Safety data sheet
according to Regulation (EC) No 1907/2006, Annex II

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

1.1 Product identifier

UNIVERSAL CLEANER 1000 ML
Art.: 9028373

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

Relevant identified uses of the substance or mixture:
Universal cleaner
Uses advised against:
No information available at present.

1.3 Details of the supplier of the safety data sheet

BTI Befestigungstechnik GmbH & Co. KG
Salzstr. 51
74653 Ingelfingen
Tel.: +49 7940 141 141
Fax: +49 7940 141 9141
Email: info@bti.de
Homepage: www.bti.de

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

1.4 Emergency telephone number

Emergency information services / official advisory body:

Telephone number of the company in case of emergencies:
+49 (0) 700 / 24 112 112 (BRC)
+1 872 5888271 (BRC)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP)

Hazard class	Hazard category	Hazard statement
Eye Dam.	1	H318-Causes serious eye damage.
Met. Corr.	1	H290-May be corrosive to metals.
Skin Corr.	1	H314-Causes severe skin burns and eye damage.

2.2 Label elements

Labeling according to Regulation (EC) 1272/2008 (CLP)

Danger

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

P101-If medical advice is needed, have product container or label at hand. P102-Keep out of reach of children. P260-Do not breathe vapours or spray. P280-Wear protective gloves / protective clothing / eye protection / face protection.
P301+P330+P331-IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353-IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310-Immediately call a POISON CENTER / doctor.
P405-Store locked up.
P501-Dispose of contents / container to an approved waste disposal facility.

Alcohols, C9-11, ethoxylated
Alcohols, C12-14, ethoxylated, sulfates, sodium salts
Disodium metasilicate, pentahydrate

2.3 Other hazards
The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).
The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).
The mixture does not contain any substance with endocrine disrupting properties (< 0,1 %).

SECTION 3: Composition/information on ingredients

3.1 Substances
n.a.
3.2 Mixtures

Alcohols, C9-11, ethoxylated	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	---
CAS	68439-46-3
content %	1-<5
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Acute Tox. 4, H302 Eye Dam. 1, H318

2-Butoxyethanol	**Substance for which an EU exposure limit value applies.**
Registration number (REACH)	01-2119475108-36-XXXX
Index	603-014-00-0
EINECS, ELINCS, NLP, REACH-IT List-No.	203-905-0
CAS	111-76-2
content %	1-<5
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319
Specific Concentration Limits and ATE	ATE (oral): 1200 mg/kg

Disodium metasilicate, pentahydrate	
Registration number (REACH)	01-2119449811-37-XXXX
Index	014-010-00-8
EINECS, ELINCS, NLP, REACH-IT List-No.	229-912-9
CAS	10213-79-3
content %	1-<5
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Met. Corr. 1, H290 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335

Alcohols, C12-14, ethoxylated, sulfates, sodium salts	
Registration number (REACH)	01-2119488639-16-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	500-234-8
CAS	68891-38-3
content %	1-<5
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 3, H412
Specific Concentration Limits and ATE	Eye Dam. 1, H318: >=10 % Eye Irrit. 2, H319: >=5 %

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.
The substances named in this section are given with their actual, appropriate classification!
For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

SECTION 4: First aid measures

4.1 Description of first aid measures

First-aiders should ensure they are protected!
Never pour anything into the mouth of an unconscious person!

Inhalation

Remove person from danger area.
Supply person with fresh air and consult doctor according to symptoms.

