

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## LIMESCALE REMOVER - 5 L

Version	Revision Date:	SDS Number:	Date of last issue: 11.08.2023
5.1	27.03.2024	10688608-00011	Date of first issue: 10.08.2012

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

#### 1.1 Product identifier

Trade name : LIMESCALE REMOVER - 5 L

Product code : 089378

Unique Formula Identifier (UFI) : HRKE-A051-P00V-2AT5

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

Use of the Sub-stance/Mixture : Decalcification agent, Detergent  
Professional use product

Recommended restrictions on use : Not applicable

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

Company : Adolf Wuerth GmbH & Co. KG  
Reinhold-Würth-Str. 12-17  
74653 Künzelsau

Telephone : +49 794015 0

Telefax : +49 794015 10 00

E-mail address of person responsible for the SDS : isi@wuerth.com

#### 1.4 Emergency telephone number

+49 (0)6132 – 84463

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Skin irritation, Category 2 H315: Causes skin irritation.

Serious eye damage, Category 1 H318: Causes serious eye damage.

#### 2.2 Label elements

##### Labelling (REGULATION (EC) No 1272/2008)

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



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Version 5.1      Revision Date: 27.03.2024      SDS Number: 10688608-00011      Date of last issue: 11.08.2023  
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Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	H315 Causes skin irritation. H318 Causes serious eye damage.
Precautionary statements	:	<b>Prevention:</b> P264 Wash skin thoroughly after handling. P280 Wear protective gloves/ eye protection/ face protection.  <b>Response:</b> P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor. P332 + P313 If skin irritation occurs: Get medical advice/ attention. P362 + P364 Take off contaminated clothing and wash it before reuse.

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Sulphamidic acid	5329-14-6 226-218-8 016-026-00-0 01-2119488633-28	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Aquatic Chronic 3; H412	>= 2,5 - < 10

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## LIMESCALE REMOVER - 5 L

Version 5.1      Revision Date: 27.03.2024      SDS Number: 10688608-00011      Date of last issue: 11.08.2023  
Date of first issue: 10.08.2012

Citric acid monohydrate	5949-29-1 01-2119457026-42	Eye Irrit. 2; H319 STOT SE 3; H335	>= 1 - < 10
2-(2-Butoxyethoxy)ethanol	112-34-5 203-961-6 603-096-00-8 01-2119475104-44	Eye Irrit. 2; H319	>= 1 - < 10

For explanation of abbreviations see section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
When symptoms persist or in all cases of doubt seek medical advice.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
- If inhaled : If inhaled, remove to fresh air.  
Get medical attention if symptoms occur.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.  
Get medical attention.  
Wash clothing before reuse.  
Thoroughly clean shoes before reuse.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.  
If easy to do, remove contact lens, if worn.  
Get medical attention immediately.
- If swallowed : If swallowed, DO NOT induce vomiting.  
Get medical attention if symptoms occur.  
Rinse mouth thoroughly with water.

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

- Risks : Causes skin irritation.  
Causes serious eye damage.

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

- Treatment : Treat symptomatically and supportively.

# SAFETY DATA SHEET

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Commission Regulation (EU) 2020/878



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Version	Revision Date:	SDS Number:	Date of last issue: 11.08.2023
5.1	27.03.2024	10688608-00011	Date of first issue: 10.08.2012

---

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical

Unsuitable extinguishing media : None known.

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

Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Sulphur oxides  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon oxides

#### 5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Use water spray to cool unopened containers.  
Remove undamaged containers from fire area if it is safe to do so.  
Evacuate area.

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### SECTION 6: Accidental release measures

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

Personal precautions : Use personal protective equipment.  
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

#### 6.2 Environmental precautions

Environmental precautions : Avoid release to the environment.  
Prevent further leakage or spillage if safe to do so.  
Prevent spreading over a wide area (e.g. by containment or oil barriers).  
Retain and dispose of contaminated wash water.  
Local authorities should be advised if significant spillages cannot be contained.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## LIMESCALE REMOVER - 5 L

Version	Revision Date:	SDS Number:	Date of last issue: 11.08.2023
5.1	27.03.2024	10688608-00011	Date of first issue: 10.08.2012

---

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

Methods for cleaning up : Soak up with inert absorbent material.  
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent.  
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.  
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

### 6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Do not get on skin or clothing.  
Avoid inhalation of vapour or mist.  
Do not swallow.  
Do not get in eyes.  
Wash skin thoroughly after handling.  
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment  
Keep container tightly closed.  
Take care to prevent spills, waste and minimize release to the environment.

Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

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

Requirements for storage areas and containers : Keep in properly labelled containers. Keep tightly closed.  
Store in accordance with the particular national regulations.

Reacts with many metals to liberate hydrogen gas which can form explosive mixtures with air. Hydrogen, a highly flammable gas, can accumulate to explosive concentrations inside drums, or any types of steel containers or tanks upon storage.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## LIMESCALE REMOVER - 5 L

Version 5.1      Revision Date: 27.03.2024      SDS Number: 10688608-00011      Date of last issue: 11.08.2023  
Date of first issue: 10.08.2012

Advice on common storage : Do not store with the following product types:  
Strong oxidizing agents

Storage class (TRGS 510) : 8A

Storage period : 12 Months

Recommended storage temperature : 5 - 35 °C

### 7.3 Specific end use(s)

Specific use(s) : No data available

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Citric acid mono-hydrate	5949-29-1	AGW (Inhalable fraction)	2 mg/m <sup>3</sup>	DE TRGS 900
		Peak-limit: excursion factor (category): 2;(I)		
		Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child		
		MAK (inhalable fraction)	2 mg/m <sup>3</sup>	DE DFG MAK
		Peak-limit: excursion factor (category): 2; I		
		Further information: Damage to the embryo or foetus is unlikely when the MAK value or the BAT value is observed		
2-(2-Butoxyethoxy)ethanol	112-34-5	TWA	10 ppm 67,5 mg/m <sup>3</sup>	2006/15/EC
		Further information: Indicative		
		STEL	15 ppm 101,2 mg/m <sup>3</sup>	2006/15/EC
		AGW (Vapour and aerosols)	10 ppm 67 mg/m <sup>3</sup>	DE TRGS 900
		Peak-limit: excursion factor (category): 1.5;(I)		
		Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child		
		MAK	10 ppm 67 mg/m <sup>3</sup>	DE DFG MAK
		Peak-limit: excursion factor (category): 1.5; I		
		Further information: Damage to the embryo or foetus is unlikely when the MAK value or the BAT value is observed		

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## LIMESCALE REMOVER - 5 L

Version 5.1      Revision Date: 27.03.2024      SDS Number: 10688608-00011      Date of last issue: 11.08.2023  
Date of first issue: 10.08.2012

Substance name	End Use	Exposure routes	Potential health effects	Value
Sulphamidic acid	Workers	Skin contact	Long-term systemic effects	10 mg/kg bw/day
	Consumers	Skin contact	Long-term systemic effects	5 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	5 mg/kg bw/day
2-(2-Butoxyethoxy)ethanol	Workers	Inhalation	Long-term systemic effects	67,5 mg/m3
	Workers	Inhalation	Long-term local effects	67,5 mg/m3
	Workers	Inhalation	Acute local effects	101,2 mg/m3
	Workers	Skin contact	Long-term systemic effects	83 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	40,5 mg/m3
	Consumers	Inhalation	Long-term local effects	40,5 mg/m3
	Consumers	Inhalation	Acute local effects	60,7 mg/m3
	Consumers	Skin contact	Long-term systemic effects	50 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	5 mg/kg bw/day

### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Sulphamidic acid	Fresh water	0,048 mg/l
	Marine water	0,0048 mg/l
	Intermittent use/release	0,48 mg/l
	Sewage treatment plant	2 mg/l
	Fresh water sediment	0,173 mg/kg
	Marine sediment	0,0173 mg/kg
	Soil	0,00638 mg/kg
Citric acid monohydrate	Fresh water	0,44 mg/l
	Marine water	0,044 mg/l
	Sewage treatment plant	1000 mg/l
	Fresh water sediment	34,6 mg/kg dry weight (d.w.)
	Marine sediment	3,46 mg/kg dry weight (d.w.)
2-(2-Butoxyethoxy)ethanol	Fresh water	1,1 mg/l
	Freshwater - intermittent	11 mg/l
	Marine water	0,11 mg/l
	Sewage treatment plant	200 mg/l
	Fresh water sediment	4,4 mg/kg dry weight (d.w.)
Marine sediment		0,44 mg/kg dry weight (d.w.)
	Soil	0,32 mg/kg dry

