



## Diverfoam SMS Chlor VF18

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

#### 1.1 Product identifier

**Trade name:** Diverfoam SMS Chlor VF18

UFI: 0C14-R09M-S00E-FT7Y

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

**Product use:** Open plant cleaning chemical.  
For industrial use only..

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

#### SWED - Sector-specific worker exposure description :

AISE\_SWED\_IS\_8b\_1  
AISE\_SWED\_IS\_4\_1  
AISE\_SWED\_IS\_7\_4  
AISE\_SWED\_IS\_7\_5

#### 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

Skin Irrit. 2 (H315)  
Eye Dam. 1 (H318)  
Aquatic Acute 1 (H400)  
Aquatic Chronic 2 (H411)  
Met. Corr. 1 (H290)

#### 2.2 Label elements



**Signal word:** Danger.

Contains amines, C12-14 (even numbered)-alkyldimethyl, N-oxides (Lauramine oxide), sodium hypochlorite (active chlorine) (Sodium Hypochlorite)

#### Hazard statements:

H315 - Causes skin irritation.  
H318 - Causes serious eye damage.  
H410 - Very toxic to aquatic life with long lasting effects.  
H290 - May be corrosive to metals.

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**Precautionary statements:**

P280 - Wear eye or face protection.

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.

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

Ingredient(s)	EC number	CAS number	REACH number	Classification	Notes	Weight percent
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	931-292-6	308062-28-4	01-2119490061-47	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Aquatic Acute 1 (H400) Aquatic Chronic 2 (H411)		1-3
sodium hypochlorite (active chlorine)	231-668-3	7681-52-9	01-2119488154-34	EUH031 Skin Corr. 1B (H314) Eye Dam. 1 (H318) Aquatic Acute 1 M=10 (H400) Aquatic Chronic 1 (H410) Met. Corr. 1 (H290)		1-3
potassium hydroxide	215-181-3	1310-58-3	01-2119487136-33	Skin Corr. 1A (H314) Acute Tox. 4 (H302) Met. Corr. 1 (H290)		0.1-1

**Specific concentration limits**

sodium hypochlorite (active chlorine):

- EUH031 >= 5%

potassium hydroxide:

- Eye Dam. 1 (H318) >= 2% > Eye Irrit. 2 (H319) >= 1%
- Skin Corr. 1A (H314) >= 5% > Skin Corr. 1B (H314) >= 2% > Skin Irrit. 2 (H315) >= 0.5%

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

ATE, if available, are listed in section 11.

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>	Take off immediately all contaminated clothing and wash it before reuse.
<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. Immediately call a POISON CENTRE, doctor or physician.
<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>	May cause bronchospasm in chlorine sensitive individuals.
<b>Skin contact:</b>	Causes irritation.
<b>Eye contact:</b>	Causes severe or permanent damage.
<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.

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**5.3 Advice for firefighters**

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

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Wear eye/face protection. Repeated or prolonged contact.. Wear suitable gloves.

**6.2 Environmental precautions**

Dilute with plenty of water. 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**

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 advised by Diversey. Wash face, hands and any exposed skin thoroughly after handling. Take off contaminated clothing. Wash contaminated clothing before reuse. Avoid contact with skin and 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.

Comah - Lower Tier requirements (tonnes): 100

200

Comah - Upper Tier requirements (tonnes): 200

500

**7.3 Specific end use(s)**

No specific advice for end use available.

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Workplace exposure limits**

Air limit values, if available:

Ingredient(s)	UK - Long term value(s)	UK - Short term value(s)
potassium hydroxide		2 mg/m <sup>3</sup>

Biological limit values, if available:

**Recommended monitoring procedures, if available:**

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

**DNEL/DMEL and PNEC values****Human exposure**

DNEL/DMEL oral exposure - Consumer (mg/kg bw)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	-	-	-	0.44
sodium hypochlorite (active chlorine)	-	-	-	0.26
potassium hydroxide	-	-	-	-

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## DNEL/DMEL dermal exposure - Worker

Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	No data available	-	- %	11
sodium hypochlorite (active chlorine)	-	-	0.5 %	-
potassium hydroxide	No data available	-	No data available	-

## DNEL/DMEL dermal exposure - Consumer

Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	No data available	-	- %	5.5
sodium hypochlorite (active chlorine)	-	-	0.5 %	-
potassium hydroxide	No data available	-	No data available	-

