

## 10A LIMESCALE REMOVER

Revision: 2024-08-04

Version: 02.0

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

#### 1.1 Product identifier

**Trade name:** 10A LIMESCALE REMOVER

UFI: C4RH-K11W-Y00P-RRP1

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

<b>Product use:</b>	Descaling agent. For professional use only.
<b>Uses advised against:</b>	Uses other than those identified are not recommended.

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

AISE\_SWED\_PW\_1\_1  
AISE\_SWED\_PW\_4\_2  
AISE\_SWED\_PW\_8a\_1  
AISE\_SWED\_PW\_19\_2

#### 1.3 Details of the supplier of the safety data sheet

Diversey Europe Operations BV, De Corridor 4, 3621ZB Breukelen [Maarssebroeksedijk 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@solenis.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 corrosion, Category 1B (H314)  
Specific target organ toxicity - Single exposure, Category 3 (H335)  
Serious eye damage, Category 1 (H318)  
Corrosive to metals, Category 1 (H290)

#### 2.2 Label elements



**Signal word:** Danger.

Contains Hydrochloric acid (Hydrochloric Acid), phosphoric acid (Phosphoric Acid)

#### Hazard statements:

H290 - May be corrosive to metals.  
H314 - Causes severe skin burns and eye damage.  
H335 - May cause respiratory irritation.

#### Precautionary statements:

P260 - Do not breathe vapours.  
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.

**10A LIMESCALE REMOVER**

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

**2.3 Other hazards**

No other hazards known.

Regulated explosives precursor - Control of Poisons and Explosives Precursors Regulations 2015

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

Ingredient(s)	EC number	CAS number	REACH number	Classification	Notes	Weight percent
Hydrochloric acid	231-595-7	7647-01-0	01-211948486 2-27	Skin corrosion, Category 1A (H314) Specific target organ toxicity - Single exposure, Category 3 (H335) Corrosive to metals, Category 1 (H290)		10-20
phosphoric acid	231-633-2	7664-38-2	01-211948592 4-24	Skin corrosion, Category 1B (H314) Acute toxicity - Oral, Category 4 (H302) Serious eye damage, Category 1 (H318) Corrosive to metals, Category 1 (H290)		3-10

**Specific concentration limits**

Hydrochloric acid:

- Serious eye damage, Category 1 (H318) >= 1%
- Skin corrosion, Category 1A (H314) >= 25% > Skin corrosion, Category 1B (H314) >= 10% > Skin irritation, Category 2 (H315) >= 1%
- Specific target organ toxicity - Single exposure, Category 3 (H335) >= 10%

phosphoric acid:

- Serious eye damage, Category 1 (H318) >= 25% > Eye irritation, Category 2 (H319) >= 10%
- Skin corrosion, Category 1B (H314) >= 25% > Skin irritation, Category 2 (H315) >= 10%

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

ATE, if available, are listed in section 11.

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

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

**SECTION 4: First aid measures****4.1 Description of first aid measures****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 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. Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTRE, doctor or physician if you feel unwell.

**Inhalation:****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 reuse. 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:**

May cause respiratory irritation.

**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**

## 10A LIMESCALE REMOVER

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. Wear eye/face protection. Wear suitable gloves.

### 6.2 Environmental precautions

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

### 6.3 Methods and material for containment and cleaning up

Ensure adequate ventilation. Dyke to collect large liquid spills. Use neutralising agent. Absorb with liquid-binding material (sand, diatomite, universal binders). 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 immediately all contaminated clothing. Wash contaminated clothing before reuse. Avoid contact with skin and eyes. Do not breathe vapours. Use only outdoors or in a well-ventilated area. See chapter 8.2, Exposure controls / Personal protection.

