Safety Data Sheet

According to Regulation (EC) No 1907/2006

Suma Crystal A8

Revision: 2021-03-14 **Version:** 09.2

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

1.1 Product identifier
Trade name: Suma Crystal A8

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

Product use:	Dish washing rinse aid. For professional use only.
Uses advised against:	Uses other than those identified are not recommended.

SWED - Sector-specific worker exposure description :
AISE_SWED_PW_1_1
AISE_SWED_PW_1_1

UFI: 5484-Q0TY-Y00H-QS92

1.3 Details of the supplier of the safety data sheet
Diversey Europe Operations BV, 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@diversey.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 Irrit. 2 (H319)

2.2 Label elements

Signal word: Warning.

Hazard statements:
H319 - Causes serious eye irritation.

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
alkyl alcohol alkoxylate	[4]	111905-53-4	[4]	Acute Tox. 4 (H302) Skin Irrit. 2 (H315)		3-10

				Eye Irrit. 2 (H319) Aquatic Chronic 3 (H412)		
citric acid	201-069-1	-	01-2119457026-42	Eye Irrit. 2 (H319)		3-10
sodium cumenesulphonate	239-854-6	-	01-2119489411-37	Eye Irrit. 2 (H319)		1-3
alkyl alcohol alkoxylate	[4]	120313-48-6	[4]	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)		1-3

Workplace exposure limit(s), if available, are listed in subsection 8.1.
ATE, if available, are listed in section 11.
[4] Exempted: polymer. See Article 2(9) 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

No special measures required.

6.2 Environmental precautions

Dilute with plenty of water. Do not allow to enter drainage system, surface or ground water.

6.3 Methods and material for containment and cleaning up

Dyke to collect large liquid spills. Absorb with liquid-binding material (sand, diatomite, universal binders, sawdust). 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.

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 adviced by Diversey. Wash hands before breaks and at the end of workday. 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.
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
alkyl alcohol alkoxylate	No data available	No data available	No data available	No data available
citric acid	-	-	-	-
sodium cumenesulphonate	-	-	-	3.8
alkyl alcohol alkoxylate	-	-	-	-

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)
alkyl alcohol alkoxylate	No data available	No data available	No data available	No data available
citric acid	No data available	-	No data available	-
sodium cumenesulphonate	No data available	-	No data available	7.6
alkyl alcohol alkoxylate	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)
alkyl alcohol alkoxylate	No data available	No data available	No data available	No data available
citric acid	No data available	-	No data available	-
sodium cumenesulphonate	No data available	-	No data available	3.8
alkyl alcohol alkoxylate	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
alkyl alcohol alkoxylate	No data available	No data available	No data available	No data available
citric acid	-	-	-	-
sodium cumenesulphonate	-	-	-	53.6
alkyl alcohol alkoxylate	-	-	-	-

DNEL inhalatory exposure - Consumer (mg/m³)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
alkyl alcohol alkoxylate	No data available	No data available	No data available	No data available
citric acid	-	-	-	-
sodium cumenesulphonate	-	-	-	13.2
alkyl alcohol alkoxylate	-	-	-	-

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)
alkyl alcohol alkoxylate	No data available	No data available	No data available	No data available
citric acid	0.44	0.044	-	> 1000
sodium cumenesulphonate	0.23	0.023	2.3	100
alkyl alcohol alkoxylate	-	-	-	-

Environmental exposure - PNEC, continued

Ingredient(s)	Sediment, freshwater (mg/kg)	Sediment, marine (mg/kg)	Soil (mg/kg)	Air (mg/m³)
alkyl alcohol alkoxylate	No data available	No data available	No data available	No data available
citric acid	34.6	3.46	33.1	-
sodium cumenesulphonate	0.862	0.086	0.037	-
alkyl alcohol alkoxylate	-	-	-	-

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:

Contributing scenario, undiluted	SWED - Sector-specific worker exposure description	LCS	PROC	Duration (min)	ERC
Automatic application in a dedicated closed system	AISE_SWED_PW_1_1	PW	PROC 1	60	ERC8a

Personal protective equipment
Eye / face protection: Safety glasses are not normally required. However, their use is recommended in those cases where splashes may occur when handling the product (EN 166).
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.

Recommended safety measures for handling the diluted product:

Recommended maximum concentration (% w/w): 0.05

Appropriate engineering controls: No special requirements under normal use conditions.
Appropriate organisational controls: No special requirements under normal use conditions.

