

Viragri Plus VT49

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Version: 08.0

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

1.1 Product identifier

Trade name: Viragri Plus VT49

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

Identified uses:

For professional and industrial use only.

AISE-P810 - Disinfection product. Semi-automatic process

AISE-P811 - Disinfection product. Fogging and gassing. Semi-automatic process

Soaking bath. Manual process (AISE_CS_I01 & AISE_CS_I10)

AISE-P315 - Surface disinfectant. Spray and rinse manual 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: MSDSinfoUK@sealedair.com

1.4 Emergency telephone number

For medical or environmental emergency only:

call 0800 052 0185

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Skin Corr. 1B (H314)

Acute Tox. 4 (H302)

Acute Tox. 4 (H332)

Skin Sens. 1 (H317)

Resp. Sens. 1 (H334)

Aquatic Acute 1 (H400)

Aquatic Chronic 1 (H410)

Met. Corr. 1 (H290)

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

Indication of danger

C - Corrosive

N - Dangerous for the environment

Risk phrases:

R34 - Causes burns.

R50 - Very toxic to aquatic organisms.

R20/22 - Harmful by inhalation and if swallowed.

R42/43 - May cause sensitisation by inhalation and skin contact.

2.2 Label elements

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Signal word: Danger.

Contains glutaral (Glutaral), alkyltrimethylbenzylammoniumchloride (Cocoalkonium Chloride).

Hazard statements:

H302 + H332 - Harmful if swallowed or if inhaled.
 H314 - Causes severe skin burns and eye damage.
 H317 - May cause an allergic skin reaction.
 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H410 - Very toxic to aquatic life with long lasting effects.
 H290 - May be corrosive to metals.

Precautionary statements:

P260 - Do not breathe vapours.
 P280 - Wear protective gloves, protective clothing and eye or face protection.
 P284 - Wear respiratory protection.
 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
 P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 - Immediately call a POISON CENTRE, doctor or physician.

2.3 Other hazards

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

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

Ingredient(s)	EC number	CAS number	REACH number	Classification	Classification (1999/45/EC)	Notes	Weight percent
glutaral	203-856-5	111-30-8	No data available	Acute Tox. 3 (H301) Acute Tox. 3 (H331) Skin Corr. 1B (H314) Skin Sens. 1 (H317) Resp. Sens. 1 (H334) Aquatic Acute 1 (H400) Met. Corr. 1 (H290)	T;R23/25 C;R34 Xn;R42/43 N;R50		10-20
alkyltrimethylbenzylammonium chloride	270-325-2	68424-85-1	No data available	Skin Corr. 1B (H314) Acute Tox. 4 (H302) Acute Tox. 4 (H312) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	Xn;R21/22 C;R34 N;R50		3-10
tetrasodium ethylene diamine tetraacetate	200-573-9	64-02-8	01-2119486762-27	Acute Tox. 4 (H302) Acute Tox. 4 (H332) Eye Dam. 1 (H318)	Xn;R20/22 Xi;R41		1-3
didecyltrimethylammonium chloride	230-525-2	7173-51-5	No data available	Skin Corr. 1B (H314) Acute Tox. 4 (H302) Aquatic Acute 1 (H400) Aquatic Chronic 2 (H411)	Xn;R22 C;R34 N;R50		1-3
phosphoric acid	231-633-2	7664-38-2	01-2119485924-24	Skin Corr. 1B (H314) Met. Corr. 1 (H290)	C;R34		1-3
d-limonene	227-813-5	5989-27-5	01-2119529223-47	Flam. Liq. 3 (H226) Asp. Tox. 1 (H304) Skin Irrit. 2 (H315) Skin Sens. 1B (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	R10 Xi;R38-43 N;R50/53 Xn;R65		0.1-1

* Polymer.

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

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

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

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

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

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

SECTION 4: First aid measures**4.1 Description of first aid measures****General Information:**

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

Inhalation

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

Skin contact:

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

Eye contact:

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

Ingestion:

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

Self-protection of first aider:

Consider personal protective equipment as indicated in subsection 8.2.

4.2 Most important symptoms and effects, both acute and delayed**Inhalation:**

May cause allergy or asthma symptoms or breathing difficulties.

Skin contact:

Causes severe burns. May cause an allergic skin reaction.

Eye contact:

Causes severe or permanent damage.