Skin contact
Wash thoroughly using copious water - remove contaminated clothing immediately. If skin irritation occurs (redness etc.), consult doctor.
Eye contact
Remove contact lenses.
Wash thoroughly for several minutes using copious water - call doctor immediately, have Data Sheet available.
Ingestion
Rinse the mouth thoroughly with water.
Do not induce vomiting - give copious water to drink. Consult doctor immediately.
4.2 Most important symptoms and effects, both acute and delayed
If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.
The following may occur:
Risk of serious damage to eyes.
Corrosive burns on skin as well as mucous membrane possible.
Gastrointestinal disturbances
Oesophageal perforation
Gastric perforation
In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.
4.3 Indication of any immediate medical attention and special treatment needed
n.c.
Note pH value.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media
Adapt to the nature and extent of fire.
Water jet spray
Foam
CO2
Unsuitable extinguishing media
High volume water jet
5.2 Special hazards arising from the substance or mixture
In case of fire the following can develop:
Oxides of carbon
Oxides of sulphur
Oxides of nitrogen
Aldehydes
Ketones
Oxides of nitrogen
Toxic gases
Fume
5.3 Advice for firefighters
For personal protective equipment see Section 8.
In case of fire and/or explosion do not breathe fumes.
Protective respirator with independent air supply.
According to size of fire
Full protection, if necessary.
Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

In case of spillage or accidental release, wear personal protective equipment as specified in section 8 to prevent contamination.
Ensure sufficient ventilation, remove sources of ignition.
Avoid dust formation with solid or powder products.
Leave the danger zone if possible, use existing emergency plans if necessary.
Ensure sufficient supply of air.
Avoid contact with eyes or skin.
If applicable, caution - risk of slipping.

6.1.2 For emergency responders

See section 8 for suitable protective equipment and material specifications.

6.2 Environmental precautions

If leakage occurs, dam up.
Resolve leaks if this possible without risk.
Prevent surface and ground-water infiltration, as well as ground penetration.
Prevent from entering drainage system.
If accidental entry into drainage system occurs, inform responsible authorities.

6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth, sawdust) and dispose of according to Section 13.
Flush residue using copious water.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe handling

7.1.1 General recommendations

Ensure good ventilation.
Avoid inhalation, and contact with eyes or skin.
Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
Observe directions on label and instructions for use.
Use working methods according to operating instructions.

7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.
Store product closed and only in original packing.
Not to be stored in gangways or stair wells.
Do not use alkali sensitive materials.
Do not store with acids.
Unsuitable material:
Metals

7.3 Specific end use(s)
No information available at present.
Cleaning product

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

GB	**Chemical Name**	2-Butoxyethanol	Content %:1-<5
WEL-TWA: 25 ppm (123 mg/m3) (WEL), 20 ppm (98 mg/m3) (EU)	WEL-STEL: 50 ppm (246 mg/m3) (WEL, EU)	---	
Monitoring procedures:	- Compur - KITA-190 U(C) (548 873) DFG Meth.-Nr. 2 (D) (Loesungsmittelgemische 3), DFG (E) (Solvent mixtures 3) - 2014, 2002 - EU project - BC/CEN/ENTR/000/2002-16 card 32-2 (2004) - NIOSH 1403 (ALCOHOLS IV) - 2003 NIOSH 2549 (VOLATILE ORGANIC COMPOUNDS - (SCREENING)) - 1996 - OSHA 83 (2-Butoxyethanol (Butyl Cellosolve)) - 1990		
BMGV: 240 mmol butoxyacetic acid/mol creatinine in urine, post shift (BMGV)	Other information: Sk (WEL)		

2-Butoxyethanol						
Area of application	**Exposure route / Environmental compartment**	**Effect on health**	**Descriptor**	**Value**	**Unit**	**Note**
	Environment - freshwater		PNEC	8,8	mg/l	
	Environment - marine		PNEC	0,88	mg/l	
	Environment - sediment, freshwater		PNEC	34,6	mg/kg dw	
	Environment - soil		PNEC	2,8	mg/kg dw	
	Environment - sewage treatment plant		PNEC	463	mg/l	
	Environment - sediment, marine		PNEC	3,46	mg/kg dw	
	Environment - sporadic (intermittent) release		PNEC	9,1	mg/l	
	Environment - soil		PNEC	2,33	mg/kg	
	Environment - oral (animal feed)		PNEC	20	mg/kg	
Consumer	Human - inhalation	Long term, local effects	DNEL	147	mg/m3	
Consumer	Human - dermal	Short term, systemic effects	DNEL	44,5	mg/kg bw/d	