REACH use scenarios considered for the diluted product:

Contributing scenario, diluted	SWED	LCS	PROC	Duration (min)	ERC
Automatic application in a dedicated closed system	AISE_SWED_PW_1_1	PW	PROC 1	480	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: 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: Liquid
Colour: Clear , Green
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 — See substance data

Substance data, boiling point

Ingredient(s)	Value (°C)	Method	Atmospheric pressure (hPa)
alkyl alcohol alkoxylate	No data available		
citric acid	No data available		
sodium cumenesulphonate	> 100	Method not given	
alkyl alcohol alkoxylate	> 250	Method not given	

Method / remark

Flammability (solid, gas): Not applicable to liquids
Flammability (liquid): Not flammable.
Flash point (°C): > 60 °C — Weight of evidence
Sustained combustion: The product does not sustain combustion — Weight of evidence
(UN Manual of Tests and Criteria, section 32, L.2)
Lower and upper explosion limit/flammability limit (%): Not determined

Substance data, flammability or explosive limits, if available:

Method / remark

Autoignition temperature: Not determined
Decomposition temperature: Not applicable.
pH < 2 (neat) — ISO 4316
Dilution pH: ≈ 3 (0.05 %) — ISO 4316
Kinematic viscosity: Not determined
Solubility in / Miscibility with Water: Fully miscible

Substance data, solubility in water

Ingredient(s)	Value (g/l)	Method	Temperature (°C)
alkyl alcohol alkoxylate	No data available		
citric acid	1630	Method not given	
sodium cumenesulphonate	Soluble		
alkyl alcohol alkoxylate	Insoluble	Method not given	

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)
alkyl alcohol alkoxylate	No data available		
citric acid	No data available		
sodium cumenesulphonate	No data available		
alkyl alcohol alkoxylate	< 10	Method not given	20

Method / remark

Relative density: ≈ 1.04 (20 °C) — OECD 109 (EU A.3)
Relative vapour density: No data available. — Not relevant to classification of this product
Particle characteristics: No data available. — Not applicable to liquids.

9.2 Other information
9.2.1 Information with regard to physical hazard classes
Explosive properties: Not explosive. Vapours may form explosive mixtures with air.
Oxidising properties: Not oxidising.
Corrosion to metals: Not corrosive — Weight of evidence

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
Keep away from products containing chlorine-based bleaching agents or sulphites.

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:.

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

Skin irritation and corrosivity
Result: Not corrosive to skin

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 (mg/kg)
alkyl alcohol alkoxylate	LD_{50}	≥ 1000	Rat	Method not given		14000
citric acid	LD_{50}	3000	Rat	Method not given		Not established
sodium cumenesulphonate	LD_{50}	> 7000	Rat	Method not given		Not established
alkyl alcohol alkoxylate	LD_{50}	> 2000	Rat	Weight of evidence		Not established

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)	ATE (mg/kg)
alkyl alcohol alkoxylate		No data available				Not established
citric acid	LD_{50}	> 2000	Rat	Method not given		Not established
sodium cumenesulphonate	LD_{50}	> 2000	Rabbit	Method not given		Not established
alkyl alcohol alkoxylate		No data available		Weight of evidence		Not established

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
alkyl alcohol alkoxylate		No data available			
citric acid		No data available			
sodium cumenesulphonate	LC_{50}	> 770	Rat	Method not given	4
alkyl alcohol alkoxylate		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)
alkyl alcohol alkoxylate	Not established	Not established	Not established	Not established
citric acid	Not established	Not established	Not established	Not established
sodium cumenesulphonate	Not established	Not established	Not established	Not established
alkyl alcohol alkoxylate	Not established	Not established	Not established	Not established

Irritation and corrosivity
Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time

alkyl alcohol alkoxylate	Irritant	Rabbit	OECD 404 (EU B.4)	
citric acid	Not irritant	Rabbit	OECD 404 (EU B.4)	
sodium cumenesulphonate	Mild irritant	Rabbit	OECD 404 (EU B.4)	
alkyl alcohol alkoxylate	Irritant	Rabbit	Draize test	

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
alkyl alcohol alkoxylate	Irritant	Rabbit	OECD 405 (EU B.5)	
citric acid	Irritant	Rabbit	OECD 405 (EU B.5)	
sodium cumenesulphonate	Irritant	Rabbit	OECD 405 (EU B.5)	
alkyl alcohol alkoxylate	Not corrosive or irritant	Rabbit	Method not given	

Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
alkyl alcohol alkoxylate	No data available			
citric acid	No data available			
sodium cumenesulphonate	No data available			
alkyl alcohol alkoxylate	No data available			

Sensitisation

Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
alkyl alcohol alkoxylate	No data available			
citric acid	Not sensitising	Guinea pig	Method not given	
sodium cumenesulphonate	Not sensitising	Guinea pig	OECD 406 (EU B.6) / GPMT	
alkyl alcohol alkoxylate	No data available			

Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
alkyl alcohol alkoxylate	No data available			
citric acid	No data available			
sodium cumenesulphonate	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)
alkyl alcohol alkoxylate	No data available		No data available	
citric acid	No data available		No evidence of genotoxicity, negative test results	Method not given
sodium cumenesulphonate	No evidence for mutagenicity, negative test results	Method not given	No evidence for mutagenicity, negative test results	OECD 474 (EU B.12)
alkyl alcohol alkoxylate	No data available		No data available	

Carcinogenicity

Ingredient(s)	Effect
alkyl alcohol alkoxylate	No data available
citric acid	No evidence for carcinogenicity, negative test results
sodium cumenesulphonate	No evidence for carcinogenicity, negative test results
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
alkyl alcohol alkoxylate			No data available				
citric acid			No data available				No evidence for reproductive toxicity
sodium cumenesulphonate	NOAEL	Teratogenic effects	> 3000	Rat	Non guideline test		
alkyl alcohol alkoxylate			No data available				

Repeated dose toxicity

Sub-acute or sub-chronic oral toxicity

Ingredient(s)	Endpoint	Value	Species	Method	Exposure	Specific effects and organs

		(mg/kg bw/d)			time (days)	affected
alkyl alcohol alkoxylate		No data available				
citric acid		No data available				
sodium cumenesulphonate	NOAEL	763 - 3534		OECD 408 (EU B.26)	90	
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
alkyl alcohol alkoxylate		No data available				
citric acid		No data available				
sodium cumenesulphonate	NOAEL	440	Mouse	Method not given	90	
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
alkyl alcohol alkoxylate		No data available				
citric acid		No data available				
sodium cumenesulphonate		No data available				
alkyl alcohol alkoxylate		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
alkyl alcohol alkoxylate			No data available					
citric acid			No data available					
sodium cumenesulphonate	Dermal	NOAEL	727	Mouse	Method not given	24 month(s)		
alkyl alcohol alkoxylate			No data available					

STOT-single exposure

Ingredient(s)	Affected organ(s)
alkyl alcohol alkoxylate	No data available
citric acid	No data available
sodium cumenesulphonate	No data available
alkyl alcohol alkoxylate	No data available

STOT-repeated exposure

Ingredient(s)	Affected organ(s)
alkyl alcohol alkoxylate	No data available
citric acid	No data available
sodium cumenesulphonate	No data available
alkyl alcohol alkoxylate	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)
alkyl alcohol alkoxylate	LC_{50}	1- 10	*Leuciscus idus*	Method not given	48
citric acid	LC_{50}	440	*Leuciscus idus*	Method not given	48
sodium cumenesulphonate	LC_{50}	> 1000	*Fish*	EPA-OPPTS 850.1075	96
alkyl alcohol alkoxylate	LC_{50}	1 - 10	*Leuciscus idus*	Method not given	96

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
alkyl alcohol alkoxylate	EC_{50}	1 - 10	*Not specified*	Method not given	48
citric acid	EC_{50}	1535	*Daphnia magna Straus*	Method not given	24
sodium cumenesulphonate	EC_{50}	> 1000	*Daphnia*	EPA-OPPTS 850.1010	48
alkyl alcohol alkoxylate	EC_{50}	1	*Not specified*	Method not given	48

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
alkyl alcohol alkoxylate		No data available			
citric acid	LC_{50}	425	*Scenedesmus quadricauda*	Method not given	168
sodium cumenesulphonate	E_rC_{50}	310	*Not specified*		72
alkyl alcohol alkoxylate	EC_{50}	0.1 - 1	*Not specified*	Method not given	72

