

Shield Toilet Descaler

Revision: 2017-02-15

Version: 01.0

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

1.1 Product identifier

Trade name: Shield Toilet Descaler

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

Identified uses:

For professional use only.

AISE-P307 - Descaling agent. Manual process

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

1.3 Details of the supplier of the safety data sheet

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

Skin Corr. 1B (H314)

Met. Corr. 1 (H290)

2.2 Label elements



Signal word: Danger.

Contains hydrochloric acid (Hydrochloric Acid), phosphoric acid (Phosphoric Acid), oleylbis(2-hydroxyethyl)methylammonium chloride (PEG-2 Oleammonium Chloride)

Hazard statements:

H314 - Causes severe skin burns and eye damage.

H290 - May be corrosive to metals.

Precautionary statements:

P280 - Wear protective gloves, protective clothing and eye or face protection.

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a POISON CENTRE, doctor or physician.

2.3 Other hazards

No other hazards known

Shield Toilet Descaler

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
phosphoric acid	231-633-2	7664-38-2	01-2119485924-24	Skin Corr. 1B (H314) Met. Corr. 1 (H290)	C;R34		3-10
hydrochloric acid	231-595-7	7647-01-0	01-2119484862-27	Skin Corr. 1B (H314) STOT SE 3 (H335) Met. Corr. 1 (H290)	C;R34 Xi;R37		3-10
oleylbis(2-hydroxyethyl)methylammonium chloride	242-332-0	18448-65-2	No data available	Skin Corr. 1B (H314) Acute Tox. 4 (H302) Aquatic Acute 1 (H400)	Xn;R22 C;R34 N;R50		1-3
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	263-179-6	61791-46-6	No data available	Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Aquatic Acute 1 (H400) Aquatic Chronic 3 (H412)	Xi;R38-41 N;R50		0.1-1

* 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 R, H and EUH phrases mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General Information:

If unconscious place in recovery position and seek medical advice. Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator.

Inhalation:

Get medical attention or advice if you feel unwell.

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:

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.

Ingestion:

Rinse mouth. Immediately drink 1 glass of water. Never give anything by mouth to an unconscious person. 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:

No known effects or symptoms in normal use.

Skin contact:

Causes severe burns.

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

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

Shield Toilet Descaler

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

Use neutralising agent. 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 Sealed Air. Wash hands before breaks and at the end of workday. Wash face, hands and any exposed skin thoroughly after handling. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Use personal protective equipment as required. Avoid contact with skin and eyes. Use only with adequate ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local and national regulations. Keep only in original container. Store in a closed container.

For conditions to avoid see subsection 10.4. For incompatible materials see subsection 10.5.

7.3 Specific end use(s)

No specific advice for end use available.

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

Air limit values, if available:

Ingredient(s)	UK - Long term value(s)	UK - Short term value(s)
phosphoric acid	1 mg/m ³	2 mg/m ³
hydrochloric acid	1 ppm aerosol mist and gas 2 mg/m ³ aerosol mist and gas	5 ppm aerosol mist and gas 8 mg/m ³ aerosol mist and gas

Biological limit values, 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
phosphoric acid	-	-	-	-
hydrochloric acid	-	-	-	-
oleylbis(2-hydroxyethyl)methylammonium chloride	No data available	No data available	No data available	No data available
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	-	-	-	-

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)
phosphoric acid	No data available	-	No data available	-
hydrochloric acid	No data available	-	No data available	-
oleylbis(2-hydroxyethyl)methylammonium chloride	No data available	No data available	No data available	No data available
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	-	-	-	-

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)
phosphoric acid	No data available	-	No data available	-
hydrochloric acid	No data available	-	No data available	-

Shield Toilet Descaler

oleylbis(2-hydroxyethyl)methylammonium chloride	No data available	No data available	No data available	No data available
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	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
phosphoric acid	-	-	2.92	-
hydrochloric acid	15	-	8	-
oleylbis(2-hydroxyethyl)methylammonium chloride	No data available	No data available	No data available	No data available
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	-	-	-	-

DNEL inhalatory exposure - Consumer (mg/m³)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
phosphoric acid	-	-	0.73	-
hydrochloric acid	-	-	-	-
oleylbis(2-hydroxyethyl)methylammonium chloride	No data available	No data available	No data available	No data available
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	-	-	-	-

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)
phosphoric acid	-	-	-	-
hydrochloric acid	0.036	0.036	0.045	0.036
oleylbis(2-hydroxyethyl)methylammonium chloride	No data available	No data available	No data available	No data available
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	-	-	-	-

Environmental exposure - PNEC, continued

Ingredient(s)	Sediment, freshwater (mg/kg)	Sediment, marine (mg/kg)	Soil (mg/kg)	Air (mg/m ³)
phosphoric acid	-	-	-	-
hydrochloric acid	-	-	-	-
oleylbis(2-hydroxyethyl)methylammonium chloride	No data available	No data available	No data available	No data available
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	-	-	-	-

8.2 Exposure controls

The following information applies for the uses indicated in subsection 1.2 of the Safety Data Sheet. If available, please refer to the product information sheet for application and handling instructions. Normal use conditions are assumed for this section.