Consumer	Human - inhalation	Short term, systemic effects	DNEL	426	mg/m3	
Consumer	Human - oral	Short term, systemic effects	DNEL	13,4	mg/kg bw/d	
Consumer	Human - inhalation	Short term, local effects	DNEL	123	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	38	mg/kg bw/d	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	49	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	3,2	mg/kg bw/d	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	89	mg/kg bw/d	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	663	mg/m3	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	246	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	75	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	98	mg/m3	

Disodium metasilicate, pentahydrate						
Area of application	**Exposure route / Environmental compartment**	**Effect on health**	**Descriptor**	**Value**	**Unit**	**Note**
	Environment - groundwater		PNEC	7,5	mg/l	
	Environment - marine		PNEC	1	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	7,5	mg/l	
	Environment - sewage treatment plant		PNEC	1000	mg/l	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	1,55	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	0,74	mg/kg bw/day	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,74	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	6,22	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	1,49	mg/kg bw/day	

Alcohols, C12-14, ethoxylated, sulfates, sodium salts

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,24	mg/l	
	Environment - periodic release		PNEC	0,13	mg/l	
	Environment - marine		PNEC	0,024	mg/l	
	Environment - sediment, freshwater		PNEC	5,45	mg/kg dry weight	
	Environment - sediment, marine		PNEC	0,545	mg/kg dry weight	
	Environment - sewage treatment plant		PNEC	10000	mg/l	
	Environment - soil		PNEC	0,946	mg/kg dry weight	
	Environment - sporadic (intermittent) release		PNEC	0,071	mg/l	
	Environment - sediment, freshwater	Short term	PNEC	0,917	mg/kg	
	Environment - sediment, marine	Short term	PNEC	0,092	mg/kg	
	Environment - soil	Short term	PNEC	7,5	mg/kg	
Consumer	Human - dermal	Long term, local effects	DNEL	0,079	mg/cm2	
Consumer	Human - oral	Long term, systemic effects	DNEL	15	mg/kg bw/day	
Consumer	Human - dermal	Long term, systemic effects	DNEL	1650	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	52	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	2750	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	175	mg/m3	
Workers / employees	Human - dermal	Long term, local effects	DNEL	0,132	mg/cm2	

GB WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany).
(8) = Inhalable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (9) = Respirable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (11) = Inhalable fraction (Directive 2004/37/CE). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (Directive 2004/37/CE). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).
(8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU).

(10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.
(13) = The substance can cause sensitisation of the skin and of the respiratory tract (Directive 2004/37/CE), (14) = The substance can cause sensitisation of the skin (Directive 2004/37/CE).

8.2 Exposure controls
8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.
If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.
Applies only if maximum permissible exposure values are listed here.
Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.
These are specified by e.g. EN 14042.
EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

8.2.2 Individual protection measures, such as personal protective equipment
General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:
Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:
Use alkali resistant protective gloves (EN ISO 374).
If applicable
Protective gloves made of butyl (EN ISO 374).
Minimum layer thickness in mm:
0,7
Permeation time (penetration time) in minutes:
> 480
The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.
The recommended maximum wearing time is 50% of breakthrough time.
Protective PVC gloves (EN ISO 374).
Protective Viton® / fluoroelastomer gloves (EN ISO 374).
Protective hand cream recommended.

Skin protection - Other:
Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:
If OES or MEL is exceeded.

Gas mask filter A (EN 14387), code colour brown
Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:
If applicable, these are included in the individual protective measures (eye/face protection, skin protection, respiratory protection).

Additional information on hand protection - No tests have been performed.
In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.
Selection of materials derived from glove manufacturer's indications.
Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.
Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.
In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.
The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls
No information available at present.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Yellow
Odour:	Lemon
Melting point/freezing point:	There is no information available on this parameter.
Boiling point or initial boiling point and boiling range:	100 °C (There is no information available on this parameter.)
Flammability:	Not combustible.
Lower explosion limit:	There is no information available on this parameter.
Upper explosion limit:	There is no information available on this parameter.
Flash point:	There is no information available on this parameter.
Auto-ignition temperature:	n.a.
Decomposition temperature:	There is no information available on this parameter.
pH:	13 (20°C)
Kinematic viscosity:	There is no information available on this parameter.
Solubility:	Soluble
Partition coefficient n-octanol/water (log value):	Does not apply to mixtures.
Vapour pressure:	There is no information available on this parameter.
Density and/or relative density:	1,03 g/cm3 (20°C)
Relative vapour density:	There is no information available on this parameter.
Particle characteristics:	Does not apply to liquids.