DNEL/DMEL 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
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	-	-	-	6.2
sodium hypochlorite (active chlorine)	3.1	3.1	1.55	1.55
potassium hydroxide	-	-	1	-

DNEL/DMEL 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
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	-	-	-	1.53
sodium hypochlorite (active chlorine)	3.1	3.1	1.55	1.55
potassium hydroxide	-	-	1	-

## 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)
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	0.0335	0.00335	0.0335	24
sodium hypochlorite (active chlorine)	0.00021	0.000042	0.00026	0.03
potassium hydroxide	-	-	-	-

## Environmental exposure - PNEC, continued

Ingredient(s)	Sediment, freshwater (mg/kg)	Sediment, marine (mg/kg)	Soil (mg/kg)	Air (mg/m <sup>3</sup> )
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	5.24	0.524	1.02	-
sodium hypochlorite (active chlorine)	-	-	-	-
potassium hydroxide	-	-	-	-

## 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:** 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.

## REACH use scenarios considered for the undiluted product:

	SWED - Sector-specific worker exposure description	LCS	PROC	Duration (min)	ERC
Automatic transfer and dilution	AISE_SWED_IS_8b_1	IS	PROC 8b	60	ERC4

## Personal protective equipment

## Eye / face protection:

## Hand protection:

Safety glasses or goggles (EN 166).

Rinse and dry hands after use. For prolonged contact protection for the skin may be necessary.

Repeated or prolonged contact: 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

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thickness:  $\geq 0.7$  mm

Suggested gloves for protection against splashes: Material: nitrile rubber Penetration time:  $\geq 30$  min

Material thickness:  $\geq 0.4$  mm

In consultation with the supplier of protective gloves a different type providing similar protection may be chosen.

**Body protection:** No special requirements under normal use conditions.  
**Respiratory protection:** No special requirements under normal use conditions.

**Environmental exposure controls:** Should not reach sewage water or drainage ditch undiluted or unneutralised.

*Recommended safety measures for handling the diluted product:*

**Recommended maximum concentration (% w/w):** 5

**Appropriate engineering controls:** Provide a good standard of general ventilation. Ensure that foam equipment does not generate respirable particles.

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

**REACH use scenarios considered for the diluted product:**

	SWED	LCS	PROC	Duration (min)	ERC
Automatic application in a dedicated system	AISE_SWED_IS_4_1	IS	PROC 4	480	ERC8a
Foam spraying	AISE_SWED_IS_7_4	IS	PROC 7	480	ERC4
Spray application	AISE_SWED_IS_7_5				

**Personal protective equipment**

**Eye / face protection:**

**Hand protection:**

Safety glasses or goggles (EN 166) are always recommended for foam applications.

Chemical-resistant protective gloves (EN 374) are always recommended for foam applications.

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:  $\geq 480$  min Material thickness:  $\geq 0.7$  mm

In consultation with the supplier of protective gloves a different type providing similar protection may be chosen.

**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 , Pale , Yellow

**Odour:** Chlorine

**Odour threshold:** Not applicable

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

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

Not relevant to classification of this product

See substance data

Substance data, boiling point

Ingredient(s)	Value (°C)	Method	Atmospheric pressure (hPa)
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	> 100	Method not given	
sodium hypochlorite (active chlorine)	Product decomposes before boiling	Method not given	1013
potassium hydroxide	Not applicable to solids or gases	Method not given	

**Method / remark**

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

**Flammability (liquid):** Not flammable.

**Flash point (°C):** > 100 °C

**Sustained combustion:** Not applicable.

( UN Manual of Tests and Criteria, section 32, L.2 )

**Lower and upper explosion limit/flammability limit (%):** Not determined

closed cup

See substance data

Substance data, flammability or explosive limits, if available:

Ingredient(s)	Lower limit	Upper limit

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	(% vol)	(% vol)
sodium hypochlorite (active chlorine)	-	-

## Method / remark

**Autoignition temperature:** Not determined  
**Decomposition temperature:** Not applicable.

**pH:** > 11 (neat)

ISO 4316

**Dilution pH:** > 11 (5 %)

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)
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	409.5 Soluble	Method not given	20
sodium hypochlorite (active chlorine)	Soluble		
potassium hydroxide	No data available		

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

## Method / remark

**Vapour pressure:** Not determined

See substance data

Substance data, vapour pressure

Ingredient(s)	Value (Pa)	Method	Temperature (°C)
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	< 10	Method not given	25
sodium hypochlorite (active chlorine)	Negligible .?		
potassium hydroxide	Negligible	Method not given	

**Relative density:** ≈ 1.13 (20 °C)

**Relative vapour density:** No data available.

**Particle characteristics:** No data available.

## Method / remark

OECD 109 (EU A.3)

Not relevant to classification of this product

Not applicable to liquids.

