



## Suma Revoflow Clear A11

Revision: 2018-01-25

Version: 03.1

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

#### 1.1 Product identifier

Trade name: Suma Revoflow Clear A11

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

##### Identified uses:

For professional use only.

AISE-P204 - Rinse aid. 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

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

For medical or environmental emergency only:

call 0800 052 0185

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Skin Irrit. 2 (H315)

Eye Irrit. 2 (H319)

Aquatic Chronic 3 (H412)

#### 2.2 Label elements



**Signal word:** Warning.

#### Hazard statements:

H315 + H319 - Causes skin and serious eye irritation.

H412 - Harmful to aquatic life with long lasting effects.

#### 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	Notes	Weight percent
alkyl alcohol alkoxyate	Polymer*	111905-53-4	[4]	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Aquatic Chronic 3 (H412)		10-20
citric acid	201-069-1	77-92-9	01-2119457026-42	Eye Irrit. 2 (H319)		3-10
alkyl alcohol alkoxyate	Polymer*	120313-48-6	[4]	Skin Irrit. 2 (H315) Aquatic Acute 1 (H400) Aquatic Chronic 2		3-10

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				(H411)		
sodium cumenesulphonate	239-854-6	15763-76-5	01-2119489411-37	Eye Irrit. 2A (H319)		1-3

\* Polymer.

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.

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

<b>Inhalation:</b>	Get medical attention or advice if you feel unwell.
<b>Skin contact:</b>	Wash skin with plenty of lukewarm, gently flowing water. Take off immediately all contaminated clothing and wash it before re-use. If skin irritation occurs: Get medical advice or attention.
<b>Eye contact:</b>	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 eye irritation persists: Get medical advice or attention.
<b>Ingestion:</b>	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.
<b>Self-protection of first aider:</b>	Consider personal protective equipment as indicated in subsection 8.2.

### 4.2 Most important symptoms and effects, both acute and delayed

<b>Inhalation:</b>	No known effects or symptoms in normal use.
<b>Skin contact:</b>	Causes irritation.
<b>Eye contact:</b>	Causes severe irritation.
<b>Ingestion:</b>	No known effects or symptoms in normal use.

### 4.3 Indication of any immediate medical attention and special treatment needed

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

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

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

### 5.2 Special hazards arising from the substance or mixture

No special hazards known.

### 5.3 Advice for firefighters

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

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Wear suitable protective clothing, gloves and eye/face protection.

### 6.2 Environmental precautions

Do not allow to enter the ground/soil. Dilute with plenty of water. 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

Absorb with liquid-binding material (sand, diatomite, universal binders, sawdust).

### 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 Diversey. 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

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

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	-
alkyl alcohol alkoxylate	No data available	No data available	No data available	No data available
sodium cumenesulphonate	-	-	-	7.6

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	-
alkyl alcohol alkoxylate	No data available	No data available	No data available	No data available
sodium cumenesulphonate	-	-	-	3.8

DNEL inhalatory exposure - Worker (mg/m<sup>3</sup>)

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	-	-	-	-
alkyl alcohol alkoxylate	No data available	No data available	No data available	No data available
sodium cumenesulphonate	-	-	-	3.8

DNEL inhalatory exposure - Consumer (mg/m<sup>3</sup>)

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	-	-	-	-
alkyl alcohol alkoxylate	No data available	No data available	No data available	No data available
sodium cumenesulphonate	-	-	-	13.2

#### 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
alkyl alcohol alkoxylate	No data available	No data available	No data available	No data available
sodium cumenesulphonate	0.23	-	2.3	100

Environmental exposure - PNEC, continued

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Ingredient(s)	Sediment, freshwater (mg/kg)	Sediment, marine (mg/kg)	Soil (mg/kg)	Air (mg/m <sup>3</sup> )
alkyl alcohol alkoxyolate	No data available	No data available	No data available	No data available
citric acid	34.6	3.46	33.1	-
alkyl alcohol alkoxyolate	No data available	No data available	No data available	No data available
sodium cumenesulphonate	-	-	-	-

## 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:

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 are not normally required. However, their use is recommended in those cases where splashes may occur when handling the product (EN 166).

