

according to Regulation (EC) No 1907/2006

**BriteGuard Limescale Remover**

Revision date: 27.09.2017

Product code: BO5885001

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

BriteGuard Limescale Remover

**Further trade names**

BO 5881001, 1000 ml

BO 5885001; 5000 ml

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Cleaning agent

**1.3. Details of the supplier of the safety data sheet**

Company name:	BOHLE AG	
Street:	Dieselstr. 10	
Place:	D-42781 Haan	
Telephone:	+49 2129 5568-0	Telefax: +49 2129 5568-282
e-mail:	info@bohle.de	
Contact person:	Klaus Nehren	Telephone: +49 2129 5568-276
e-mail:	MSDS@bohle.de	
Internet:	www.bohle-group.com	
Responsible Department:	Chemie	

**1.4. Emergency telephone number:** Emergency CONTACT (24-Hour-Number):GBK GmbH +49 (0)6132-84463

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Hazard Statements:

Causes skin irritation.

Causes serious eye irritation.

**2.2. Label elements****Regulation (EC) No. 1272/2008****Signal word:** Warning**Pictograms:****Hazard statements**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

**Precautionary statements**

P280 Wear protective gloves and eye/face protection.

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

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

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**SECTION 3: Composition/information on ingredients**
**3.2. Mixtures**
**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
5949-29-1	Citric acid monohydrate			<10 %
	Eye Irrit. 2; H319			
79-33-4	2-Hydroxypropanoic acid			<5 %
	Skin Irrit. 2, Eye Dam. 1; H315 H318			
97489-15-1	Sulfonic acids, C14-17-sec-alkane, sodium salts			<5 %
	Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Aquatic Chronic 3; H302 H315 H318 H412			

Full text of H and EUH statements: see section 16.

**Labelling for contents according to Regulation (EC) No 648/2004**

&lt; 5 % non-ionic surfactants, &lt; 5 % anionic surfactants.

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

Take off immediately all contaminated clothing.  
Remove affected person from the danger area and lay down.

**After inhalation**

Provide fresh air.  
If unconscious place in recovery position and seek medical advice.  
If symptoms persist, call a physician.

**After contact with skin**

Wash with plenty of water.  
If skin irritation persists, call a physician.

**After contact with eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing. If symptoms persist, call a physician.

**After ingestion**

Rinse mouth. Let water be drunk in little sips (dilution effect).  
Do NOT induce vomiting. Call a doctor.  
Do not allow a neutralisation agent to be drunk.

**SECTION 5: Firefighting measures**
**5.1. Extinguishing media**
**Suitable extinguishing media**

 Carbon dioxide (CO<sub>2</sub>), Extinguishing powder, Water spray jet, alcohol resistant foam

**Unsuitable extinguishing media**

High power water jet

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**5.2. Special hazards arising from the substance or mixture**

In case of fire may be liberated: Carbon monoxide, Carbon dioxide  
Nitrogen oxides (NO<sub>x</sub>)

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes.

**Additional information**

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

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

Provide adequate ventilation. Wear personal protective equipment.

**6.2. Environmental precautions**

Do not empty into drains.

**6.3. Methods and material for containment and cleaning up**

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

**6.4. Reference to other sections**

SECTION 7: Handling and storage  
SECTION 8: Exposure controls/personal protection  
SECTION 13: Disposal considerations

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

Provide sufficient air exchange and/or exhaust in work rooms.  
Provide eye shower and label its location conspicuously

**Advice on protection against fire and explosion**

Usual measures for fire prevention.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep only in the original container in a cool, well-ventilated place.  
Protect against direct sunlight.  
Always close containers tightly after the removal of product.

**Advice on storage compatibility**

Keep away from food, drink and animal feedingstuffs.  
Do not store together with: Alkali (lye)

**Further information on storage conditions**

storage temperature: -5°C - 40°C

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters**

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**DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
97489-15-1	Sulfonic acids, C14-17-sec-alkane, sodium salts			
	Consumer DNEL, long-term	oral		7,1 mg/kg bw/day
	Worker DNEL, acute	dermal		2,8 mg/kg bw/day
	Consumer DNEL, acute	dermal		2,8 mg/kg bw/day
	Worker DNEL, long-term	dermal		5 mg/kg bw/day
	Consumer DNEL, long-term	dermal		3,57 mg/kg bw/day
	Worker DNEL, long-term	inhalation		35 mg/m <sup>3</sup>
	Consumer DNEL, long-term	inhalation		12,4 mg/m <sup>3</sup>

**8.2. Exposure controls**

**Appropriate engineering controls**

Even in case of a full release, due to the small amount of substances present, it is not expected that exposure limits will be reached. However it is the duty of the user to verify this and follow given exposure limits at the workplace.

