

# Safety Data Sheet

according to UK REACH Regulation

## BetoZem Ex S

Revision date: 15.03.2022

Product code:

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

#### 1.1. Product identifier

BetoZem Ex S

UFI: 0820-A0QK-W00D-16W7

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

##### Use of the substance/mixture

Cleaning agent, acidic

##### Uses advised against

Any non-intended use.

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

##### Manufacturer

Company name:	Schaich Chemie und Bautenschutz GmbH	
Street:	Ficht 8	
Place:	D-94107 Untergriesbach	
Telephone:	+49(0)8593 93 96 207	Telefax: +49(0)8593 93 96 206
e-mail:	info@schaich-chemie.de	
Internet:	www.schaich-chemie.de	
Responsible Department:	+49 (0)8593 9396207 (8:00-16:00)	

##### Supplier

Company name:	Stein & Co. GmbH
Street:	Wirtschaftspark Straße 3/9
Place:	A-4482 Ennsdorf

**1.4. Emergency telephone number:** +49 (0)8593 9396207 (8:00-13:00)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GB CLP Regulation

Met. Corr. 1; H290  
Skin Corr. 1; H314  
Eye Dam. 1; H318  
STOT SE 3; H335

Full text of hazard statements: see SECTION 16.

#### 2.2. Label elements

##### GB CLP Regulation

##### Hazard components for labelling

hydrochloric acid ... %

**Signal word:** Danger**Pictograms:****Hazard statements**

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

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**Precautionary statements**

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

**2.3. Other hazards**

For information or further instructions, see also section 11 or 12.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures****Chemical characterization**

in aqueous solution

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
7647-01-0	Hydrochloric acid ... %			15 - < 20 %
	231-595-7	017-002-01-X	01-2119484862-27	
	Met. Corr. 1, Skin Corr. 1B, STOT SE 3; H290 H314 H335			

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

**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
7647-01-0	231-595-7	Hydrochloric acid ... %	15 - < 20 %
	Skin Corr. 1B; H314: >= 25 - 100 Skin Irrit. 2; H315: >= 10 - < 25 Eye Irrit. 2; H319: >= 10 - < 25 STOT SE 3; H335: >= 10 - 100		

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

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

**Further Information**

Product does not contain listed SVHC substances &gt; 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH)

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

**After inhalation**

In case of accident by inhalation: remove casualty to fresh air and keep at rest. In case of respiratory tract irritation, consult a physician. In the case of lung irritation: Primary treatment using corticoide spray, eg. Auxiloson spray, Pulmicort-dosage-spray. (Auxiloson and Pulmicort are registered trademarks).

**After contact with skin**

Take off immediately all contaminated clothing. After contact with skin, wash immediately with: Water and soap. In case of skin irritation, seek medical treatment.

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### After contact with eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of eye irritation consult an ophthalmologist.

### After ingestion

Rinse mouth thoroughly with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person or a person with cramps. Call a physician immediately.

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

refer to section 2 and 11.

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

No active charcoal administration (as endoscopy will be required)!

First Aid, decontamination, treatment of symptoms.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### Suitable extinguishing media

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

#### Unsuitable extinguishing media

High power water jet.

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

Can be released in case of fire: Carbon dioxide (CO<sub>2</sub>), Carbon monoxide, Hydrogen chloride (HCl)

### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

### Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Use water spray jet to protect personnel and to cool endangered containers.

## SECTION 6: Accidental release measures

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

#### General advice

Do not breathe vapour/aerosol. Avoid contact with skin, eyes and clothes.

#### For non-emergency personnel

Wear personal protection equipment (refer to section 8).

#### For emergency responders

No special measures are necessary.

### 6.2. Environmental precautions

Do not allow to enter into surface water or drains. Discharge into the environment must be avoided.

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

#### For containment

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.

#### For cleaning up

Clean contaminated objects and areas thoroughly observing environmental regulations.

#### Other information

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.

Clean contaminated objects and areas thoroughly observing environmental regulations.

### 6.4. Reference to other sections

Safe handling: see section 7

Disposal: see section 13

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

Wear suitable protective clothing. ( See section 8. )  
 Conditions to avoid: aerosol or mist formation  
 Avoid contact with skin, eyes and clothes.

**Advice on protection against fire and explosion**

Usual measures for fire prevention.

**Advice on general occupational hygiene**

The usual precautions for handling chemicals should be considered.  
 Always close containers tightly after the removal of product. Do not eat, drink, smoke or sneeze at the workplace. Wash hands before breaks and after work. Remove contaminated clothing immediately and dispose off safely. Wash contaminated clothing prior to re-use.

**Further information on handling**

Avoid contact with skin, eyes and clothes. Do not breathe vapour/aerosol.  
 General protection and hygiene measures: refer to chapter 8

**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. Store locked up.  
 Unsuitable container/equipment material: Metal

**Hints on joint storage**

Do not store together with: Explosives. Oxidizing solids. Oxidizing liquids. Radioactive substances. Infectious substances.