Ingestion:

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

4.3 Indication of any immediate medical attention and special treatment needed

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

SECTION 5: Firefighting measures**5.1 Extinguishing media**

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

5.2 Special hazards arising from the substance or mixture

No special hazards known.

5.3 Advice for firefighters

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

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

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

6.2 Environmental precautions

Do not allow to enter drainage system, surface or ground water. Do not allow to enter the ground/soil. 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

Use neutralising agent. Absorb with liquid-binding material (sand, diatomite, universal binders, sawdust). Ensure adequate ventilation.

6.4 Reference to other sections

For personal protective equipment see subsection 8.2. For disposal considerations see section 13.

SECTION 7: Handling and storage**7.1 Precautions for safe handling****Measures to prevent fire and explosions:**

No special precautions required.

Measures to prevent aerosol and dust generation:

Where practical always use remotely operated methods of application. Unprotected operators must never enter an area under treatment, or before the advised re-entry period has elapsed.

Measures required to protect the environment:

For environmental exposure controls see subsection 8.2.

Advices on general occupational hygiene:

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not mix with other products unless advised by Sealed Air. Wash hands before breaks and at the end of workday. Wash face, hands and any exposed skin thoroughly after handling. Take off immediately all contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Use personal protective equipment as required. Avoid contact with skin and eyes. Do not breathe vapours. Use only with adequate ventilation. For further details refer to the special fact sheet on application of aldehyde based

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disinfectants by spraying or fogging.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local and national regulations. Keep only in original container. Store in a closed container. For conditions to avoid see subsection 10.4. For incompatible materials see subsection 10.5.

7.3 Specific end use(s)

For further details refer to the special fact sheet on application of aldehyde based products by spraying or fogging.

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)
glutaral	0.05 ppm 0.2 mg/m ³	0.05 ppm 0.2 mg/m ³
phosphoric acid	1 mg/m ³	2 mg/m ³

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
glutaral	-	-	-	-
alkyldimethylbenzylammoniumchloride	No data available	No data available	No data available	No data available
tetrasodium ethylene diamine tetraacetate	-	-	-	25
didecyldimethylammonium chloride	No data available	No data available	No data available	No data available
phosphoric acid	-	-	-	-
d-limonene	-	-	-	4.76

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)
glutaral	No data available	-	No data available	-
alkyldimethylbenzylammoniumchloride	No data available	No data available	No data available	No data available
tetrasodium ethylene diamine tetraacetate	No data available	-	No data available	-
didecyldimethylammonium chloride	No data available	No data available	No data available	No data available
phosphoric acid	No data available	-	No data available	-
d-limonene	0.222 mg/cm ² skin	-	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)
glutaral	No data available	-	No data available	-
alkyldimethylbenzylammoniumchloride	No data available	No data available	No data available	No data available
tetrasodium ethylene diamine tetraacetate	No data available	-	No data available	-
didecyldimethylammonium chloride	No data available	No data available	No data available	No data available
phosphoric acid	No data available	-	No data available	-
d-limonene	0.111 mg/cm ² skin	-	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
glutaral	-	-	0.25	-
alkyldimethylbenzylammoniumchloride	No data available	No data available	No data available	No data available
tetrasodium ethylene diamine tetraacetate	2.5	2.5	-	-
didecyldimethylammonium chloride	No data available	No data available	No data available	No data available
phosphoric acid	-	-	2.92	-
d-limonene	-	-	-	33.3

DNEL inhalatory exposure - Consumer (mg/m³)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
glutaral	-	-	-	-
alkyldimethylbenzylammoniumchloride	No data available	No data available	No data available	No data available
tetrasodium ethylene diamine tetraacetate	1.5	1.5	-	-
didecyldimethylammonium chloride	No data available	No data available	No data available	No data available

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phosphoric acid	-	-	0.73	-
d-limonene	-	-	-	8.33

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)
glutaral	0.0025	0.00025	-	0.8
alkyldimethylbenzylammoniumchloride	No data available	No data available	No data available	No data available
tetrasodium ethylene diamine tetraacetate	2.2	0.22	1.2	43
didecyldimethylammonium chloride	No data available	No data available	No data available	No data available
phosphoric acid	-	-	-	-
d-limonene	0.0054	0.00054	-	1.8

Environmental exposure - PNEC, continued

Ingredient(s)	Sediment, freshwater (mg/kg)	Sediment, marine (mg/kg)	Soil (mg/kg)	Air (mg/m ³)
glutaral	5.27	0.527	0.03	-
alkyldimethylbenzylammoniumchloride	No data available	No data available	No data available	No data available
tetrasodium ethylene diamine tetraacetate	-	-	0.72	-
didecyldimethylammonium chloride	No data available	No data available	No data available	No data available
phosphoric acid	-	-	-	-
d-limonene	1.32	0.13	0.262	-

8.2 Exposure controls

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

If available, please refer to the product information sheet for application and handling instructions.