## 9.2 Other information

### 9.2.1 Information with regard to physical hazard classes

**Explosive properties:** Not explosive.

**Oxidising properties:** Not oxidising.

**Corrosion to metals:** Corrosive

Weight of evidence

### 9.2.2 Other safety characteristics

**Alkali reserve:** ≈ 1.1 (g NaOH / 100g; pH=10)

## 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

May be corrosive to metals. Reacts with acids releasing toxic chlorine gas.

### 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): &gt;2000

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

**Acute toxicity**

Acute oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)	ATE (mg/kg)
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	LD <sub>50</sub>	> 1064 1064	Rat	OECD 401 (EU B.1)		17000
sodium hypochlorite (active chlorine)	LD <sub>50</sub>	1100	Rat	OECD 401 (EU B.1)	90	Not established
potassium hydroxide	LD <sub>50</sub>	333	Rat	OECD 425		42000

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)	ATE (mg/kg)
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	LD <sub>50</sub>	> -	Rat	OECD 402 (EU B.3)		Not established
sodium hypochlorite (active chlorine)	LD <sub>50</sub>	> 20000	Rabbit	OECD 402 (EU B.3)		Not established
potassium hydroxide		No data available				Not established

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides		No data available			
sodium hypochlorite (active chlorine)	LC <sub>50</sub>	> 10.5 (vapour)	Rat	OECD 403 (EU B.2)	1
potassium hydroxide		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)
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	Not established	Not established	Not established	Not established
sodium hypochlorite (active chlorine)	Not established	Not established	Not established	Not established
potassium hydroxide	Not established	Not established	Not established	Not established

**Irritation and corrosivity**

Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	Irritant	Rabbit	OECD 404 (EU B.4)	
sodium hypochlorite (active chlorine)	Corrosive	Rabbit	OECD 404 (EU B.4)	
potassium hydroxide	Corrosive	Rabbit	Draize test	

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	Severe damage	Rabbit	OECD 405 (EU B.5)	
sodium hypochlorite (active chlorine)	Severe damage	Rabbit	OECD 405 (EU B.5)	
potassium hydroxide	Corrosive	Rabbit	Method not given	

Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	No data available			
sodium hypochlorite (active chlorine)	Irritating to respiratory tract			
potassium hydroxide	No data available			

**Sensitisation**

Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	Not sensitising	Guinea pig	OECD 406 (EU B.6) / Buehler test	
sodium hypochlorite (active chlorine)	Not sensitising	Guinea pig	OECD 406 (EU B.6) / Buehler test	
potassium hydroxide	Not sensitising	Guinea pig	Method not given	

Sensitisation by inhalation

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Ingredient(s)	Result	Species	Method	Exposure time
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	No data available			
sodium hypochlorite (active chlorine)	Not sensitising			
potassium hydroxide	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)
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13)	No data available	
sodium hypochlorite (active chlorine)	No evidence for mutagenicity	OECD 471 (EU B.12/13)	No evidence for mutagenicity, negative test results	OECD 474 (EU B.12)
potassium hydroxide	No evidence for mutagenicity, negative test results	Method not given	No data available	

## Carcinogenicity

Ingredient(s)	Effect
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	No evidence for carcinogenicity, negative test results
sodium hypochlorite (active chlorine)	No evidence for carcinogenicity, negative test results
potassium hydroxide	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
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	NOAEL	Teratogenic effects	25	Rat	Non guideline test		
sodium hypochlorite (active chlorine)	NOAEL	Developmental toxicity Impaired fertility	5 (Cl)	Rat	OECD 414 (EU B.31), oral OECD 415 (EU B.34), oral		No evidence for reproductive toxicity
potassium hydroxide			No data available				No evidence for reproductive toxicity