**Further information on storage conditions**

Protect against: UV-radiation/sunlight., Heat, Humidity

**7.3. Specific end use(s)**

See section 1.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
7647-01-0	Hydrogen chloride (gas and aerosol mists)	1	2		TWA (8 h)	WEL
		5	8		STEL (15 min)	WEL

**DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
7647-01-0	Hydrochloric acid ... %			
Worker DNEL, acute		inhalation	local	8 mg/m <sup>3</sup>
Worker DNEL, long-term		inhalation	local	15 mg/m <sup>3</sup>

**8.2. Exposure controls**

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**Appropriate engineering controls**

Provide adequate ventilation as well as local exhaustion at critical locations.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Suitable eye protection: Tightly sealed safety glasses. BS/EN 166

**Hand protection**

Wear suitable gloves. BS EN 374

Suitable material:

Butyl rubber. (0,5 mm) (Breakthrough time  $\geq$  8h)FKM (fluororubber). (0,4 mm) (Breakthrough time  $\geq$  8h)CR (polychloroprenes, Chloroprene rubber). (0,5 mm) (Breakthrough time  $\geq$  2h)

Before using check leak tightness / impermeability. In the case of wanting to use the gloves again, clean them before taking off and air them well.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

**Skin protection**

Protective clothing. Protective apron (acid-resistant)

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500 (D).

**Respiratory protection**

With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory protection necessary at:

Exceeding exposure limit values

Insufficient ventilation

Generation/formation of aerosols

Suitable respiratory protective equipment: Combination filtering device (EN 14387) Type: EP-2/3

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

**Environmental exposure controls**

This material and its container must be disposed of in a safe way.

The product is an acid. Before discharge into sewage plants the product normally needs to be neutralised.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state:	liquid
Colour:	red
Odour:	stinging

**Changes in the physical state**

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	85 °C
Sublimation point:	No information available.
Softening point:	No information available.
Pour point:	not determined
Flash point:	not determined

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**Flammability**

Solid/liquid: No information available.  
 Gas: No information available.

**Explosive properties**

none

Lower explosion limits: not determined  
 Upper explosion limits: not determined  
 Auto-ignition temperature: not determined

**Self-ignition temperature**

Solid: No information available.  
 Gas: No information available.

Decomposition temperature: not determined

pH-Value: 2

Viscosity / dynamic: not determined

Viscosity / kinematic: not determined

Flow time: not determined

Water solubility: very soluble

**Solubility in other solvents**

No information available.

Partition coefficient n-octanol/water: No information available.

Vapour pressure:  
 (at 20 °C) 23 hPa

Vapour pressure:  
 (at 50 °C) No information available.

Density (at 20 °C): 1,095 g/cm<sup>3</sup>

Bulk density: No information available.

Relative vapour density: not determined

**9.2. Other information****Information with regard to physical hazard classes**

Sustaining combustion: No data available

Oxidizing properties  
 none

**Other safety characteristics**

Solvent separation test: No information available.

Solvent content: No information available.

Solid content: not determined

Evaporation rate: No information available.

**Further Information**

No information available.

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

May be corrosive to metals.

**10.2. Chemical stability**

The product is chemically stable under recommended conditions of storage, use and temperature.

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**10.3. Possibility of hazardous reactions**

Violent reaction with: alkali

**10.4. Conditions to avoid**

Protect against direct sunlight.

Keep away from heat.

**10.5. Incompatible materials**

Materials to avoid: Substances which form flammable gases when in contact with water. Organic peroxides.

Inflammatory substances. Alkali metals. Oxidizing agents. alkali. Strong acid

**10.6. Hazardous decomposition products**Can be released in case of fire: Carbon dioxide (CO<sub>2</sub>), Carbon monoxide Hydrogen chloride (HCl)**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in GB CLP Regulation****Toxicokinetics, metabolism and distribution**

No information available.

**Acute toxicity**

Based on available data, the classification criteria are not met.

**Irritation and corrosivity**

Causes severe skin burns and eye damage.

Causes serious eye damage.

**Sensitising effects**

Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Based on available data, the classification criteria are not met.

hydrochloric acid ... % (CAS No. 7647-01-0):

In vitro mutagenicity/genotoxicity:

Method: mammalian chromosome aberration test (in vitro)

Result: positive.

Method: mitotic recombination in *Saccharomyces cerevisiae*

Result: negative.

Carcinogenicity:

Exposure time: 128 weeks

Species: Rat.

Method: no guideline followed

Result: NOAEL = &lt;10 ppm

Literature information: ECHA Dossier

**STOT-single exposure**

May cause respiratory irritation. (Hydrochloric acid ... %)

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

hydrochloric acid ... % (CAS No. 7647-01-0):

Subchronic inhalation toxicity:

Exposure time: 90d

Species: Rat.

Method: OECD Guideline 413

Result: NOAEL = 20 ppm

Literature information: ECHA Dossier

**Aspiration hazard**

Based on available data, the classification criteria are not met.

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**Specific effects in experiment on an animal**

No information available.

**11.2. Information on other hazards****Endocrine disrupting properties**

No information available.