Normal use conditions are assumed for this section.

Recommended safety measures for handling the undiluted product:

Covering activities such as filling and transfer of product to application equipment, flasks or buckets

Appropriate engineering controls:

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

Appropriate organisational controls:

Avoid direct contact and/or splashes where possible. Train personnel.

Personal protective equipment**Eye / face protection:**

Safety glasses or goggles (EN 166). The use of a full-face shield or other full-face protection is strongly recommended when handling open containers or if splashes may occur.

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

Body protection:

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

Wear chemical-resistant clothing and boots in case direct dermal exposure and/or splashes may occur.

Respiratory protection:

Respiratory protection is not normally required. However, inhalation of vapour, spray, gas or aerosols should be avoided.

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 (%): 3.3**Appropriate engineering controls:**

Use only in well ventilated areas. Ensure that ventilation is present with an exposure reduction efficacy of at least 90%.

Appropriate organisational controls:

Avoid direct contact and/or splashes where possible. Train personnel. Employees and/or livestock should not be present in the treated facility during fogging. Before reentry of the treated facilities without respiratory protection, wait for at least 10 hours after fogging and at least 4 hours after spraying.

Personal protective equipment

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Eye / face protection:	Covered by respiratory protection.
Hand protection:	Rinse and dry hands after use. For prolonged contact protection for the skin may be necessary.
Body protection:	Wear chemical-resistant clothing and boots in case direct dermal exposure and/or splashes may occur.
Respiratory protection:	If exposure to liquid particles cannot be avoided use: full-face mask (EN 136) with filter type A2P3 (EN 14387) or self-contained or compressed air breathing apparatus (EN 137 / EN 138) Consider specific local use conditions. In consultation with the supplier of respiratory protection equipment a different type providing similar protection may be chosen.
Environmental exposure controls:	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, Colourless	
Odour: Slightly perfumed	
Odour threshold: Not applicable	
pH: ≈ 4 (neat)	
Melting point/freezing point (°C): Not determined	
Initial boiling point and boiling range (°C): Not determined	

Substance data, boiling point

Ingredient(s)	Value (°C)	Method	Atmospheric pressure (hPa)
glutaral	No data available		
alkyldimethylbenzylammoniumchloride	> 107	Method not given	
tetrasodium ethylene diamine tetraacetate	No data available	Non-experimental data	
didecyldimethylammonium chloride	No data available		
phosphoric acid	158	Method not given	1013
d-limonene	175-178	Method not given	1013

Method / remark

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

Substance data, flammability or explosive limits, if available:

Ingredient(s)	Lower limit (% vol)	Upper limit (% vol)
d-limonene	0.7	6.1

Method / remark

Vapour pressure: Not determined

Substance data, vapour pressure

Ingredient(s)	Value (Pa)	Method	Temperature (°C)
glutaral	2000	Method not given	20.1
alkyldimethylbenzylammoniumchloride	No data available	Method not given	20
tetrasodium ethylene diamine tetraacetate	0.0000000002	Read across	25
didecyldimethylammonium chloride	No data available		
phosphoric acid	4	Method not given	20
d-limonene	190-230	Method not given	20

Method / remark

Vapour density: Not determined
Relative density: 1.04 g/cm³ (20 °C)
Solubility in / Miscibility with Water: Fully miscible

Substance data, solubility in water

Ingredient(s)	Value (g/l)	Method	Temperature (°C)
glutaral	Soluble		
alkyldimethylbenzylammoniumchloride	Soluble	Method not given	
tetrasodium ethylene diamine tetraacetate	500	Method not given	20
didecyldimethylammonium chloride	No data available		
phosphoric acid	Soluble		
d-limonene	Insoluble	Method not given	20

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

Method / remark

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

9.2 Other information

Surface tension (N/m): Not determined
Corrosion to metals: Corrosive

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 and metals. 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):