**Protective and hygiene measures**

Provide adequate ventilation. Do not breathe vapour/aerosol.  
 Avoid contact with skin, eyes and clothing. Take off all contaminated clothing immediately.  
 Keep away from food, drink and animal feedingstuffs. When using do not eat or drink.  
 Do not smoke. Wash hands before breaks and at the end of workday.

**Eye/face protection**

safety glasses with side-shields conforming to EN166

**Hand protection**

The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.  
 Recommended material: Butyl caoutchouc (butyl rubber), FKM (fluoro rubber), NBR (Nitrile rubber), CR (polychloroprene, chloroprene rubber)  
 Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).  
 By short-term hand contact: Disposable gloves Dermatril BO5007510 / BO5007516 / BO5007519 / BO5007520

**Skin protection**

impervious clothing DIN EN 13034  
 Chemical resistant safety shoes

**Respiratory protection**

In case of inadequate ventilation wear respiratory protection. Combination filtering device (EN 14387)  
 Recommended Filter type: A-P2

**Environmental exposure controls**

Do not allow to enter into surface water or drains.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Physical state: liquid  
 Colour: red  
 Odour: aromatic

**Test method**

pH-Value (at 20 °C): 2,5

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**Changes in the physical state**

Initial boiling point and boiling range: 100 °C

**Flammability**

Non-flammable.

**Auto-ignition temperature**

not auto-flammable

Vapour pressure:  
(at 20 °C) 23 hPaVapour pressure:  
(at 20 °C) 1,09 hPa

Solvent content: 0%

**9.2. Other information**

Solid content: 7,5%

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

None under normal processing.

**10.2. Chemical stability**

No decomposition if used as directed.

**10.3. Possibility of hazardous reactions**No known hazardous reactions.  
Exothermic reaction with: Alkali (lye)  
Exothermic reaction with strong acids.**10.4. Conditions to avoid**

None known.

**10.5. Incompatible materials**

None known.

**10.6. Hazardous decomposition products**

None known.

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

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**Acute toxicity**

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
5949-29-1	Citric acid monohydrate					
	oral	LD50 mg/kg	5400	Mouse		
	dermal	LD50 mg/kg	>2000	Rat		
79-33-4	2-Hydroxypropanoic acid					
	oral	LD50 mg/kg	3730	Rat		
	dermal	LD50 mg/kg	>2000	Rabbit		
97489-15-1	Sulfonic acids, C14-17-sec-alkane, sodium salts					
	oral	LD50 mg/kg	>2000	Rat		
	dermal	LD50 mg/kg	>2000	Mouse		

**SECTION 12: Ecological information**
**12.1. Toxicity**

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
79-33-4	2-Hydroxypropanoic acid					
	Acute crustacea toxicity	EC50	240 mg/l	48 h	daphnia	
97489-15-1	Sulfonic acids, C14-17-sec-alkane, sodium salts					
	Acute fish toxicity	LC50 mg/l	1-10	96 h		OECD 203
	Acute algae toxicity	ErC50	>61 mg/l	72 h		OECD 201
	Acute crustacea toxicity	EC50 mg/l	9,81	48 h	Daphnia magna (Big water flea)	OECD 202

**SECTION 13: Disposal considerations**
**13.1. Waste treatment methods**
**Advice on disposal**

In accordance with local and national regulations.

**Contaminated packaging**

Non-contaminated packages may be recycled. Cleaning agent: Water (with cleaning agent)

**SECTION 14: Transport information**
**Land transport (ADR/RID)**
**14.2. UN proper shipping name:**

Not dangerous goods in the meaning of ADR/RID, ADNR, IMDG-Code, ICAO/IATA-DGR

**SECTION 15: Regulatory information**
**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Safety Data Sheet**

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**National regulatory information****SECTION 16: Other information****Relevant H and EUH statements (number and full text)**

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H412	Harmful to aquatic life with long lasting effects.

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*