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

The product has not been tested.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
7647-01-0	Hydrochloric acid ... %					
	Acute fish toxicity	LC50 mg/l	3,25	96 h	Lepomis macrochirus	ECHA Dossier
	Acute algae toxicity	ErC50	4,7 mg/l	72 h	Chlorella vulgaris	ECHA Dossier
	Acute crustacea toxicity	EC50 mg/l	4,92	48 h	Daphnia magna	ECHA Dossier
	Acute bacteria toxicity	(EC50 mg/l)	(>=5)	3 h	activated sludge	ECHA Dossier

**12.2. Persistence and degradability**

The product has not been tested.

**12.3. Bioaccumulative potential**

No indication of bioaccumulation potential.

**12.4. Mobility in soil**

No information available.

**12.5. Results of PBT and vPvB assessment**

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

The aforementioned statement applies to substances contained in the product with a minimum content of 0.1 %.

**12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

The aforementioned statement applies to substances contained in the product with a minimum content of 0.1 %.

**12.7. Other adverse effects**

No information available.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Dispose of waste according to applicable legislation. Consult the local waste disposal expert about waste disposal. Non-contaminated packages may be recycled. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Control report for waste code/ waste marking according to (EWC) European Waste Catalogue:

**List of Wastes Code - residues/unused products**

200129 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); detergents containing hazardous substances; hazardous waste



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**List of Wastes Code - used product**

200129 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); detergents containing hazardous substances; hazardous waste

**List of Wastes Code - contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

**Contaminated packaging**

Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information****Land transport (ADR/RID)**

**14.1. UN number or ID number:** UN 1789  
**14.2. UN proper shipping name:** HYDROCHLORIC ACID  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
 Hazard label: 8



Classification code: C1  
 Special Provisions: 520  
 Limited quantity: 5 L  
 Excepted quantity: E1  
 Transport category: 3  
 Hazard No: 80  
 Tunnel restriction code: E

**Inland waterways transport (ADN)**

**14.1. UN number or ID number:** UN 1789  
**14.2. UN proper shipping name:** HYDROCHLORIC ACID  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
 Hazard label: 8



Classification code: C1  
 Special Provisions: 520  
 Limited quantity: 5 L  
 Excepted quantity: E1

**Marine transport (IMDG)**

**14.1. UN number or ID number:** UN 1789  
**14.2. UN proper shipping name:** HYDROCHLORIC ACID  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
 Hazard label: 8

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Marine pollutant:	NO
Special Provisions:	223
Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-A, S-B

**Air transport (ICAO-TI/IATA-DGR)**

<b>14.1. UN number or ID number:</b>	UN 1789
<b>14.2. UN proper shipping name:</b>	HYDROCHLORIC ACID
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III
Hazard label:	8



Special Provisions:	A3 A803
Limited quantity Passenger:	1 L
Passenger LQ:	Y841
Excepted quantity:	E1
IATA-packing instructions - Passenger:	852
IATA-max. quantity - Passenger:	5 L
IATA-packing instructions - Cargo:	856
IATA-max. quantity - Cargo:	60 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS:	No
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**14.6. Special precautions for user**

Safe handling: see section 7

Personal protection equipment: see section 8

**14.7. Maritime transport in bulk according to IMO instruments**

not relevant

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

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

2010/75/EU (VOC): No information available.

2004/42/EC (VOC): No information available.

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

**Additional information**

Safety Data Sheet according to UK-REACH Regulation

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

UK REACH Appendix XVII, No (mixture): 3

**National regulatory information**

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
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Water hazard class (D): 1 - slightly hazardous to water

**15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information****Changes**

Rev. 1,0; Initial release: 09.10.2015

Rev. 2,0; Revision: 22.07.2019

Rev. 3,0; Revision: 15.03.2022

**Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

CAS: Chemical Abstracts Service

CLP: Classification, Labelling and Packaging of substances and mixtures

DNEL: Derived No Effect Level

d: day(s)

EINECS: European INventory of Existing Commercial chemical Substances

ELINCS: European List of Notified Chemical Substances

ECHA: European Chemicals Agency

EWC: European Waste Catalogue

IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

h: hour

LOAEL: Lowest observed adverse effect level

LOAEC: Lowest observed adverse effect concentration

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

NOAEL: No observed adverse effect level

NOAEC: No observed adverse effect concentration

NLP: No-Longer Polymers

N/A: not applicable

OECD: Organisation for Economic Co-operation and Development

PNEC: predicted no effect concentration

PBT: Persistent bioaccumulative toxic

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail )

REACH: Registration, Evaluation, Authorisation of Chemicals

SVHC: substance of very high concern

TRGS: Technische Regeln für Gefahrstoffe

UN: United Nations

VOC: Volatile Organic Compounds

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**Classification for mixtures and used evaluation method according to GB CLP Regulation**

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Skin Corr. 1; H314	On basis of test data
Eye Dam. 1; H318	On basis of test data
STOT SE 3; H335	Calculation method

**Relevant H and EUH statements (number and full text)**

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.

**Further Information**

Classification according to GHS [UK CLP] - Classification procedure:

Health hazards: Calculation method.

Environmental hazards: Calculation method.

Physical hazards: On basis of test data and / or calculated and / or estimated.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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