Recommended safety measures for handling the undiluted product:

Appropriate engineering controls: No special requirements under normal use conditions.
Appropriate organisational controls: Avoid direct contact and/or splashes where possible Train personnel

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
 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: Should not reach sewage water or drainage ditch undiluted or unneutralised.

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
Appearance: Liquid

Shield Toilet Descaler

Colour: Clear, Blue**Odour:** Slightly perfumed**Odour threshold:** Not applicable**pH:** ≈ 0.8 (neat)**Melting point/freezing point (°C):** Not determined**Initial boiling point and boiling range (°C):** Not determined

ISO 4316

Not relevant to classification of this product

See substance data

Substance data, boiling point

Ingredient(s)	Value (°C)	Method	Atmospheric pressure (hPa)
phosphoric acid	158	Method not given	1013
hydrochloric acid	50-90	Method not given	
oleylbis(2-hydroxyethyl)methylammonium chloride	No data available		
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	No data available		

Method / remark**Flash point (°C):** Not applicable.**Sustained combustion:** Not applicable.**Evaporation rate:** Not determined

Not relevant to classification of this product

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

See substance data

Substance data, vapour pressure

Ingredient(s)	Value (Pa)	Method	Temperature (°C)
phosphoric acid	4	Method not given	20
hydrochloric acid	1450-6100	Method not given	20
oleylbis(2-hydroxyethyl)methylammonium chloride	No data available		
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	No data available		

Method / remark**Vapour density:** Not determined**Relative density:** ≈ 1.10 (20 °C)**Solubility in / Miscibility with Water:** Fully miscible

Not relevant to classification of this product

OECD 109 (EU A.3)

Substance data, solubility in water

Ingredient(s)	Value (g/l)	Method	Temperature (°C)
phosphoric acid	Soluble		
hydrochloric acid	500	Method not given	
oleylbis(2-hydroxyethyl)methylammonium chloride	No data available		
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	No data available		

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

Method / remark**Autoignition temperature:** Not determined**Decomposition temperature:** Not applicable.**Viscosity:** ≈ 185 mPa.s (20 °C)**Explosive properties:** Not explosive.**Oxidising properties:** Not oxidising**9.2 Other information****Surface tension (N/m):** Not determined**Corrosion to metals:** 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

Keep away from products containing chlorine-based bleaching agents or sulphites. Reacts with alkali and metals.

10.6 Hazardous decomposition products

None known under normal storage and use conditions.

SECTION 11: Toxicological information**11.1 Information on toxicological effects**

Mixture data:.

Relevant calculated ATE(s):

ATE - Oral (mg/kg): >2000

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)
phosphoric acid	LD ₅₀	2600	Rat	OECD 423 (EU B.1 tris)	
hydrochloric acid	LD ₅₀	900	Rabbit	Method not given	
oleylbis(2-hydroxyethyl)methylammonium chloride		No data available			
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	LD ₅₀	> 2000	Rat	Read across	

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
phosphoric acid	LD ₅₀	2740	Rabbit	Method not given	
hydrochloric acid	LD ₅₀	> 5010	Rabbit	Method not given	
oleylbis(2-hydroxyethyl)methylammonium chloride		No data available			
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	LD ₅₀	> 2000	Rat	Read across	

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
phosphoric acid	LC ₅₀	850	Rat	Method not given	2
hydrochloric acid	LC ₅₀	8	Rat	Method not given	
oleylbis(2-hydroxyethyl)methylammonium chloride		No data available			
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides		No data available			

Irritation and corrosivity

Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
phosphoric acid	Corrosive	Rabbit	OECD 404 (EU B.4)	
hydrochloric acid	Corrosive	Rabbit	Method not given	
oleylbis(2-hydroxyethyl)methylammonium chloride	No data available			
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	Irritant	Rabbit	Read across OECD 404 (EU B.4)	

