. Keep at rest. Immediately call a POISON CENTRE, doctor or physician.

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:**

Corrosive to the respiratory tract. May cause bronchospasm in chlorine sensitive individuals.

Skin contact:

Causes severe burns.

Eye contact:

Causes severe or permanent damage.

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Ingestion: Ingestion will lead to a strong caustic effect on mouth and throat and to the danger of perforation of oesophagus and stomach.

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**

Ensure adequate ventilation. Do not breathe dust or vapour. Wear suitable protective clothing, gloves and eye/face protection.

6.2 Environmental precautions

Do not allow to enter drainage system, surface or ground water. Do not allow to enter the ground/soil. Inform responsible authorities in case undiluted product reaches drainage system, surface or ground water or the ground/soil.

6.3 Methods and material for containment and cleaning up

Collect mechanically. Ensure adequate ventilation.

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. Wash contaminated clothing before reuse. Use personal protective equipment as required. Avoid contact with skin and eyes. Do not breathe dust. 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
disodium metasilicate pentahydrate	-	-	-	0.74

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sodium carbonate	-	-	-	-
sodium dichloroisocyanurate, dihydrate	-	-	-	1.15
tetrasodium (1-hydroxy ethylidene)bisphosphonate	No data available	No data available	No data available	No data available
alkyl alcohol alkoxylate	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)
disodium metasilicate pentahydrate	No data available	-	No data available	1.49
sodium carbonate	No data available	-	No data available	-
sodium dichloroisocyanurate, dihydrate	No data available	-	No data available	2.3
tetrasodium (1-hydroxy ethylidene)bisphosphonate	No data available	No data available	No data available	No data available
alkyl alcohol alkoxylate	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)
disodium metasilicate pentahydrate	No data available	-	No data available	0.74
sodium carbonate	No data available	-	No data available	-
sodium dichloroisocyanurate, dihydrate	No data available	-	No data available	1.15
tetrasodium (1-hydroxy ethylidene)bisphosphonate	No data available	No data available	No data available	No data available
alkyl alcohol alkoxylate	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
disodium metasilicate pentahydrate	-	-	-	6.22
sodium carbonate	-	-	10	-
sodium dichloroisocyanurate, dihydrate	-	-	-	8.11
tetrasodium (1-hydroxy ethylidene)bisphosphonate	No data available	No data available	No data available	No data available
alkyl alcohol alkoxylate	No data available	No data available	No data available	No data available

DNEL inhalatory exposure - Consumer (mg/m³)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
disodium metasilicate pentahydrate	-	-	-	1.55
sodium carbonate	10	-	-	-
sodium dichloroisocyanurate, dihydrate	-	-	-	1.99
tetrasodium (1-hydroxy ethylidene)bisphosphonate	No data available	No data available	No data available	No data available
alkyl alcohol alkoxylate	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)
disodium metasilicate pentahydrate	7.5	1	7.5	1000
sodium carbonate	-	-	-	-
sodium dichloroisocyanurate, dihydrate	0.00017	1.52	0.0017	0.59
tetrasodium (1-hydroxy ethylidene)bisphosphonate	No data available	No data available	No data available	No data available
alkyl alcohol alkoxylate	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)
disodium metasilicate pentahydrate	-	-	-	-
sodium carbonate	-	-	-	-
sodium dichloroisocyanurate, dihydrate	7.56	-	0.756	-
tetrasodium (1-hydroxy ethylidene)bisphosphonate	No data available	No data available	No data available	No data available
alkyl alcohol alkoxylate	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:
Covering activities such as filling and transfer of product to application equipment, flasks or buckets

Appropriate engineering controls: If the product is diluted by using specific dosing systems with no risk of splashes or direct skin contact, the personal protection equipment as described in this section is not required.

Appropriate organisational controls: Avoid direct contact and/or splashes where possible. Train personnel.

Personal protective equipment

Eye / face protection: Safety glasses or goggles (EN 166).