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)
glutaral	LD ₅₀	158	Rat	OECD 401 (EU B.1)	-
alkyldimethylbenzylammoniumchloride	LD ₅₀	398	Rat	Method not given	
tetrasodium ethylene diamine tetraacetate	LD ₅₀	>= 1780	Rat	Non guideline test	-
didecyldimethylammonium chloride	LD ₅₀	300 - 2000	Rat	OECD 401 (EU B.1)	
phosphoric acid	LD ₅₀	2600	Rat	OECD 423 (EU B.1 tris)	-
d-limonene	LD ₅₀	4400 - 5100	Rat	Method not given	

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
glutaral	LD ₅₀	> 2000	Rat	OECD 402 (EU B.3)	-
alkyldimethylbenzylammoniumchloride	LD ₅₀	800 - 1420	Rat	Method not given	
tetrasodium ethylene diamine tetraacetate	LD ₅₀	> 5000	Rabbit	Method not given	-
didecyldimethylammonium chloride		No data available			
phosphoric acid	LD ₅₀	2740	Rabbit	Method not given	-
d-limonene	LD ₅₀	> 5000	Rabbit	Method not given	

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
glutaral	LC ₅₀	0.48 (mist)	Rat	OECD 403 (EU B.2)	4
alkyldimethylbenzylammoniumchloride		No data			

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		available			
tetrasodium ethylene diamine tetraacetate	LC ₅₀	>= 1 (dust)	Rat	OECD 403 (EU B.2)	6
didecyltrimethylammonium chloride		No data available			
phosphoric acid	LC ₅₀	850	Rat	Method not given	2
d-limonene		No data available			

Irritation and corrosivity

Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
glutaral	Corrosive		Method not given	
alkyldimethylbenzylammoniumchloride	Corrosive		Method not given	
tetrasodium ethylene diamine tetraacetate	Not irritant	Rabbit	Non guideline test	
didecyltrimethylammonium chloride	Corrosive	Rabbit	OECD 404 (EU B.4)	
phosphoric acid	Corrosive	Rabbit	OECD 404 (EU B.4)	
d-limonene	Irritant	Rabbit	Method not given	

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
glutaral	Severe damage		OECD 405 (EU B.5)	
alkyldimethylbenzylammoniumchloride	Severe damage		Method not given	
tetrasodium ethylene diamine tetraacetate	Severe damage		Method not given	
didecyltrimethylammonium chloride	No data available			
phosphoric acid	Severe damage	Rabbit	Method not given	
d-limonene	No data available			

Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
glutaral	No data available			
alkyldimethylbenzylammoniumchloride	No data available			
tetrasodium ethylene diamine tetraacetate	No data available			
didecyltrimethylammonium chloride	No data available			
phosphoric acid	No data available			
d-limonene	No data available			

Sensitisation

Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
glutaral	Sensitising	Guinea pig	Method not given	-
alkyldimethylbenzylammoniumchloride	Not sensitising		Method not given	
tetrasodium ethylene diamine tetraacetate	Not sensitising	Guinea pig	OECD 406 (EU B.6) / GPMT	-
didecyltrimethylammonium chloride	No data available			
phosphoric acid	Not sensitising	Human	Human experience	-
d-limonene	Sensitising	Guinea pig	Method not given	

Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
glutaral	Sensitising		Method not given	-
alkyldimethylbenzylammoniumchloride	No data available			
tetrasodium ethylene diamine tetraacetate	No data available			-
didecyltrimethylammonium chloride	No data available			
phosphoric acid	No data available			-
d-limonene	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)
glutaral	Mutagenic	Method not given	No evidence of genotoxicity, negative test results	Method not given
alkyldimethylbenzylammoniumchloride	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13)	No data available	
tetrasodium ethylene diamine tetraacetate	No evidence for mutagenicity, negative test results	Method not given	No evidence of genotoxicity, negative test results	Method not given
didecyltrimethylammonium chloride	No data available		No data available	
phosphoric acid	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13) OECD 473 OECD 476 (Mouse lymphoma)	No data available	
d-limonene	No data available		No data available	