9.2 Other information

Explosives:	Product is not explosive.
Oxidising liquids:	No

SECTION 10: Stability and reactivity

10.1 Reactivity
See also Subsection 10.2 to 10.6.
Contact with strong acids leads to strong exothermic reaction.
Corrosive to metals.
10.2 Chemical stability
See also Subsection 10.1 to 10.6.
Stable with proper storage and handling.
10.3 Possibility of hazardous reactions
See also Subsection 10.1 to 10.6.
Exothermic reaction possible with:
Acids
Peroxides
Oxidizing agents
10.4 Conditions to avoid
See also section 7.
10.5 Incompatible materials
See also section 7.
Avoid contact with strong acids.
Avoid contact with alkali sensitive materials.
Metals
Acids
Oxidizing agents
Peroxides
10.6 Hazardous decomposition products
See also Subsection 10.1 to 10.5.
See also section 5.2
No decomposition when used as directed.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Possibly more information on health effects, see Section 2.1 (classification).

UNIVERSAL CLEANER 1000 ML Art.: 9028373						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:	ATE	>2000	mg/kg			calculated value
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:	ATE	>20	mg/l/4h			calculated value, Vapours
Acute toxicity, by inhalation:	ATE	>5	mg/l/4h			calculated value, Aerosol
Skin corrosion/irritation:						n.d.a.

Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.

Alcohols, C9-11, ethoxylated						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:	LD50	1378	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	Analogous conclusion
Acute toxicity, by inhalation:	LC50	>20,1	mg/l/4h			
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Risk of serious damage to eyes., Analogous conclusion
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitizising
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAEL	250	mg/kg			

2-Butoxyethanol						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:	ATE	1200	mg/kg			
Acute toxicity, by dermal route:	LD50	2275	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	

Acute toxicity, by inhalation:	LC50	10-20	mg/l/4h	Rat		Vapours
Skin corrosion/irritation:				Rabbit	Regulation (EC) 440/2008 B.4 (DERMAL IRRITATION/CORROSION)	Skin Irrit. 2, Product removes fat.
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Irrit. 2
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:					OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Carcinogenicity:				Rat	OECD 451 (Carcinogenicity Studies)	Negative
Carcinogenicity:	NOAEC	125	ppm	Mouse	OECD 451 (Carcinogenicity Studies)	Negative
Aspiration hazard:						No

Symptoms:						acidosis, ataxia, breathing difficulties, respiratory distress, drowsiness, unconsciousness, annoyance, coughing, headaches, gastrointestinal disturbances, insomnia, mucous membrane irritation, dizziness
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	<69	mg/kg bw/d	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	
Specific target organ toxicity - repeated exposure (STOT-RE), dermal:	NOAEL	>150	mg/kg bw/d	Rabbit	OECD 411 (Subchronic Dermal Toxicity - 90-day Study)	

Disodium metasilicate, pentahydrate						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rat	U.S. EPA Guidline OPPTS 870.1200	
Acute toxicity, by inhalation:	LC50	>2,06	g/m3	Rat		
Acute toxicity, by inhalation:	LD50	>2,06	mg/l/4h			Vapours
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Corrosive
Serious eye damage/irritation:				Rabbit	IUCLID Chem. Data Sheet (ESIS)	Corrosive

Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Not sensitizising
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Carcinogenicity:						No indications of such an effect.
Reproductive toxicity (Developmental toxicity):	NOAEL	>200	mg/kg bw/d	Mouse		Negative
Reproductive toxicity (Effects on fertility):	NOAEL	>159	mg/kg bw/d	Rat		Negative
Symptoms:						mucous membrane irritation
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	260-284	mg/kg bw/d	Mouse		Negative
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	227-237	mg/kg bw/d	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	Negative