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Hand protection:	Chemical-resistant protective gloves (EN 374). Verify instructions regarding permeability and breakthrough time, as provided by the gloves supplier. Consider specific local use conditions, such as risk of splashes, cuts, contact time and temperature. Suggested gloves for prolonged contact: Material: butyl rubber Penetration time: >= 480 min Material thickness: >= 0.7 mm Suggested gloves for protection against splashes: Material: nitrile rubber Penetration time: >= 30 min Material thickness: >= 0.4 mm In consultation with the supplier of protective gloves a different type providing similar protection may be chosen.
Body protection:	Wear chemical-resistant clothing and boots in case direct dermal exposure and/or splashes may occur.
Respiratory protection:	If exposure to dust cannot be avoided use: half mask (EN 140) with particle filter P2 (EN 143) or full-face mask (EN 136) with particle filter P1 (EN 143) 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:	Should not reach sewage water or drainage ditch undiluted.
<i>Recommended safety measures for handling the <u>diluted</u> product:</i>	
Recommended maximum concentration (%): 1	
Appropriate engineering controls:	No special requirements under normal use conditions.
Appropriate organisational controls:	No special requirements under normal use conditions.
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
Colour: White
Odour: Chlorine
Odour threshold: Not applicable
pH:
Dilution pH: > 12 (10%)
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)
disodium metasilicate pentahydrate	No data available		
sodium carbonate	1600	Method not given	1013
sodium dichloroisocyanurate, dihydrate	Product decomposes before boiling	Read across	
tetrasodium (1-hydroxy ethylidene)bisphosphonate	No data available		
alkyl alcohol alkoxyolate	> 250	Method not given	

Method / remark

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

Substance data, flammability or explosive limits, if available:

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Method / remark

Vapour pressure: Not determined

Substance data, vapour pressure

Ingredient(s)	Value (Pa)	Method	Temperature (°C)
disodium metasilicate pentahydrate	No data available		
sodium carbonate	Negligible		
sodium dichloroisocyanurate, dihydrate	0.006	Read across	20
tetrasodium (1-hydroxy ethylidene)bisphosphonate	No data available		
alkyl alcohol alkoxyate	< 10	Method not given	20

Method / remark

Vapour density: Not determined

Relative density: 1.1 g/cm³ (20 °C)

Solubility in / Miscibility with Water: Soluble

Substance data, solubility in water

Ingredient(s)	Value (g/l)	Method	Temperature (°C)
disodium metasilicate pentahydrate	175	Method not given	20
sodium carbonate	210-215	Method not given	20
sodium dichloroisocyanurate, dihydrate	248.2	Read across	25
tetrasodium (1-hydroxy ethylidene)bisphosphonate	No data available		
alkyl alcohol alkoxyate	Insoluble	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 determined

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

Keep container in a well-ventilated place. Keep in a cool place.

10.5 Incompatible materials

Reacts with acids releasing toxic chlorine gas. Keep away from acids.

10.6 Hazardous decomposition products

Chlorine.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Mixture data:

Relevant calculated ATE(s):

ATE - Oral (mg/kg): >2000

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

Acute toxicity

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Acute oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
disodium metasilicate pentahydrate	LD ₅₀	1152 - 1349	Mouse	Method not given	-
sodium carbonate	LD ₅₀	2800	Rat	Method not given	-
sodium dichloroisocyanurate, dihydrate	LD ₅₀	1671	Rat	EPA OPP 81-1	-
tetrasodium (1-hydroxy ethylidene)bisphosphonate		No data available			
alkyl alcohol alkoxylate	LD ₅₀	> 2000	Rat	Method not given	

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
disodium metasilicate pentahydrate	LD ₅₀	> 5000	Rat	Method not given	-
sodium carbonate	LD ₅₀	> 2000	Rabbit	Method not given	-
sodium dichloroisocyanurate, dihydrate	LD ₅₀	> 5000	Rat	EPA OPP 81-2	-
tetrasodium (1-hydroxy ethylidene)bisphosphonate		No data available			
alkyl alcohol alkoxylate		No data available			

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
disodium metasilicate pentahydrate	LC ₅₀	> 2.06 (mist)	Rat	Method not given	4
sodium carbonate	LC ₅₀	2.3 (dust)	Rat	OECD 403 (EU B.2)	2
sodium dichloroisocyanurate, dihydrate	LC ₅₀	> 0.27	Rat	OECD 403 (EU B.2)	4
tetrasodium (1-hydroxy ethylidene)bisphosphonate		No data available			
alkyl alcohol alkoxylate		No data available			

Irritation and corrosivity

Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
disodium metasilicate pentahydrate	Corrosive	Rabbit	OECD 404 (EU B.4)	
sodium carbonate	Not irritant	Rabbit	Method not given	
sodium dichloroisocyanurate, dihydrate	Corrosive	Rabbit	EPA OPP 81-5	
tetrasodium (1-hydroxy ethylidene)bisphosphonate	No data available			
alkyl alcohol alkoxylate	Irritant	Rabbit	Draize test	