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## LIMESCALE REMOVER - 5 L

Version 5.1      Revision Date: 27.03.2024      SDS Number: 10688608-00011      Date of last issue: 11.08.2023  
Date of first issue: 10.08.2012

		weight (d.w.)
	Secondary Poisoning	56 mg/kg food

### 8.2 Exposure controls

#### Engineering measures

Ensure adequate ventilation, especially in confined areas.  
Minimize workplace exposure concentrations.

#### Personal protective equipment

Eye/face protection : Wear the following personal protective equipment:  
Chemical resistant goggles must be worn.  
If splashes are likely to occur, wear:  
Face-shield  
Equipment should conform to DIN EN 166

#### Hand protection

Material : Nitrile rubber  
Break through time : 480 min  
Glove thickness : 0,4 mm  
Directive : Equipment should conform to DIN EN 374  
Protective index : Class 6

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.  
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.  
Equipment should conform to DIN EN 14387

Filter type : Organic vapour type (A)

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state : liquid

Colour : red



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Commission Regulation (EU) 2020/878



## LIMESCALE REMOVER - 5 L

Version	Revision Date:	SDS Number:	Date of last issue: 11.08.2023
5.1	27.03.2024	10688608-00011	Date of first issue: 10.08.2012

---

Odour : characteristic

Odour Threshold : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling range : 100 °C

Flammability (solid, gas) : Not applicable

Flammability (liquids) : Ignitable (see flash point)

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Flash point : 100 - < 200 °C

Auto-ignition temperature : No data available

Decomposition temperature : No data available

pH : 0,6 (20 °C)  
Concentration: 100 %

Viscosity  
Viscosity, kinematic : No data available

Solubility(ies)  
Water solubility : completely miscible

Partition coefficient: n-octanol/water : Not applicable

Vapour pressure : 23 hPa (20 °C)

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## LIMESCALE REMOVER - 5 L

Version	Revision Date:	SDS Number:	Date of last issue: 11.08.2023
5.1	27.03.2024	10688608-00011	Date of first issue: 10.08.2012

---

Density : 1,063 g/cm<sup>3</sup> (20 °C)

Relative vapour density : No data available

Particle characteristics  
Particle size : Not applicable

### 9.2 Other information

Explosives : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Evaporation rate : No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Not classified as a reactivity hazard.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : Can react with strong oxidizing agents.

### 10.4 Conditions to avoid

Conditions to avoid : None known.

### 10.5 Incompatible materials

Materials to avoid : Oxidizing agents  
Bases

### 10.6 Hazardous decomposition products

No hazardous decomposition products are known.

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## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure : Inhalation  
Skin contact  
Ingestion

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## LIMESCALE REMOVER - 5 L

Version	Revision Date:	SDS Number:	Date of last issue: 11.08.2023
5.1	27.03.2024	10688608-00011	Date of first issue: 10.08.2012

---

Eye contact

### Acute toxicity

Not classified based on available information.

### Components:

#### Sulphamidic acid:

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

#### Citric acid monohydrate:

Acute oral toxicity : LD50 (Mouse): 5.400 mg/kg  
Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

#### 2-(2-Butoxyethoxy)ethanol:

Acute oral toxicity : LD50 (Mouse): 2.410 mg/kg  
Acute dermal toxicity : LD50 (Rabbit): 2.764 mg/kg

### Skin corrosion/irritation

Causes skin irritation.

### Product:

Result : Skin irritation  
Remarks : Information taken from reference works and the literature.

### Components:

#### Sulphamidic acid:

Result : Skin irritation  
Remarks : Based on national or regional regulation.

#### Citric acid monohydrate:

Species : Rabbit  
Result : No skin irritation

#### 2-(2-Butoxyethoxy)ethanol:

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : Mild skin irritation

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## LIMESCALE REMOVER - 5 L

Version 5.1      Revision Date: 27.03.2024      SDS Number: 10688608-00011      Date of last issue: 11.08.2023  
Date of first issue: 10.08.2012

---

### Serious eye damage/eye irritation

Causes serious eye damage.