### 7.2 Conditions for safe storage, including any incompatibilities

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

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

### 7.3 Specific end use(s)

No specific advice for end use available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Workplace exposure limits

Air limit values, if available:

Ingredient(s)	UK - Long term value(s)	UK - Short term value(s)
Hydrochloric acid	1 ppm aerosol mist and gas 2 mg/m <sup>3</sup> aerosol mist and gas	5 ppm aerosol mist and gas 8 mg/m <sup>3</sup> aerosol mist and gas
phosphoric acid	1 mg/m <sup>3</sup>	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
Hydrochloric acid	-	-	-	-
phosphoric acid	-	-	-	0.1

DNEL/DMEL dermal exposure - Worker

Ingredient(s)	Short term - Local	Short term - Systemic	Long term - Local	Long term - Systemic
---------------	--------------------	-----------------------	-------------------	----------------------

## 10A LIMESCALE REMOVER

	effects	effects (mg/kg bw)	effects	effects (mg/kg bw)
Hydrochloric acid	-	-	-	-
phosphoric acid	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)
Hydrochloric acid	-	-	-	-
phosphoric acid	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
Hydrochloric acid	15	-	8	-
phosphoric acid	-	-	2.92	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
Hydrochloric acid	-	-	-	-
phosphoric acid	-	-	0.73	-

**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)
Hydrochloric acid	0.036	0.036	0.045	0.036
phosphoric acid	-	-	-	-

Environmental exposure - PNEC, continued

Ingredient(s)	Sediment, freshwater (mg/kg)	Sediment, marine (mg/kg)	Soil (mg/kg)	Air (mg/m <sup>3</sup> )
Hydrochloric acid	-	-	0.036	-
phosphoric acid	-	-	-	-

**8.2 Exposure controls**

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

Recommended safety measures for handling the undiluted product:

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

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

	SWED - Sector-specific worker exposure description	LCS	PROC	Duration (min)	ERC
Automatic application in a dedicated closed system	AISE_SWED_PW_1_1	PW	PROC 1	480	ERC8a
Manual application	AISE_SWED_PW_19_2	PW	PROC 19	480	ERC8a
Automatic application in a dedicated system	AISE_SWED_PW_4_2	PW	PROC 4	480	ERC8a
Manual transfer of product	AISE_SWED_PW_8a_1	PW	PROC 8a	60	ERC8a

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

Safety glasses or goggles (EN 16321 / 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. 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.

**Hand protection:**

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:**

Respiratory protection is not normally required. However, inhalation of vapour, spray, gas or

## 10A LIMESCALE REMOVER

aerosols should be avoided.

**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

**Physical state:** Liquid**Colour:** Clear , Red**Odour:** Product specific**Odour threshold:** Not applicable**Melting point/freezing point (°C):** Not determined**Initial boiling point and boiling range (°C):** Not determined**Method / remark**

Not relevant to classification of this product

See substance data

Substance data, boiling point

Ingredient(s)	Value (°C)	Method	Atmospheric pressure (hPa)
Hydrochloric acid	50-90	Method not given	
phosphoric acid	158	Method not given	1013

**Method / remark****Flammability (solid, gas):** Not applicable to liquids**Flammability (liquid):** Not flammable.**Flash point (°C):** Not determined**Sustained combustion:** Not applicable.

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

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

Substance data, flammability or explosive limits, if available:

**Method / remark****Autoignition temperature:** Not determined**Decomposition temperature:** Not applicable.**pH:** ≤ 2 (neat)**Kinematic viscosity:** Not determined**Solubility in / Miscibility with water:** Fully miscible

ISO 4316

Substance data, solubility in water

Ingredient(s)	Value (g/l)	Method	Temperature (°C)
Hydrochloric acid	500	Method not given	
phosphoric acid	Soluble		

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)
Hydrochloric acid	1450-6100	Method not given	20
phosphoric acid	4	Method not given	20

**Method / remark****Relative density:** ≈ 1.09 (20 °C)**Relative vapour density:** No data available.**Particle characteristics:** No data available.

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**9.2.2 Other safety characteristics**

No other relevant information available.

**SECTION 10: Stability and reactivity****10.1 Reactivity**

No reactivity hazards known under normal storage and use conditions.

**10.2 Chemical stability**

Stable under normal storage and use conditions.

**10.3 Possibility of hazardous reactions**

No hazardous reactions known under normal storage and use conditions.

**10.4 Conditions to avoid**

None known under normal storage and use conditions.

**10.5 Incompatible materials**

May be corrosive to metals. Reacts with alkali. Keep away from products containing chlorine-based bleaching agents or sulphites.

**10.6 Hazardous decomposition products**

None known under normal storage and use conditions.

**SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

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)	ATE Oral (mg/kg)
Hydrochloric acid	LD <sub>50</sub>	900	Rabbit	Method not given		900
phosphoric acid	LD <sub>50</sub>	> 300-5000	Rat	OECD 423 (EU B.1 tris)		2600

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)	ATE Dermal (mg/kg)
Hydrochloric acid	LD <sub>50</sub>	> 5010	Rabbit	Method not given		5010
phosphoric acid	LD <sub>50</sub>	2740	Rabbit	Method not given		2740

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
Hydrochloric acid	LC <sub>50</sub>	8 (mist)	Rat	Method not given	0.5
phosphoric acid	LC <sub>50</sub>	850	Rat	Method not given	2

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)
Hydrochloric acid	Not established	Not established	Not established	Not established
phosphoric acid	Not established	Not established	Not established	Not established

**Irritation and corrosivity**

Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
Hydrochloric acid	Corrosive	Rabbit	Method not given	
phosphoric acid	Corrosive	Rabbit	OECD 404 (EU B.4)	

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
Hydrochloric acid	Corrosive Severe damage	Rabbit	OECD 405 (EU B.5)	

phosphoric acid	Severe damage	Rabbit	Method not given	
-----------------	---------------	--------	------------------	--

## Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
Hydrochloric acid	Irritating to respiratory tract			
phosphoric acid	No data available			

## Sensitisation

## Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
Hydrochloric acid	Not sensitising	Guinea pig	OECD 406 (EU B.6) / GPMT	
phosphoric acid	Not sensitising	Human	Human experience	

## Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
Hydrochloric acid	No data available			
phosphoric acid	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)
Hydrochloric acid	No evidence for mutagenicity	OECD 471 (EU B.12/13)	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	

## Carcinogenicity

Ingredient(s)	Effect
Hydrochloric acid	No evidence for carcinogenicity, negative test results
phosphoric acid	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
Hydrochloric acid			No data available				No evidence for reproductive toxicity
phosphoric acid	NOAEL	Developmental toxicity	410	Rat	OECD 422, oral	10 day(s)	No evidence for reproductive toxicity 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
Hydrochloric acid		No data available				
phosphoric acid	NOAEL	250	Rat	OECD 422, oral		

## Sub-chronic dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
Hydrochloric acid		No data available				
phosphoric acid		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
Hydrochloric acid		No data available				
phosphoric acid		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
Hydrochloric acid			No data available					
phosphoric acid			No data available					

## STOT-single exposure

Ingredient(s)	Affected organ(s)
Hydrochloric acid	No data available
phosphoric acid	No data available

## STOT-repeated exposure

Ingredient(s)	Affected organ(s)
Hydrochloric acid	No data available
phosphoric acid	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)
Hydrochloric acid	LC <sub>50</sub>	7.45	Various species	Method not given	96
phosphoric acid	LC <sub>50</sub>	138	Gambusia affinis	Method not given	96

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
Hydrochloric acid	EC <sub>50</sub>	0.492	Daphnia magna Straus	Method not given	48
phosphoric acid	EC <sub>50</sub>	> 100	Daphnia magna Straus	OECD 202 (EU C.2)	48

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
Hydrochloric acid	EC <sub>50</sub>	0.73	Pseudokirchneriella subcapitata	Method not given	72
phosphoric acid	EC <sub>50</sub>	> 100	Desmodesmus subspicatus	OECD 201 (EU C.3)	72

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
Hydrochloric acid		No data available			
phosphoric acid		No data available			



## 10A LIMESCALE REMOVER

Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
Hydrochloric acid		No data available			
phosphoric acid	EC <sub>50</sub>	270	Activated sludge	Method not given	

## Aquatic long-term toxicity

Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
Hydrochloric acid		No data available				
phosphoric acid		No data available				

Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
Hydrochloric acid		No data available				
phosphoric acid		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
Hydrochloric acid		No data available				
phosphoric acid		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
Hydrochloric acid		No data available				
phosphoric acid		No data available				

Terrestrial toxicity - plants, if available:

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

Terrestrial toxicity - birds, if available:

Ingredient(s)	Endpoint	Value	Species	Method	Exposure time (days)	Effects observed
Hydrochloric acid		No data available				
phosphoric acid		No data available				

Terrestrial toxicity - beneficial insects, if available:

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

Terrestrial toxicity - soil bacteria, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
---------------	----------	-----------------------	---------	--------	----------------------	------------------

## 10A LIMESCALE REMOVER

Hydrochloric acid		No data available				
phosphoric acid		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
Hydrochloric acid	No data available			
phosphoric acid	No data available			

Abiotic degradation - hydrolysis, if available:

Ingredient(s)	Half-life time in fresh water	Method	Evaluation	Remark
Hydrochloric acid	No data available			
phosphoric acid	No data available			

Abiotic degradation - other processes, if available:

Ingredient(s)	Type	Half-life time	Method	Evaluation	Remark
Hydrochloric acid		No data available			
phosphoric acid		No data available			

## Biodegradation

Ready biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT <sub>50</sub>	Method	Evaluation
Hydrochloric acid					Not applicable (inorganic substance)
phosphoric acid					Not applicable (inorganic substance)

Ready biodegradability - anaerobic and marine conditions, if available:

Ingredient(s)	Medium & Type	Analytical method	DT <sub>50</sub>	Method	Evaluation
Hydrochloric acid					No data available
phosphoric acid					No data available

Degradation in relevant environmental compartments, if available:

Ingredient(s)	Medium & Type	Analytical method	DT <sub>50</sub>	Method	Evaluation
Hydrochloric acid					No data available
phosphoric acid					No data available

## 12.3 Bioaccumulative potential

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

Ingredient(s)	Value	Method	Evaluation	Remark
Hydrochloric acid	-0.25	Method not given	No bioaccumulation expected	
phosphoric acid	No data available		No bioaccumulation expected	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
Hydrochloric acid	No data available				
phosphoric acid	No data available			No bioaccumulation expected	

## 12.4 Mobility in soil

Adsorption/Desorption to soil or sediment

Ingredient(s)	Adsorption coefficient Log K <sub>oc</sub>	Desorption coefficient Log K <sub>oc</sub> (des)	Method	Soil/sediment type	Evaluation
Hydrochloric acid	No data available				High potential for mobility in soil
phosphoric acid	No data available				Potential for mobility in soil, soluble in water

## 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:

## 10A LIMESCALE REMOVER

**12.7 Other adverse effects**

No other adverse effects known.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Waste from residues / unused products:**

The concentrated contents or contaminated packaging should be disposed of by a certified handler or according to the site permit. Release of waste to sewers is discouraged. The cleaned packaging material is suitable for energy recovery or recycling in line with local legislation.

**European Waste Catalogue:**

20 01 29\* - detergents containing dangerous substances.

**Empty packaging****Recommendation:**

Dispose of observing national or local regulations.

**Suitable cleaning agents:**

Water, if necessary with cleaning agent.

**SECTION 14: Transport information****Land transport (ADR/RID), Sea transport (IMDG), Air transport (ICAO-TI / IATA-DGR)**

**14.1 UN number or ID number:** 1789

**14.2 UN proper shipping name:**

Hydrochloric acid, solution

**14.3 Transport hazard class(es):**

Transport hazard class (and subsidiary risks): 8

**14.4 Packing group:** III

**14.5 Environmental hazards:**

Environmentally hazardous: No

Marine pollutant: No

**14.6 Special precautions for user:** None known.

**14.7 Maritime transport in bulk according to IMO instruments:** 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****National regulations :**

- Control of Poisons and Explosives Precursors Regulations 2015
- 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**

non-ionic surfactants

< 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

**10A LIMESCALE REMOVER**

available to them, at their direct request or at the request of a detergent manufacturer.

**Comah - classification:** Not classified

**15.2 Chemical safety assessment**

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

**SECTION 16: Other information**

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

**SDS code:** MS1005603

**Version:** 02.0

**Revision:** 2024-08-04

**Reason for revision:**

This data sheet contains changes from the previous version in section(s): 1, 2, 4, 5, 6, 8, 10, 16, Overall design adjusted in accordance with Amendment 2020/878, Annex II of Regulation (EC) No 1907/2006

**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.

**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
- H290 - May be corrosive to metals.
- H302 - Harmful if swallowed.
- H314 - Causes severe skin burns and eye damage.
- H318 - Causes serious eye damage.
- H335 - May cause respiratory irritation.
- H402 - Harmful to aquatic life.

**End of Safety Data Sheet**