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
alkyl alcohol alkoxylate		No data available			
citric acid		No data available			
sodium cumenesulphonate		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
alkyl alcohol alkoxylate	EC_{10}	> 1000	*Activated sludge*	DEV-L2	
citric acid	EC_{50}	> 10000	*Pseudomonas putida*	Method not given	16 hour(s)
sodium cumenesulphonate	E_rC_{50}	> 1000	*Bacteria*	OECD 209	3 hour(s)
alkyl alcohol alkoxylate		1000	*Activated sludge*	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
alkyl alcohol alkoxylate		No data available				
citric acid		No data available				
sodium cumenesulphonate		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
alkyl alcohol alkoxylate		No data available				
citric acid		No data available				
sodium cumenesulphonate		No data available				
alkyl alcohol alkoxylate	NOEC	>0.1- <1	*Daphnia magna*	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
alkyl alcohol alkoxylate		No data available				
citric acid		No data available				
sodium cumenesulphonate		No data available				
alkyl alcohol alkoxylate		No data available				

Terrestrial toxicity

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

Terrestrial toxicity - plants, if available:

Terrestrial toxicity - birds, if available:

Terrestrial toxicity - beneficial insects, if available:

Terrestrial toxicity - soil bacteria, if available:

12.2 Persistence and degradability

Abiotic degradation

Abiotic degradation - photodegradation in air, if available:

Abiotic degradation - hydrolysis, if available:

Abiotic degradation - other processes, if available:

Biodegradation

Ready biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT_{50}	Method	Evaluation
alkyl alcohol alkoxylate			> 60 % in 28 day(s)	OECD 301F	Readily biodegradable
citric acid			97 % in 28 day(s)	OECD 301B	Readily biodegradable
sodium cumenesulphonate	Activated sludge, aerobe	CO_2 production	100 % in 28 day(s)	OECD 301B	Readily biodegradable
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:

12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

Ingredient(s)	Value	Method	Evaluation	Remark
alkyl alcohol alkoxylate	No data available			
citric acid	-1.72		No bioaccumulation expected	
sodium cumenesulphonate	-1.1	Method not given	Low potential for bioaccumulation	
alkyl alcohol alkoxylate	-		No bioaccumulation expected	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark

alkyl alcohol alkoxylate	No data available				
citric acid	No data available				
sodium cumenesulphonate	No data available				
alkyl alcohol alkoxylate	-			No bioaccumulation expected	

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
alkyl alcohol alkoxylate	No data available				
citric acid	No data available				Potential for mobility in soil, soluble in water
sodium cumenesulphonate	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 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.

European Waste Catalogue: 20 01 29* - detergents containing dangerous substances.

Empty packaging

Recommendation: Dispose of observing national or local regulations.

Suitable cleaning agents: Water, if necessary with cleaning agent.

SECTION 14: Transport information

Land transport (ADR/RID), Sea transport (IMDG), Air transport (ICAO-TI / IATA-DGR)

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
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 Transport in bulk according to Annex II of MARPOL and the IBC Code: Non-dangerous goods

SECTION 15: Regulatory information

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

EU regulations:
• Regulation (EC) No. 1907/2006 - REACH
• Regulation (EC) No 1272/2008 - CLP
• Regulation (EC) No. 648/2004 - Detergents regulation
• substances identified as having endocrine disrupting properties in accordance with the criteria set out in Delegated Regulation (EU) 2017/2100 or Regulation (EU) 2018/605

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

Ingredients according to EC Detergents Regulation 648/2004

non-ionic surfactants	5 - 15 %
anionic surfactants, polycarboxylates	< 5 %

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.

Seveso - 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

SDS code: MSDS1977 **Version:** 09.2 **Revision:** 2021-03-14

Reason for revision:
Overall design adjusted in accordance with Amendment 2020/878, Annex II of Regulation (EC) No 1907/2006, This data sheet contains changes from the previous version in section(s):, 3, 7, 9, 10, 11, 16

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 H and EUH phrases mentioned in section 3:
- H302 - Harmful if swallowed.
- H315 - Causes skin irritation.
- H319 - Causes serious eye irritation.
- H412 - Harmful to aquatic life with long lasting effects.

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 - Organization for Economic Cooperation and Development
- PBT - Persistent, Bioaccumulative and Toxic
- PNEC - Predicted No Effect Concentration
- PROC - Process categories
- REACH number - REACH registration number, without supplier specific part
- vPvB - very Persistent and very Bioaccumulative

End of Safety Data Sheet