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
disodium metasilicate pentahydrate	Corrosive	Rabbit	Method not given	
sodium carbonate	Irritant	Rabbit	Method not given	
sodium dichloroisocyanurate, dihydrate	Corrosive	Rabbit	EPA OPP 81-4	
tetrasodium (1-hydroxy ethylidene)bisphosphonate	No data available			
alkyl alcohol alkoxylate	Not corrosive or irritant	Rabbit	Method not given	

Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
disodium metasilicate pentahydrate	No data available			
sodium carbonate	No data available			
sodium dichloroisocyanurate, dihydrate	Irritating to respiratory tract			
tetrasodium (1-hydroxy ethylidene)bisphosphonate	No data available			
alkyl alcohol alkoxylate	No data available			

Sensitisation

Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
disodium metasilicate pentahydrate	Not sensitising		Method not given	-
sodium carbonate	Not sensitising		Method not given	-
sodium dichloroisocyanurate, dihydrate	Not sensitising	Guinea pig	OECD 406 (EU B.6) / GPMT	-
tetrasodium (1-hydroxy ethylidene)bisphosphonate	No data available			
alkyl alcohol alkoxylate	No data available			

Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
disodium metasilicate pentahydrate	No data available			-
sodium carbonate	No data available			-
sodium dichloroisocyanurate, dihydrate	No data available			-

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tetrasodium (1-hydroxy ethylidene)bisphosphonate	No data available			
alkyl alcohol alkoxylate	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)
disodium metasilicate pentahydrate	No data available		No data available	
sodium carbonate	No data available		No data available	
sodium dichloroisocyanurate, dihydrate	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13)	No evidence of genotoxicity, negative test results	OECD 475 (EU B.11)
tetrasodium (1-hydroxy ethylidene)bisphosphonate	No data available		No data available	
alkyl alcohol alkoxylate	No data available		No data available	

Carcinogenicity

Ingredient(s)	Effect
disodium metasilicate pentahydrate	No data available
sodium carbonate	No evidence for carcinogenicity, weight-of-evidence
sodium dichloroisocyanurate, dihydrate	No evidence for carcinogenicity, negative test results
tetrasodium (1-hydroxy ethylidene)bisphosphonate	No data available
alkyl alcohol alkoxylate	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
disodium metasilicate pentahydrate			No data available				
sodium carbonate			No data available				
sodium dichloroisocyanurate, dihydrate	NOAEL	Developmental toxicity	190	Rat	OECD 416, (EU B.35), oral		
tetrasodium (1-hydroxy ethylidene)bisphosphonate			No data available				
alkyl alcohol alkoxylate			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
disodium metasilicate pentahydrate		No data available			-	
sodium carbonate		No data available			-	
sodium dichloroisocyanurate, dihydrate	NOAEL	115	Rat	Method not given	28	
tetrasodium (1-hydroxy ethylidene)bisphosphonate		No data available				
alkyl alcohol alkoxylate		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
disodium metasilicate pentahydrate		No data available			-	
sodium carbonate		No data available			-	
sodium dichloroisocyanurate, dihydrate		No data available			-	
tetrasodium (1-hydroxy ethylidene)bisphosphonate		No data available				
alkyl alcohol alkoxylate		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
disodium metasilicate pentahydrate		No data available			-	
sodium carbonate		No data available			-	
sodium dichloroisocyanurate, dihydrate	NOAEL	> 31	Rat	Method not given	28	
tetrasodium (1-hydroxy ethylidene)bisphosphonate		No data available				
alkyl alcohol alkoxylate		No data available				

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Chronic toxicity

Ingredient(s)	Exposure route	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time	Specific effects and organs affected	Remark
disodium metasilicate pentahydrate			No data available					
sodium carbonate			No data available					
sodium dichloroisocyanurate, dihydrate	Oral	NOAEL	1523	Mouse	OECD 453 (EU B.33)	24 month(s)		
tetrasodium (1-hydroxy ethylidene)bisphosphonate			No data available					
alkyl alcohol alkoxylate			No data available					

STOT-single exposure

Ingredient(s)	Affected organ(s)
disodium metasilicate pentahydrate	No data available
sodium carbonate	No data available
sodium dichloroisocyanurate, dihydrate	No data available
tetrasodium (1-hydroxy ethylidene)bisphosphonate	No data available
alkyl alcohol alkoxylate	No data available