#### Product:

Result : Corrosive  
Remarks : Information taken from reference works and the literature.

#### Components:

##### Sulphamidic acid:

Result : Irritation to eyes, reversing within 21 days  
Remarks : Based on national or regional regulation.

##### Citric acid monohydrate:

Species : Rabbit  
Result : Irritation to eyes, reversing within 21 days

##### 2-(2-Butoxyethoxy)ethanol:

Species : Rabbit  
Result : Irritation to eyes, reversing within 21 days

### Respiratory or skin sensitisation

#### Skin sensitisation

Not classified based on available information.

#### Respiratory sensitisation

Not classified based on available information.

#### Components:

##### 2-(2-Butoxyethoxy)ethanol:

Test Type : Maximisation Test  
Exposure routes : Skin contact  
Species : Guinea pig  
Result : negative

#### Germ cell mutagenicity

Not classified based on available information.

#### Components:

##### Sulphamidic acid:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

Test Type: in vitro micronucleus test  
Method: OECD Test Guideline 487  
Result: negative

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## LIMESCALE REMOVER - 5 L

Version 5.1      Revision Date: 27.03.2024      SDS Number: 10688608-00011      Date of last issue: 11.08.2023  
Date of first issue: 10.08.2012

---

Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Mouse  
Application Route: Ingestion  
Method: OECD Test Guideline 474  
Result: negative

### **Citric acid monohydrate:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

Test Type: in vitro micronucleus test  
Result: positive

Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)  
Species: Rat  
Application Route: Ingestion  
Result: negative

### **2-(2-Butoxyethoxy)ethanol:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

Test Type: In vitro mammalian cell gene mutation test  
Result: negative

Test Type: Chromosome aberration test in vitro  
Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)  
Species: Mouse  
Application Route: Ingestion  
Result: negative

### **Carcinogenicity**

Not classified based on available information.

### **Reproductive toxicity**

Not classified based on available information.

### **Components:**

#### **Citric acid monohydrate:**

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## LIMESCALE REMOVER - 5 L

Version	Revision Date:	SDS Number:	Date of last issue: 11.08.2023
5.1	27.03.2024	10688608-00011	Date of first issue: 10.08.2012

---

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rat  
Application Route: Ingestion  
Result: negative

### **2-(2-Butoxyethoxy)ethanol:**

Effects on fertility : Test Type: One-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 415  
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rat  
Application Route: Ingestion  
Result: negative

### **STOT - single exposure**

Not classified based on available information.

### **Components:**

#### **Citric acid monohydrate:**

Assessment : May cause respiratory irritation.

### **STOT - repeated exposure**

Not classified based on available information.

### **Repeated dose toxicity**

### **Components:**

#### **Sulphamidic acid:**

Species : Rat  
NOAEL : 1.000 mg/kg  
Application Route : Ingestion  
Exposure time : 90 Days  
Method : OECD Test Guideline 408

#### **Citric acid monohydrate:**

Species : Rat  
NOAEL : 4.000 mg/kg  
LOAEL : 8.000 mg/kg  
Application Route : Ingestion  
Exposure time : 10 Days

#### **2-(2-Butoxyethoxy)ethanol:**

Species : Rat  
NOAEL : 250 mg/kg  
LOAEL : 1.000 mg/kg

# SAFETY DATA SHEET

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Commission Regulation (EU) 2020/878



## LIMESCALE REMOVER - 5 L

Version	Revision Date:	SDS Number:	Date of last issue: 11.08.2023
5.1	27.03.2024	10688608-00011	Date of first issue: 10.08.2012

---

Application Route : Ingestion  
Exposure time : 90 Days  
Method : OECD Test Guideline 408

Species : Rat  
NOAEL :  $\geq 0,094$  mg/l  
Application Route : inhalation (vapour)  
Exposure time : 90 Days  
Method : OECD Test Guideline 413

Species : Rat  
NOAEL :  $\geq 2.000$  mg/kg  
Application Route : Skin contact  
Exposure time : 90 Days

### Aspiration toxicity

Not classified based on available information.