**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
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	NOAEL	-		OECD 422, oral		
sodium hypochlorite (active chlorine)	NOAEL	50	Rat	OECD 408 (EU B.26)	90	
potassium hydroxide		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
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides		No data available				
sodium hypochlorite (active chlorine)		No data available				
potassium hydroxide		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
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides		No data available				
sodium hypochlorite (active chlorine)		No data available				
potassium hydroxide		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
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides			No data available					
sodium hypochlorite (active chlorine)			No data available					



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potassium hydroxide			No data available				
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## STOT-single exposure

Ingredient(s)	Affected organ(s)
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	No data available
sodium hypochlorite (active chlorine)	Not applicable
potassium hydroxide	No data available

## STOT-repeated exposure

Ingredient(s)	Affected organ(s)
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	No data available
sodium hypochlorite (active chlorine)	Not applicable
potassium hydroxide	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)
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	LC <sub>50</sub>	2.67-3.46	<i>Pimephales promelas</i>	Similar to OECD 203	96
sodium hypochlorite (active chlorine)	LC <sub>50</sub>	0.06	<i>Oncorhynchus mykiss</i>	Method not given	96
potassium hydroxide	LC <sub>50</sub>	80	<i>Various species</i>	Weight of evidence	24

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	EC <sub>50</sub>	3.1	<i>Daphnia magna Straus</i>	OECD 202, static	48
sodium hypochlorite (active chlorine)	EC <sub>50</sub>	0.035	<i>Ceriodaphnia dubia</i>	OECD 202 (EU C.2)	48
potassium hydroxide	EC <sub>50</sub>	30 - 1000	<i>Daphnia magna Straus</i>	Weight of evidence	

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	E <sub>r</sub> C <sub>50</sub>	0.143	<i>Pseudokirchneriella subcapitata</i>	Method not given	72
sodium hypochlorite (active chlorine)	NOEC	0.0021	<i>Not specified</i>	Method not given	168
potassium hydroxide		No data available			

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides		No data available			

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sodium hypochlorite (active chlorine)	EC <sub>50</sub>	0.026	<i>Crassostrea virginica</i>	Method not given	2
potassium hydroxide		No data available			

## Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	EC <sub>10</sub>	> -	<i>Bacteria</i>	Non guideline test	- hour(s)
sodium hypochlorite (active chlorine)		0.375	<i>Activated sludge</i>	Method not given	
potassium hydroxide	EC <sub>50</sub>	22	<i>Photobacterium phosphoreum</i>	Method not given	15 minute(s)

## Aquatic long-term toxicity

## Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	NOEC	-	<i>Pimephales promelas</i>	Method not given	- day(s)	
sodium hypochlorite (active chlorine)	NOEC	0.04	<i>Menidia pelinsulae</i>	Method not given	96 hour(s)	
potassium hydroxide		No data available				

## Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	NOEC	-	<i>Daphnia magna</i>	OECD 211, flow-through	- day(s)	
sodium hypochlorite (active chlorine)	NOEC	0.007	<i>Crassostrea virginica</i>	Method not given	15 day(s)	
potassium hydroxide		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
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides		No data available				
sodium hypochlorite (active chlorine)		No data available				
potassium hydroxide		No data available				

## Terrestrial toxicity

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

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
sodium hypochlorite (active chlorine)		No data available				
potassium hydroxide		No data available				

## Terrestrial toxicity - plants, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
sodium hypochlorite (active chlorine)		No data available				
potassium hydroxide		No data available				

## Terrestrial toxicity - birds, if available:

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

## Terrestrial toxicity - beneficial insects, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw)	Species	Method	Exposure time (days)	Effects observed
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		soil)				
sodium hypochlorite (active chlorine)		No data available				
potassium hydroxide		No data available				

Terrestrial toxicity - soil bacteria, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
sodium hypochlorite (active chlorine)		No data available				
potassium hydroxide		No data available				

## 12.2 Persistence and degradability

### Abiotic degradation

Abiotic degradation - photodegradation in air, if available:

Ingredient(s)	Half-life time	Method	Evaluation	Remark
sodium hypochlorite (active chlorine)	115 day(s)	Indirect photo-oxidation		
potassium hydroxide	No data available			

Abiotic degradation - hydrolysis, if available:

Ingredient(s)	Half-life time in fresh water	Method	Evaluation	Remark
sodium hypochlorite (active chlorine)	No data available			
potassium hydroxide	No data available			

Abiotic degradation - other processes, if available:

Ingredient(s)	Type	Half-life time	Method	Evaluation	Remark
sodium hypochlorite (active chlorine)		No data available			
potassium hydroxide		No data available			

### Biodegradation

Ready biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT <sub>50</sub>	Method	Evaluation
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	Activated sludge, aerobe	CO <sub>2</sub> production	90 % in 28 day(s)	OECD 301B	Readily biodegradable
sodium hypochlorite (active chlorine)					Not applicable (inorganic substance)
potassium hydroxide					Not applicable (inorganic substance)

Ready biodegradability - anaerobic and marine conditions, if available:

Ingredient(s)	Medium & Type	Analytical method	DT <sub>50</sub>	Method	Evaluation
sodium hypochlorite (active chlorine)					No data available

Degradation in relevant environmental compartments, if available:

Ingredient(s)	Medium & Type	Analytical method	DT <sub>50</sub>	Method	Evaluation
sodium hypochlorite (active chlorine)					No data available
potassium hydroxide					No data available

## 12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log K<sub>ow</sub>)

Ingredient(s)	Value	Method	Evaluation	Remark
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	< -	Method not given	No bioaccumulation expected	
sodium hypochlorite (active chlorine)	.?	Method not given	No bioaccumulation expected	
potassium hydroxide	No data available		Not relevant, does not bioaccumulate	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	No data available				
sodium hypochlorite	No data available				

## Diverfoam SMS Chlor VF18

(active chlorine)					
potassium hydroxide	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
amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	No data available				Low mobility in soil
sodium hypochlorite (active chlorine)	1.12				High potential for mobility in soil
potassium hydroxide	No data available				Low 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.  
20 01 15\* - alkalines.

**European Waste Catalogue:****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:** 1719**14.2 UN proper shipping name:**

Caustic alkali liquid, n.o.s. ( potassium hydroxide , sodium hypochlorite )

**14.3 Transport hazard class(es):****Transport hazard class (and subsidiary risks):** 8**14.4 Packing group:** III**14.5 Environmental hazards:****Environmentally hazardous:** Yes**Marine pollutant:** Yes**14.6 Special precautions for user:** None known.**14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code:** The product is not transported in bulk tankers.**Other relevant information:****ADR****Classification code:** C5**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

#### National regulations :

- Regulation (EC) 1907/2006 - REACH (UK amended)
- Regulation (EC) 1272/2008 - CLP (UK amended)
- Regulation (EC) 648/2004 - Detergents regulation (UK amended)
- Delegated Regulation (EU) 2017/2100 and Regulation (EU) 2018/605 (UK amended)
- Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)
- International Maritime Dangerous Goods (IMDG) Code

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

#### Ingredients according to Detergents Regulation

phosphonates	5 - 15 %
non-ionic surfactants, chlorine-based bleaching agents	< 5 %

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

**Comah - classification:** E1 - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

### 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:** MSDS1656

**Version:** 08.0

**Revision:** 2022-03-20

#### 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):, 2, 8, 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:

- H290 - May be corrosive to metals.
- H302 - Harmful if swallowed.
- H314 - Causes severe skin burns and eye damage.
- H315 - Causes skin irritation.
- H318 - Causes serious eye damage.
- 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.

#### Abbreviations and acronyms:

- AISE - The international Association for Soaps, Detergents and Maintenance Products
- ATE - Acute Toxicity Estimate
- DNEL - Derived No Effect Limit
- EC50 - effective concentration, 50%
- ERC - Environmental release categories
- EUH - CLP Specific hazard statement
- LC50 - Lethal Concentration, 50% / Median Lethal Concentration
- LCS - Life cycle stage
- LD50 - Lethal Dose, 50% / Median Lethal dose
- NOAEL - No observed adverse effect level
- NOEL - No observed effect level
- OECD - Organisation for Economic Cooperation and Development
- PBT - Persistent, Bioaccumulative and Toxic
- PNEC - Predicted No Effect Concentration
- PROC - Process categories
- REACH number - REACH registration number, without supplier specific part
- vPvB - very Persistent and very Bioaccumulative

**End of Safety Data Sheet**