STOT-repeated exposure

Ingredient(s)	Affected organ(s)
disodium metasilicate pentahydrate	No data available
sodium carbonate	No data available
sodium dichloroisocyanurate, dihydrate	No data available
tetrasodium (1-hydroxy ethylidene)bisphosphonate	No data available
alkyl alcohol alkoxylate	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)
disodium metasilicate pentahydrate	LC ₅₀	210	<i>Brachydanio rerio</i>	Method not given	96
sodium carbonate	LC ₅₀	300	<i>Lepomis macrochirus</i>	Method not given	96
sodium dichloroisocyanurate, dihydrate	LC ₅₀	0.23	<i>Lepomis macrochirus</i>	Method not given	96
tetrasodium (1-hydroxy ethylidene)bisphosphonate		No data available			
alkyl alcohol alkoxylate	LC ₅₀	1 - 10	<i>Leuciscus idus</i>	Method not given	96

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
disodium metasilicate pentahydrate	EC ₅₀	216	<i>Daphnia magna Straus</i>	Method not given	96
sodium carbonate	EC ₅₀	265	<i>Daphnia magna Straus</i>	Method not given	96
sodium dichloroisocyanurate, dihydrate	EC ₅₀	0.17	<i>Daphnia magna Straus</i>	ASTM draft method	48
tetrasodium (1-hydroxy ethylidene)bisphosphonate		No data available			
alkyl alcohol alkoxylate	EC ₅₀	1	<i>Not specified</i>	Method not given	48

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
disodium metasilicate pentahydrate	EC ₅₀	207	<i>Desmodesmus</i>	Method not given	72

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			<i>subspicatus</i>		
sodium carbonate		No data available			-
sodium dichloroisocyanurate, dihydrate	EC ₅₀	< 0.5	<i>Scenedesmus obliquus</i>	Non guideline test	3
tetrasodium (1-hydroxy ethylidene)bisphosphonate		No data available			
alkyl alcohol alkoxylate	EC ₅₀	0.1 - 1	<i>Not specified</i>	Method not given	72

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
disodium metasilicate pentahydrate		No data available			-
sodium carbonate		No data available			-
sodium dichloroisocyanurate, dihydrate		No data available			-
tetrasodium (1-hydroxy ethylidene)bisphosphonate		No data available			
alkyl alcohol alkoxylate		No data available			-

Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
disodium metasilicate pentahydrate	EC ₀	> 1000	<i>Pseudomonas putida</i>	Method not given	0.5 hour(s)
sodium carbonate		No data available			
sodium dichloroisocyanurate, dihydrate		No data available			
tetrasodium (1-hydroxy ethylidene)bisphosphonate		No data available			
alkyl alcohol alkoxylate		1000	<i>Activated sludge</i>	DIN EN ISO 8192-OECD 209-88/302/EEC	

Aquatic long-term toxicity

Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
disodium metasilicate pentahydrate		No data available				
sodium carbonate		No data available				
sodium dichloroisocyanurate, dihydrate	NOEC	1000	<i>Oncorhynchus mykiss</i>	OECD 215	28 day(s)	
tetrasodium (1-hydroxy ethylidene)bisphosphonate		No data available				
alkyl alcohol alkoxylate		No data available				

Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
disodium metasilicate pentahydrate		No data available				
sodium carbonate		No data available				
sodium dichloroisocyanurate, dihydrate	NOEC	160	<i>Daphnia magna</i>	OECD 211	21 day(s)	
tetrasodium (1-hydroxy ethylidene)bisphosphonate		No data available				
alkyl alcohol alkoxylate	NOEC	0.25	<i>Daphnia magna</i>	Method not given	21 day(s)	

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
disodium metasilicate pentahydrate		No data available			-	
sodium carbonate		No data available			-	
sodium dichloroisocyanurate, dihydrate		No data available			-	
tetrasodium (1-hydroxy ethylidene)bisphosphonate		No data available				
alkyl alcohol alkoxylate		No data available			-	

Terrestrial toxicity

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

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
disodium metasilicate pentahydrate		No data available			-	
sodium carbonate		No data available			-	
sodium dichloroisocyanurate, dihydrate	NOEC	1000	<i>Eisenia fetida</i>	OECD 207	14	
alkyl alcohol alkoxylate		No data available			-	

Terrestrial toxicity - plants, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
disodium metasilicate pentahydrate		No data available			-	
sodium carbonate		No data available			-	
sodium dichloroisocyanurate, dihydrate		No data available			-	
alkyl alcohol alkoxylate		No data available			-	

Terrestrial toxicity - birds, if available:

Ingredient(s)	Endpoint	Value	Species	Method	Exposure time (days)	Effects observed
disodium metasilicate pentahydrate		No data available			-	
sodium carbonate		No data available			-	
sodium dichloroisocyanurate, dihydrate		No data available			-	
alkyl alcohol alkoxylate		No data available			-	