## 11.2 Information on other hazards

### Endocrine disrupting properties

#### Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Components:

#### **Sulphamidic acid:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 70,3 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 71,6 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): 33,8 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

EC10 (Desmodesmus subspicatus (green algae)): 29,5 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 :  $> 200$  mg/l

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## LIMESCALE REMOVER - 5 L

Version	Revision Date:	SDS Number:	Date of last issue: 11.08.2023
5.1	27.03.2024	10688608-00011	Date of first issue: 10.08.2012

---

Exposure time: 3 h  
Method: OECD Test Guideline 209

### **Citric acid monohydrate:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 1.535 mg/l  
aquatic invertebrates Exposure time: 24 h

### **2-(2-Butoxyethoxy)ethanol:**

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 1.300 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): > 100 mg/l  
aquatic invertebrates Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic : ErC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l  
plants Exposure time: 96 h  
Method: OECD Test Guideline 201

NOEC (Desmodesmus subspicatus (green algae)): >= 100 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC10 : > 1.995 mg/l  
Exposure time: 30 min

## 12.2 Persistence and degradability

### Components:

#### **Citric acid monohydrate:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 97 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

#### **2-(2-Butoxyethoxy)ethanol:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 85 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301C



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## LIMESCALE REMOVER - 5 L

Version	Revision Date:	SDS Number:	Date of last issue: 11.08.2023
5.1	27.03.2024	10688608-00011	Date of first issue: 10.08.2012

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### 12.3 Bioaccumulative potential

#### Components:

##### **Sulphamidic acid:**

Partition coefficient: n-octanol/water : log Pow: 0,1

##### **Citric acid monohydrate:**

Partition coefficient: n-octanol/water : log Pow: -1,72

##### **2-(2-Butoxyethoxy)ethanol:**

Partition coefficient: n-octanol/water : log Pow: 1

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

#### Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Endocrine disrupting properties

#### Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### 12.7 Other adverse effects

No data available

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities. Do not dispose of waste into sewer.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## LIMESCALE REMOVER - 5 L

Version	Revision Date:	SDS Number:	Date of last issue: 11.08.2023
5.1	27.03.2024	10688608-00011	Date of first issue: 10.08.2012

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.  
If not otherwise specified: Dispose of as unused product.

Waste Code : The following Waste Codes are only suggestions:

used product  
20 01 29, detergents containing hazardous substances

unused product  
20 01 29, detergents containing hazardous substances

uncleaned packagings  
15 01 10, packaging containing residues of or contaminated by hazardous substances

Acc. Packaging Act properly emptied packaging:  
Properly emptied, non-contaminated packaging of non-hazardous products can be supplied to a system for the collection of sales packaging.

### SECTION 14: Transport information

#### 14.1 UN number or ID number

ADN	: UN 3264
ADR	: UN 3264
RID	: UN 3264
IMDG	: UN 3264
IATA	: UN 3264

#### 14.2 UN proper shipping name

ADN	: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphamidic acid)
ADR	: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphamidic acid)
RID	: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphamidic acid)
IMDG	: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphamidic acid)
IATA	: Corrosive liquid, acidic, inorganic, n.o.s. (Sulphamidic acid)

#### 14.3 Transport hazard class(es)

	Class	Subsidiary risks
ADN	: 8	

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## LIMESCALE REMOVER - 5 L

Version	Revision Date:	SDS Number:	Date of last issue: 11.08.2023
5.1	27.03.2024	10688608-00011	Date of first issue: 10.08.2012

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**ADR** : 8  
**RID** : 8  
**IMDG** : 8  
**IATA** : 8

### 14.4 Packing group

#### ADN

Packing group : III  
Classification Code : C1  
Hazard Identification Number : 80  
Labels : 8

#### ADR

Packing group : III  
Classification Code : C1  
Hazard Identification Number : 80  
Labels : 8  
Tunnel restriction code : (E)

#### RID

Packing group : III  
Classification Code : C1  
Hazard Identification Number : 80  
Labels : 8

#### IMDG

Packing group : III  
Labels : 8  
EmS Code : F-A, S-B

#### IATA (Cargo)

Packing instruction (cargo aircraft) : 856  
Packing instruction (LQ) : Y841  
Packing group : III  
Labels : Corrosive