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
phosphoric acid	Severe damage	Rabbit	Method not given	
hydrochloric acid	Corrosive Severe damage	Rabbit	OECD 405 (EU B.5)	
oleylbis(2-hydroxyethyl)methylammonium chloride	No data available			
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	Severe damage	Rabbit	OECD 405 (EU B.5)	

Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
phosphoric acid	No data available			

hydrochloric acid	No data available			
oleylbis(2-hydroxyethyl)methylammonium chloride	No data available			
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	No data available			

Sensitisation

Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
phosphoric acid	Not sensitising	Human	Human experience	
hydrochloric acid	Not sensitising	Guinea pig	OECD 406 (EU B.6) / GPMT	
oleylbis(2-hydroxyethyl)methylammonium chloride	No data available			
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	Not sensitising	Guinea pig	OECD 406 (EU B.6) / Buehler test Read across	

Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
phosphoric acid	No data available			
hydrochloric acid	No data available			
oleylbis(2-hydroxyethyl)methylammonium chloride	No data available			
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	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)
phosphoric acid	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13) OECD 473 OECD 476 (Mouse lymphoma)	No data available	
hydrochloric acid	No evidence for mutagenicity	OECD 471 (EU B.12/13)	No data available	
oleylbis(2-hydroxyethyl)methylammonium chloride	No data available		No data available	
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13) Read across	No evidence of genotoxicity, negative test results	OECD 475 (EU B.11) OECD 478 Read across

Carcinogenicity

Ingredient(s)	Effect
phosphoric acid	No data available
hydrochloric acid	No evidence for carcinogenicity, negative test results
oleylbis(2-hydroxyethyl)methylammonium chloride	No data available
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	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
phosphoric acid	NOAEL	Developmental toxicity	410	Rat	OECD 422, oral	10 day(s)	No evidence for reproductive toxicity No evidence for developmental toxicity
hydrochloric acid			No data available				No evidence for reproductive toxicity
oleylbis(2-hydroxyethyl)methylammonium chloride			No data available				
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	NOAEL	Developmental toxicity Teratogenic effects	25	Rat	Read across		No evidence for developmental 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
phosphoric acid	NOAEL	250	Rat	OECD 422, oral		
hydrochloric acid		No data available				
oleylbis(2-hydroxyethyl)methylammonium chloride		No data available				
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides		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
---------------	----------	--------------------	---------	--------	----------------------	--------------------------------------

Shield Toilet Descaler

phosphoric acid		No data available				
hydrochloric acid		No data available				
oleylbis(2-hydroxyethyl)methylammonium chloride		No data available				
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides		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
phosphoric acid		No data available				
hydrochloric acid		No data available				
oleylbis(2-hydroxyethyl)methylammonium chloride		No data available				
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides		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
phosphoric acid			No data available					
hydrochloric acid			No data available					
oleylbis(2-hydroxyethyl)methylammonium chloride			No data available					
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides			No data available					

STOT-single exposure

Ingredient(s)	Affected organ(s)
phosphoric acid	No data available
hydrochloric acid	No data available
oleylbis(2-hydroxyethyl)methylammonium chloride	No data available
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	Not applicable

STOT-repeated exposure

Ingredient(s)	Affected organ(s)
phosphoric acid	No data available
hydrochloric acid	No data available
oleylbis(2-hydroxyethyl)methylammonium chloride	No data available
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	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)
phosphoric acid	LC ₅₀	138	<i>Gambusia affinis</i>	Method not given	96
hydrochloric acid	LC ₅₀	7.45	<i>Various species</i>	Method not given	96
oleylbis(2-hydroxyethyl)methylammonium chloride		No data available			
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	LC ₅₀	> 0.1 - 1	<i>Brachydanio rerio</i>	Method not given	96

Shield Toilet Descaler

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
phosphoric acid	EC ₅₀	> 100	<i>Daphnia magna Straus</i>	OECD 202 (EU C.2)	48
hydrochloric acid	EC ₅₀	0.492	<i>Daphnia magna Straus</i>	Method not given	48
oleylbis(2-hydroxyethyl)methylammonium chloride		No data available			
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	EC ₅₀	> 0.1 - 1	<i>Daphnia magna Straus</i>	Method not given	48

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
phosphoric acid	EC ₅₀	> 100	<i>Desmodesmus subspicatus</i>	OECD 201 (EU C.3)	72
hydrochloric acid	EC ₅₀	0.78	<i>Pseudokirchneriella subcapitata</i>	Method not given	72
oleylbis(2-hydroxyethyl)methylammonium chloride		No data available			
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	E _r C ₅₀	0.19	<i>Pseudokirchneriella subcapitata</i>	Read across	72