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Carcinogenicity

Ingredient(s)	Effect
glutaral	No evidence for carcinogenicity, weight-of-evidence
alkyldimethylbenzylammoniumchloride	No data available
tetrasodium ethylene diamine tetraacetate	No evidence for carcinogenicity, weight-of-evidence
didecyldimethylammonium chloride	No data available
phosphoric acid	No data available
d-limonene	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
glutaral			No data available				No evidence for developmental toxicity No evidence for reproductive toxicity
alkyldimethylbenzylammoniumchloride			No data available				
tetrasodium ethylene diamine tetraacetate			No data available				No evidence for reproductive toxicity
didecyldimethylammonium chloride			No data available				
phosphoric acid	NOAEL	Developmental toxicity	410	Rat	OECD 422, oral	10 day(s)	No evidence for reproductive toxicity No evidence for developmental toxicity
d-limonene			No data available				

Repeated dose toxicity

Sub-acute or sub-chronic oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
glutaral		No data available			-	
alkyldimethylbenzylammoniumchloride		No data available				
tetrasodium ethylene diamine tetraacetate		No data available			-	
didecyldimethylammonium chloride		No data available				
phosphoric acid	NOAEL	250	Rat	OECD 422, oral	-	
d-limonene		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
glutaral		No data available			-	
alkyldimethylbenzylammoniumchloride		No data available				
tetrasodium ethylene diamine tetraacetate		No data available			-	
didecyldimethylammonium chloride		No data available				
phosphoric acid		No data available			-	
d-limonene		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
glutaral		No data available			-	
alkyldimethylbenzylammoniumchloride		No data available				
tetrasodium ethylene diamine tetraacetate		No data available			-	
didecyldimethylammonium chloride		No data available				
phosphoric acid		No data available			-	
d-limonene		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
glutaral			No data available					
alkyldimethylbenzylam			No data					

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moniumchloride			available				
tetrasodium ethylene diamine tetraacetate			No data available				
didecyldimethylammonium chloride			No data available				
phosphoric acid			No data available				
d-limonene			No data available				

STOT-single exposure

Ingredient(s)	Affected organ(s)
glutaral	No data available
alkyldimethylbenzylammoniumchloride	No data available
tetrasodium ethylene diamine tetraacetate	No data available
didecyldimethylammonium chloride	No data available
phosphoric acid	No data available
d-limonene	No data available

STOT-repeated exposure

Ingredient(s)	Affected organ(s)
glutaral	No data available
alkyldimethylbenzylammoniumchloride	No data available
tetrasodium ethylene diamine tetraacetate	Not applicable
didecyldimethylammonium chloride	No data available
phosphoric acid	No data available
d-limonene	No data available

Aspiration hazard

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

Potential adverse health effects and symptoms

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

SECTION 12: Ecological information

12.1 Toxicity

No data is available on the mixture.

Substance data, where relevant and available, are listed below

Aquatic short-term toxicity

Aquatic short-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
glutaral	LC ₅₀	9.4	<i>Lepomis macrochirus</i>	OECD 203, static	96
alkyldimethylbenzylammoniumchloride	LC ₅₀	0.85	Fish	Method not given	96
tetrasodium ethylene diamine tetraacetate	LC ₅₀	> 100	<i>Lepomis macrochirus</i>	OPP 72-1, static (EPA)	96
didecyldimethylammonium chloride	LC ₅₀	0.1 - 1	<i>Brachydanio rerio</i>	OECD 203	96
phosphoric acid	LC ₅₀	138	<i>Gambusia affinis</i>	Method not given	96
d-limonene	LC ₅₀	0.72	<i>Pimephales promelas</i>	OECD 203	96

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
glutaral	EC ₅₀	0.345	<i>Daphnia magna Straus</i>	Method not given	48
alkyldimethylbenzylammoniumchloride	EC ₅₀	0.02	<i>Daphnia magna Straus</i>	Method not given	48
tetrasodium ethylene diamine tetraacetate	EC ₅₀	> 100	<i>Daphnia magna Straus</i>	DIN 38412, Part 11	48
didecyldimethylammonium chloride	EC ₅₀	0.1 - 1	<i>Daphnia magna Straus</i>	OECD 202	48
phosphoric acid	EC ₅₀	> 100	<i>Daphnia magna Straus</i>	OECD 202	48
d-limonene	EC ₅₀	0.36	<i>Daphnia magna Straus</i>	OECD 202	48

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
glutaral	EC ₅₀	0.6	<i>Desmodesmus</i>	OECD 201, static	72