Terrestrial toxicity - beneficial insects, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
disodium metasilicate pentahydrate		No data available			-	
sodium carbonate		No data available			-	
sodium dichloroisocyanurate, dihydrate		No data available			-	
alkyl alcohol alkoxylate		No data available			-	

Terrestrial toxicity - soil bacteria, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
disodium metasilicate pentahydrate		No data available			-	
sodium carbonate		No data available			-	
sodium dichloroisocyanurate, dihydrate		No data available			-	
alkyl alcohol alkoxylate		No data available			-	

12.2 Persistence and degradability**Abiotic degradation**

Abiotic degradation - photodegradation in air, if available:

Abiotic degradation - hydrolysis, if available:

Ingredient(s)	Half-life time in fresh water	Method	Evaluation	Remark
sodium carbonate	No data available		Rapidly hydrolysible	

Abiotic degradation - other processes, if available:

Biodegradation

Ready biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT ₅₀	Method	Evaluation
disodium metasilicate pentahydrate					Not applicable (inorganic substance)
sodium carbonate					Not applicable (inorganic substance)
sodium dichloroisocyanurate, dihydrate		Oxygen depletion	2 % in 28d day(s)	OECD 301D	Not readily biodegradable.

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tetrasodium (1-hydroxy ethylidene)bisphosphonate					No data available
alkyl alcohol alkoxylate		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 Kow)

Ingredient(s)	Value	Method	Evaluation	Remark
disodium metasilicate pentahydrate	No data available		No bioaccumulation expected	
sodium carbonate	No data available		No bioaccumulation expected	
sodium dichloroisocyanurate, dihydrate	-0.0056	Method not given	No bioaccumulation expected	
tetrasodium (1-hydroxy ethylidene)bisphosphonate	No data available			
alkyl alcohol alkoxylate	No data available		No bioaccumulation expected	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
disodium metasilicate pentahydrate	No data available				
sodium carbonate	No data available			No bioaccumulation expected	
sodium dichloroisocyanurate, dihydrate	No data available				
tetrasodium (1-hydroxy ethylidene)bisphosphonate	No data available				
alkyl alcohol alkoxylate	No data available				

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
disodium metasilicate pentahydrate	No data available				Potential for mobility in soil, soluble in water
sodium carbonate	No data available				Potential for mobility in soil, soluble in water
sodium dichloroisocyanurate, dihydrate	No data available				
tetrasodium (1-hydroxy ethylidene)bisphosphonate	No data available				
alkyl alcohol alkoxylate	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:

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.

European Waste Catalogue:

20 01 15* - alkalines.

Empty packaging

Recommendation:

Dispose of observing national or local regulations.

SECTION 14: Transport information



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

14.1 UN number: 3253

14.2 UN proper shipping name:

Disodium trioxosilicate , mixture

14.3 Transport hazard class(es):

Class: 8

Label(s): 8

14.4 Packing group: III

14.5 Environmental hazards:

Environmentally hazardous: No

Marine pollutant: No

14.6 Special precautions for user:

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.

Other relevant information:

ADR

Classification code: C6

Tunnel restriction code: E

Hazard identification number: 80

IMO/IMDG

EmS: F-A, S-B

The product has been classified, labelled and packaged in accordance with the requirements of ADR and the provisions of the IMDG Code. Transport regulations include special provisions for certain classes of dangerous goods packed in limited quantities.

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

chlorine-based bleaching agents, non-ionic surfactants, phosphonates, polycarboxylates < 5%

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

SDS code: MS1002144

Version: 01.0

Revision: 2015-05-29

Reason for revision:

Overall design adjusted in accordance with Amendment 453/2010, Annex II of Regulation (EC) No 1907/2006

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:

- H290 - May be corrosive to metals.
- H302 - Harmful if swallowed.
- H314 - Causes severe skin burns and eye damage.
- H315 - Causes skin irritation.
- H319 - Causes serious eye irritation.
- 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.
- EUH031 - Contact with acids liberates toxic gas.
- R22 - Harmful if swallowed.
- R31 - Contact with acids liberates toxic gas.
- R34 - Causes burns.
- R36 - Irritating to eyes.
- R37 - Irritating to respiratory system.
- R38 - Irritating to skin.
- R50 - Very toxic to aquatic organisms.
- R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Abbreviations and acronyms:

- AISE - The international Association for Soaps, Detergents and Maintenance Products
- DNEL - Derived No Effect Limit

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- 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