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
phosphoric acid		No data available			-
hydrochloric acid		No data available			-
oleylbis(2-hydroxyethyl)methylammonium chloride		No data available			
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides		No data available			-

Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
phosphoric acid	EC ₅₀	270	<i>Activated sludge</i>	Method not given	
hydrochloric acid		No data available			
oleylbis(2-hydroxyethyl)methylammonium chloride		No data available			
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	EC ₁₀	24	<i>Pseudomonas putida</i>	Read across	18 hour(s)

Aquatic long-term toxicity

Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
phosphoric acid		No data available				
hydrochloric acid		No data available				
oleylbis(2-hydroxyethyl)methylammonium chloride		No data available				
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	NOEC	0.42	<i>Pimephales promelas</i>	Read across		

Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
phosphoric acid		No data available				
hydrochloric acid		No data available				
oleylbis(2-hydroxyethyl)methylammonium chloride		No data available				
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	NOEC	0.7	<i>Daphnia magna</i>	Read across OECD 211	21 day(s)	

Aquatic toxicity to other aquatic benthic organisms, including sediment-dwelling organisms, if available:

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

Shield Toilet Descaler

hydrochloric acid		No data available			-	
oleylbis(2-hydroxyethyl)methylammonium chloride		No data available				
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides		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
phosphoric acid		No data available			-	
hydrochloric acid		No data available			-	
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides		No data available			-	

Terrestrial toxicity - plants, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
phosphoric acid		No data available			-	
hydrochloric acid		No data available			-	
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides		No data available			-	

Terrestrial toxicity - birds, if available:

Ingredient(s)	Endpoint	Value	Species	Method	Exposure time (days)	Effects observed
phosphoric acid		No data available			-	
hydrochloric acid		No data available			-	
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides		No data available			-	

Terrestrial toxicity - beneficial insects, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
phosphoric acid		No data available			-	
hydrochloric acid		No data available			-	
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides		No data available			-	

Terrestrial toxicity - soil bacteria, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
phosphoric acid		No data available			-	
hydrochloric acid		No data available			-	
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides		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
phosphoric acid					Not applicable (inorganic substance)
hydrochloric acid					Not applicable (inorganic substance)
oleylbis(2-hydroxyethyl)methylammonium chloride					No data available
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides		Oxygen depletion	> 60%	OECD 301D	Readily biodegradable

Shield Toilet Descaler

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
phosphoric acid	No data available		No bioaccumulation expected	
hydrochloric acid	-0.25	Method not given	No bioaccumulation expected	
oleylbis(2-hydroxyethyl)methylammonium chloride	No data available			
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	No data available		No bioaccumulation expected	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
phosphoric acid	No data available			No bioaccumulation expected	
hydrochloric acid	No data available				
oleylbis(2-hydroxyethyl)methylammonium chloride	No data available				
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	-			Not relevant, does not bioaccumulate	

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
phosphoric acid	No data available				Potential for mobility in soil, soluble in water
hydrochloric acid	No data available				High potential for mobility in soil
oleylbis(2-hydroxyethyl)methylammonium chloride	No data available				
ethanol, 2,2'-iminobis-, N-tallow alkyl derivs., N-oxides	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: 3264

14.2 UN proper shipping name:

Corrosive liquid, acidic, inorganic, n.o.s. (hydrochloric acid , phosphoric acid)

14.3 Transport hazard class(es):

Class: 8

Label(s): 8

14.4 Packing group: III

14.5 Environmental hazards:

Shield Toilet Descaler

Environmentally hazardous: No

Marine pollutant: No

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: C1

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

EU regulations:

- Regulation (EC) No. 1907/2006 - REACH
- Regulation (EC) No 1272/2008 - CLP

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

Ingredients according to EC Detergents Regulation 648/2004

cationic surfactants, non-ionic surfactants

< 5 %

perfumes, Eugenol, Hexyl Cinnamal

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: MS1003496

Version: 01.0

Revision: 2017-02-15

Classification procedure

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

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

- H302 - Harmful if swallowed.
- H315 - Causes skin irritation.
- H318 - Causes serious eye damage.
- H290 - May be corrosive to metals.
- H314 - Causes severe skin burns and eye damage.
- H412 - Harmful to aquatic life with long lasting effects.
- H335 - May cause respiratory irritation.
- H400 - Very toxic to aquatic life.

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