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			<i>subspicatus</i>		
alkyldimethylbenzylammoniumchloride	EC ₅₀	0.06	<i>Pseudokirchneriella subcapitata</i>	OECD 201	96
tetrasodium ethylene diamine tetraacetate	EC ₅₀	> 100	<i>Scenedesmus obliquus</i>	88/302/EEC, Part C, static	72
didecyldimethylammonium chloride	EC ₅₀	0.1 - 1	<i>Pseudokirchneriella subcapitata</i>	OECD 201	72
phosphoric acid	EC ₅₀	> 100	<i>Desmodesmus subspicatus</i>	OECD 201	72
d-limonene	E _r C ₅₀	150	<i>Desmodesmus subspicatus</i>	OECD 201	72

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
glutaral		No data available			-
alkyldimethylbenzylammoniumchloride		No data available			-
tetrasodium ethylene diamine tetraacetate		No data available			-
didecyldimethylammonium chloride		No data available			-
phosphoric acid		No data available			-
d-limonene		No data available			-

Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
glutaral		No data available			
alkyldimethylbenzylammoniumchloride	EC ₂₀	10	<i>Activated sludge</i>	OECD 209	0.5 hour(s)
tetrasodium ethylene diamine tetraacetate	EC ₂₀	> 500	<i>Activated sludge</i>	OECD 209	0.5 hour(s)
didecyldimethylammonium chloride		No data available			
phosphoric acid	EC ₅₀	270	<i>Activated sludge</i>	Method not given	
d-limonene		No data available			

Aquatic long-term toxicity

Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
glutaral		No data available				
alkyldimethylbenzylammoniumchloride		No data available				
tetrasodium ethylene diamine tetraacetate	NOEC	>= 36.9	<i>Brachydanio rerio</i>	OECD 210	35 day(s)	
didecyldimethylammonium chloride		No data available				
phosphoric acid		No data available				
d-limonene		No data available				

Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
glutaral		No data available				
alkyldimethylbenzylammoniumchloride		No data available				
tetrasodium ethylene diamine tetraacetate	NOEC	25	<i>Daphnia magna</i>	OECD 211	21 day(s)	
didecyldimethylammonium chloride		No data available				
phosphoric acid		No data available				
d-limonene		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
glutaral		Page 11 / 15			-	

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		available				
alkyldimethylbenzylammoniumchloride		No data available			-	
tetrasodium ethylene diamine tetraacetate		No data available			-	
didecyldimethylammonium chloride		No data available			-	
phosphoric acid		No data available			-	
d-limonene		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
glutaral		No data available			-	
alkyldimethylbenzylammoniumchloride		No data available			-	
tetrasodium ethylene diamine tetraacetate	LD ₅₀	156	<i>Eisenia fetida</i>	OECD 207	14	
didecyldimethylammonium chloride		No data available			-	
phosphoric acid		No data available			-	
d-limonene		No data available			-	

Terrestrial toxicity - plants, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
glutaral		No data available			-	
alkyldimethylbenzylammoniumchloride		No data available			-	
tetrasodium ethylene diamine tetraacetate	NOEC	0.25 - 1.25			21	
didecyldimethylammonium chloride		No data available			-	
phosphoric acid		No data available			-	
d-limonene		No data available			-	

Terrestrial toxicity - birds, if available:

Ingredient(s)	Endpoint	Value	Species	Method	Exposure time (days)	Effects observed
glutaral		No data available			-	
alkyldimethylbenzylammoniumchloride		No data available			-	
tetrasodium ethylene diamine tetraacetate		No data available			-	
didecyldimethylammonium chloride		No data available			-	
phosphoric acid		No data available			-	
d-limonene		No data available			-	

Terrestrial toxicity - beneficial insects, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
glutaral		No data available			-	
alkyldimethylbenzylammoniumchloride		No data available			-	
tetrasodium ethylene diamine tetraacetate		No data available			-	
didecyldimethylammonium chloride		No data available			-	
phosphoric acid		No data available			-	
d-limonene		No data available			-	

Terrestrial toxicity - soil bacteria, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
glutaral		No data available			-	