**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 (EN 14605).

**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 (%): 0.04

**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:** Liquid

**Colour:** Clear, Yellow

**Odour:** Product specific

**Odour threshold:** Not applicable

**pH:** < 2 (neat)

**Melting point/freezing point (°C):** Not determined

Not relevant to classification of this product

**Initial boiling point and boiling range (°C):** Not determined

Substance data, boiling point

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

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sodium cumenesulphonate	No data available		
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## Method / remark

**Flash point (°C):** Not applicable. 93.4

**Sustained combustion:** Not applicable.  
( UN Manual of Tests and Criteria, section 32, L.2 )

**Evaporation rate:** Not determined

**Flammability (solid, gas):** Not applicable to liquids

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

## Method / remark

**Vapour density:** Not determined

**Relative density:** ≈ 1.04 (20 °C)

**Solubility in / Miscibility with Water:** Fully miscible

Substance data, solubility in water

Ingredient(s)	Value (g/l)	Method	Temperature (°C)
alkyl alcohol alkoxyolate	No data available		
citric acid	1630	Method not given	
alkyl alcohol alkoxyolate	Insoluble	Method not given	
sodium cumenesulphonate	493 Soluble	Method not given	20

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 corrosive

Not relevant to classification of this product  
Weight of evidence

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 alkali. 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

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## 11.1 Information on toxicological effects

No data is available on the mixture.

ATE - Oral (mg/kg): >5000

**Skin irritation and corrosivity**

**Result:** Not corrosive

**Method:** OECD 431 (EU B.40 bis), Episkin

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)
alkyl alcohol alkoxylate	LD <sub>50</sub>	> 2000	Rat	Method not given	
citric acid	LD <sub>50</sub>	3000	Rat	Method not given	
alkyl alcohol alkoxylate	LD <sub>50</sub>	> 2000	Rat	Method not given	
sodium cumenesulphonate	LD <sub>50</sub>	> 7000	Rat	Method not given	

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
alkyl alcohol alkoxylate		No data available			
citric acid	LD <sub>50</sub>	> 2000	Rat	Method not given	
alkyl alcohol alkoxylate		No data available			
sodium cumenesulphonate	LD <sub>50</sub>	> 2000	Rabbit	Method not given	

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			
alkyl alcohol alkoxylate		No data available			
sodium cumenesulphonate	LC <sub>50</sub>	> 5 (mist) No mortality observed	Rat	Read across	3.87

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

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)	
alkyl alcohol alkoxylate	Not corrosive or irritant	Rabbit	Method not given	
sodium cumenesulphonate	Irritant	Rabbit	OECD 405 (EU B.5)	

Respiratory tract irritation and corrosivity

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

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sodium cumenesulphonate	Not sensitising	Guinea pig	OECD 406 (EU B.6) / GPMT
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## Sensitisation by inhalation

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

## Carcinogenicity

Ingredient(s)	Effect
alkyl alcohol alkoxylate	No data available
citric acid	No evidence for carcinogenicity, negative test results
alkyl alcohol alkoxylate	No data available
sodium cumenesulphonate	No evidence for carcinogenicity, negative test results

## 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
alkyl alcohol alkoxylate			No data available				
sodium cumenesulphonate	NOAEL	Teratogenic effects	> 936	Rat	Non guideline test		No known significant effects or critical hazards

## 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
alkyl alcohol alkoxylate		No data available				
citric acid		No data available				
alkyl alcohol alkoxylate		No data available				
sodium cumenesulphonate	NOAEL	763 - 3534	Rat	OECD 408 (EU B.26)		No effects observed

## 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				
alkyl alcohol alkoxylate		No data available				
sodium cumenesulphonate		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				
alkyl alcohol alkoxylate		No data available				
sodium cumenesulphonate		No data available				

## Chronic toxicity

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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					
alkyl alcohol alkoxylate			No data available					
sodium cumenesulphonate			No data available					

## STOT-single exposure

Ingredient(s)	Affected organ(s)
alkyl alcohol alkoxylate	No data available
citric acid	No data available
alkyl alcohol alkoxylate	No data available
sodium cumenesulphonate	Not applicable

## STOT-repeated exposure

Ingredient(s)	Affected organ(s)
alkyl alcohol alkoxylate	No data available
citric acid	No data available
alkyl alcohol alkoxylate	No data available
sodium cumenesulphonate	Not applicable

**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)
alkyl alcohol alkoxylate	LC <sub>50</sub>	1 - 10	<i>Leuciscus idus</i>	Method not given	48
citric acid	LC <sub>50</sub>	440	<i>Leuciscus idus</i>	Method not given	48
alkyl alcohol alkoxylate	LC <sub>50</sub>	1 - 10	<i>Leuciscus idus</i>	Method not given	96
sodium cumenesulphonate	LC <sub>50</sub>	> 1000	<i>Fish</i>	EPA-OPPTS 850.1075	96