#### IATA (Passenger)

Packing instruction (passenger aircraft) : 852  
Packing instruction (LQ) : Y841  
Packing group : III  
Labels : Corrosive

### 14.5 Environmental hazards

#### ADN

Environmentally hazardous : no

#### ADR

Environmentally hazardous : no

#### RID

Environmentally hazardous : no

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## LIMESCALE REMOVER - 5 L

Version	Revision Date:	SDS Number:	Date of last issue: 11.08.2023
5.1	27.03.2024	10688608-00011	Date of first issue: 10.08.2012

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### IMDG

Marine pollutant : no

### 14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

### 14.7 Maritime transport in bulk according to IMO instruments

Remarks : Not applicable for product as supplied.

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## SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Conditions of restriction for the following entries should be considered:  
Number on list 75, 3

If you intend to use this product as tattoo ink, please contact your vendor.

Substance(s) or mixture(s) are listed here according to their appearance in the regulation, irrespective of their use/purpose or the conditions of the restriction. Please refer to the conditions in corresponding Regulation to determine whether an entry is applicable to the placing on the market or not.

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## LIMESCALE REMOVER - 5 L

Version	Revision Date:	SDS Number:	Date of last issue: 11.08.2023
5.1	27.03.2024	10688608-00011	Date of first issue: 10.08.2012

---

Not applicable

Water hazard class (Germany) : WGK 1 slightly hazardous to water  
Classification according to AwSV, Annex 1 (5.2)

TA Luft List (Germany) : 5.2.1: Total dust:  
Not applicable  
5.2.2: Inorganic substances in powdered form:  
Not applicable  
5.2.4: Inorganic substances in gaseous form:  
Not applicable  
5.2.5: Organic Substances:  
Not applicable  
5.2.7.1.1: Carcinogenic substance:  
Not applicable  
5.2.7.1.1: Quartz fine dust PM4:  
Not applicable  
5.2.7.1.1: Formaldehyde:  
Not applicable  
5.2.7.1.1: fibres:  
Not applicable  
5.2.7.1.2: Germ cell mutagens:  
Not applicable  
5.2.7.1.3: Substances toxic to reproduction:  
Not applicable  
5.2.7.2: Poorly degradable, easily enrichable and highly toxic  
organic substances:  
Not applicable

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial  
emissions (integrated pollution prevention and control)  
Volatile organic compounds (VOC) content: 2 %, 21,2 g/l  
Remarks: VOC content excluding water

Regulation (EC) No. : Preservation agents:  
648/2004, as amended BENZOTRIAZOLE

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

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## SECTION 16: Other information

Other information : Items where changes have been made to the previous version  
are highlighted in the body of this document by two vertical  
lines.

### Full text of H-Statements

H315 : Causes skin irritation.  
H319 : Causes serious eye irritation.  
H335 : May cause respiratory irritation.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## LIMESCALE REMOVER - 5 L

Version	Revision Date:	SDS Number:	Date of last issue: 11.08.2023
5.1	27.03.2024	10688608-00011	Date of first issue: 10.08.2012

H412 : Harmful to aquatic life with long lasting effects.

### Full text of other abbreviations

Aquatic Chronic	: Long-term (chronic) aquatic hazard
Eye Irrit.	: Eye irritation
Skin Irrit.	: Skin irritation
STOT SE	: Specific target organ toxicity - single exposure
2006/15/EC	: Europe. Indicative occupational exposure limit values
DE DFG MAK	: Germany. MAK BAT Annex IIa
DE TRGS 900	: Germany. TRGS 900 - Occupational exposure limit values.
2006/15/EC / TWA	: Limit Value - eight hours
2006/15/EC / STEL	: Short term exposure limit
DE DFG MAK / MAK	: MAK value
DE TRGS 900 / AGW	: Time Weighted Average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECl - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

### Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## LIMESCALE REMOVER - 5 L

Version	Revision Date:	SDS Number:	Date of last issue: 11.08.2023
5.1	27.03.2024	10688608-00011	Date of first issue: 10.08.2012

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### Classification of the mixture:

Skin Irrit. 2	H315
Eye Dam. 1	H318

### Classification procedure:

Based on product data or assessment
Based on product data or assessment

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

DE / EN