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		available				
alkyldimethylbenzylammoniumchloride		No data available			-	
tetrasodium ethylene diamine tetraacetate		No data available			-	
didecyldimethylammonium chloride		No data available			-	
phosphoric acid		No data available			-	
d-limonene		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 ₅₀	Method	Evaluation
glutaral		DOC reduction	> 901%	OECD 301A	Readily biodegradable
alkyldimethylbenzylammoniumchloride		Oxygen depletion	> 60%	OECD 301D	Readily biodegradable
tetrasodium ethylene diamine tetraacetate					Readily biodegradable
didecyldimethylammonium chloride		Oxygen depletion	> 60%	OECD 301D	Readily biodegradable
phosphoric acid					Not applicable (inorganic substance)
d-limonene			80 % in 28 day(s)	OECD 301D	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
glutaral	-0.36	(EC) 440/2008, A.8		
alkyldimethylbenzylammoniumchloride	0.5 - 1.58	Method not given	No bioaccumulation expected	
tetrasodium ethylene diamine tetraacetate	-13	Method not given	No bioaccumulation expected	
didecyldimethylammonium chloride	No data available			
phosphoric acid	No data available		No bioaccumulation expected	
d-limonene	No data available		High potential for bioaccumulation	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
glutaral	No data available				
alkyldimethylbenzylammoniumchloride	0.5		Method not given	No bioaccumulation expected	
tetrasodium ethylene diamine tetraacetate	1.8	<i>Lepomis macrochirus</i>	Method not given	Low potential for bioaccumulation	
didecyldimethylammonium chloride	2.1		Method not given	No bioaccumulation expected	
phosphoric acid	No data available			No bioaccumulation expected	
d-limonene	683.1		Method not given	High potential for bioaccumulation	

12.4 Mobility in soil

Adsorption/Desorption to soil or sediment

Ingredient(s)	Adsorption coefficient Log K _{oc}	Desorption coefficient Log K _{oc} (des)	Method	Soil/sediment type	Evaluation
glutaral	No data available				
alkyldimethylbenzylammoniumchloride	No data available				
tetrasodium ethylene diamine tetraacetate	No data available				Adsorption to solid soil phase is not expected
didecyldimethylammonium chloride	No data available				
phosphoric acid	No data available				Potential for mobility in soil, soluble in water
d-limonene	No data available				High potential for mobility in soil

12.5 Results of PBT and vPvB assessment

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

12.6 Other adverse effects

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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:

16 03 05* - organic wastes 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



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

14.1 UN number: 3265

14.2 UN proper shipping name:

Corrosive liquid, acidic, organic, n.o.s. (glutaral)

14.3 Transport hazard class(es):

Class: 8

Label(s): 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 73/78 and the IBC Code: The product is not transported in bulk tankers.

Other relevant information:

ADR

Classification code: C3

Tunnel restriction code: E

Hazard identification number: 80

IMO/IMDG

EmS: F-A, S-B

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

SECTION 15: Regulatory information

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

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

Ingredients according to EC Detergents Regulation 648/2004

EDTA and salts thereof
disinfectants, Limonene

< 5%

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out on the mixture

SECTION 16: Other information

The information in this document is based on our best present knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally binding contract

SDS code: MSDS3888

Version: 08.0

Revision: 2015-04-21

Reason for revision:

Overall design adjusted in accordance with Amendment 453/2010, Annex II of Regulation (EC) No 1907/2006, This data sheet contains changes from the previous version in section(s):, 3

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Classification procedure

The classification of the mixture is in general based on calculation methods using substance data, as required by Regulation (EC) No 1272/2008. If for certain classifications data on the mixture is available or for example bridging principles or weight of evidence can be used for classification, this will be indicated in the relevant sections of the Safety Data Sheet. See section 9 for physical chemical properties, section 11 for toxicological information and section 12 for ecological information.

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

- H226 - Flammable liquid and vapour.
- H290 - May be corrosive to metals.
- H301 - Toxic if swallowed.
- H302 - Harmful if swallowed.
- H304 - May be fatal if swallowed and enters airways.
- H312 - Harmful in contact with skin.
- H314 - Causes severe skin burns and eye damage.
- H315 - Causes skin irritation.
- H317 - May cause an allergic skin reaction.
- H318 - Causes serious eye damage.
- H331 - Toxic if inhaled.
- H332 - Harmful if inhaled.
- H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- 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.
- R10 - Flammable.
- R20 - Harmful by inhalation.
- R21 - Harmful in contact with skin.
- R22 - Harmful if swallowed.
- R23 - Toxic by inhalation.
- R25 - Toxic if swallowed.
- R34 - Causes burns.
- R38 - Irritating to skin.
- R41 - Risk of serious damage to eyes.
- R42 - May cause sensitisation by inhalation.
- R43 - May cause sensitisation by skin contact.
- R50 - Very toxic to aquatic organisms.
- R65 - Harmful: may cause lung damage if swallowed.
- R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Abbreviations and acronyms:

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