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
alkyl alcohol alkoxylate	EC <sub>50</sub>	1 - 10	<i>Not specified</i>	Method not given	48
citric acid	EC <sub>50</sub>	1535	<i>Daphnia magna Straus</i>	Method not given	24
alkyl alcohol alkoxylate	EC <sub>50</sub>	1	<i>Not specified</i>	Method not given	48
sodium cumenesulphonate	EC <sub>50</sub>	> 100	<i>Daphnia magna Straus</i>	OECD 202 (EU C.2)	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 <sub>50</sub>	425	<i>Scenedesmus quadricauda</i>	Method not given	168
alkyl alcohol alkoxylate	EC <sub>50</sub>	0.1 - 1	<i>Not specified</i>	Method not given	72
sodium cumenesulphonate	EC <sub>50</sub>	> 230	<i>Not specified</i>	EPA OPPTS 850.5400	96

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			-

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alkyl alcohol alkoxylate		No data available			-
sodium cumenesulphonate		No data available			-

## Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
alkyl alcohol alkoxylate	EC <sub>10</sub>	> 1000	Activated sludge	DEV-L2	
citric acid	EC <sub>50</sub>	> 10000	<i>Pseudomonas putida</i>	Method not given	16 hour(s)
alkyl alcohol alkoxylate		1000	Activated sludge	DIN EN ISO 8192-OECD 209-88/302/EEC	
sodium cumenesulphonate	E <sub>r</sub> C <sub>50</sub>	> 1000	Bacteria	OECD 209	3 hour(s)

## Aquatic long-term toxicity

## Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
alkyl alcohol alkoxylate		No data available				
citric acid		No data available				
alkyl alcohol alkoxylate		No data available				
sodium cumenesulphonate		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				
alkyl alcohol alkoxylate	NOEC	0.25	<i>Daphnia magna</i>	Method not given	21 day(s)	
sodium cumenesulphonate		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
alkyl alcohol alkoxylate		No data available			-	
citric acid		No data available			-	
alkyl alcohol alkoxylate		No data available			-	
sodium cumenesulphonate		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
alkyl alcohol alkoxylate		No data available			-	
citric acid		No data available			-	
alkyl alcohol alkoxylate		No data available			-	
sodium cumenesulphonate		No data available			-	

## Terrestrial toxicity - plants, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
alkyl alcohol alkoxylate		No data available			-	
citric acid		No data available			-	
alkyl alcohol alkoxylate		No data available			-	
sodium cumenesulphonate		No data available			-	

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Terrestrial toxicity - birds, if available:

Ingredient(s)	Endpoint	Value	Species	Method	Exposure time (days)	Effects observed
alkyl alcohol alkoxylate		No data available			-	
citric acid		No data available			-	
alkyl alcohol alkoxylate		No data available			-	
sodium cumenesulphonate		No data available			-	

Terrestrial toxicity - beneficial insects, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
alkyl alcohol alkoxylate		No data available			-	
citric acid		No data available			-	
alkyl alcohol alkoxylate		No data available			-	
sodium cumenesulphonate		No data available			-	

Terrestrial toxicity - soil bacteria, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
alkyl alcohol alkoxylate		No data available			-	
citric acid		No data available			-	
alkyl alcohol alkoxylate		No data available			-	
sodium cumenesulphonate		No data 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 <sub>50</sub>	Method	Evaluation
alkyl alcohol alkoxylate			> 60 % in 28 day(s)	OECD 301F	Readily biodegradable
citric acid			97 % in 28 day(s)		Readily biodegradable
alkyl alcohol alkoxylate		CO <sub>2</sub> production	> 60% in 28 day(s)	OECD 301B	Readily biodegradable
sodium cumenesulphonate		CO <sub>2</sub> production	103 - 109% 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	
alkyl alcohol alkoxylate	No data available		No bioaccumulation expected	
sodium cumenesulphonate	-1.1	Method not given	No bioaccumulation expected	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
alkyl alcohol alkoxylate	No data available				
citric acid	No data available				
alkyl alcohol alkoxylate	No data available				
sodium cumenesulphonate	No data available				

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**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
alkyl alcohol alkoxylate	No data available				Potential for adsorption to soil
sodium cumenesulphonate	No data available				

**12.5 Results of PBT and vPvB assessment**

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

**12.6 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 14\* - acids.

**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**Class:** -**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 1272/2008 - CLP
- Regulation (EC) No. 1907/2006 - REACH
- Regulation (EC) No. 648/2004 - Detergents regulation

**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 %

polycarboxylates

&lt; 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.

**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:** MSDS6007**Version:** 03.1**Revision:** 2018-01-25**Reason for revision:**

This data sheet contains changes from the previous version in section(s):, 2, 3, 16

**Suma Revoflow Clear A11****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:**

- H315 - Causes skin irritation.
- H319 - Causes serious eye irritation.
- H400 - Very toxic to aquatic life.
- H411 - Toxic to aquatic life with long lasting effects.
- H412 - Harmful to aquatic life with long lasting effects.

**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**