Alcohols, C12-14, ethoxylated, sulfates, sodium salts						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:	LD50	4100	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Skin Irrit. 2
Serious eye damage/irritation:		>=10	%	Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Dam. 1
Serious eye damage/irritation:		>=5	%	Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Irrit. 2
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)

Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:				Mouse	OECD 475 (Mammalian Bone Marrow Chromosome Aberration Test)	Negative
Germ cell mutagenicity:				Mouse	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Reproductive toxicity:	NOAEL	>1000	mg/kg	Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative, References
Reproductive toxicity:	NOAEL	>300	mg/kg	Rat	OECD 416 (Two-generation Reproduction Toxicity Study)	Negative, References
Aspiration hazard:						No
Symptoms:						mucous membrane irritation
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	>225	mg/kg	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	Target organ(s): liver, References

11.2. Information on other hazards

UNIVERSAL CLEANER 1000 ML Art.: 9028373						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Endocrine disrupting properties:						Does not apply to mixtures.
Other information:						No other relevant information available on adverse effects on health.

SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

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Art.: 9028373

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:							n.d.a.
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and degradability:							The surfactant(s) contained in this mixture complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.
12.3. Bioaccumulative potential:							n.d.a.

12.4. Mobility in soil:							n.d.a.
12.5. Results of PBT and vPvB assessment							n.d.a.
12.6. Endocrine disrupting properties:							Does not apply to mixtures.
12.7. Other adverse effects:							No information available on other adverse effects on the environment.
Other information:							According to the recipe, contains no AOX.

Alcohols, C9-11, ethoxylated							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.3. Bioaccumulative potential:							Not to be expected
12.1. Toxicity to fish:	LC50	96h	11	mg/l			
12.1. Toxicity to fish:	LC50	96h	5-7	mg/l	Oncorhynchus mykiss		
12.1. Toxicity to daphnia:	EC50	48h	2,5	mg/l	Daphnia magna		
12.1. Toxicity to daphnia:	EC50	48h	1-10	mg/l	Daphnia magna		
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	2,11	mg/l	Daphnia magna	QSAR	
12.1. Toxicity to algae:	EC50	72h	1,978	mg/l	Desmodesmus subspicatus	QSAR	
12.1. Toxicity to algae:	EC50	72h	1-10	mg/l	Skeletonema costatum		
12.2. Persistence and degradability:		28d	>60	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Readily biodegradable

12.2. Persistence and degradability:			94	%		OECD 301 E (Ready Biodegradability - Modified OECD Screening Test)	
12.2. Persistence and degradability:			99	%		OECD 302 B (Inherent Biodegradability - Zahn-Wellens/EMPA Test)	
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50	4h	410	mg/l			Analogous conclusion
Water solubility:							Soluble

2-Butoxyethanol							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:	LC50	96h	1474	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	NOEC/NOEL	21d	>100	mg/l	Brachydanio rerio	OECD 204 (Fish, Prolonged Toxicity Test - 14-Day Study)	
12.1. Toxicity to daphnia:	EC50	48h	1550	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	100	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to algae:	EC50	72h	1840	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	

12.1. Toxicity to algae:	NOEC/NOEL	72h	286	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	95	%		OECD 301 E (Ready Biodegradability - Modified OECD Screening Test)	Readily biodegradable
12.2. Persistence and degradability:		28d	>99	%		OECD 302 B (Inherent Biodegradability - Zahn-Wellens/EMPA Test)	Readily biodegradable
12.3. Bioaccumulative potential:	BCF		3,2				Slight
12.3. Bioaccumulative potential:	Log Pow		0,81			OECD 107 (Partition Coefficient (n-octanol/water) - Shake Flask Method)	Not to be expected
12.4. Mobility in soil:	H (Henry)		0,0000016	atm*m3/mol			
12.4. Mobility in soil:	Koc		67				Expert judgement
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC10	16h	>700	mg/l	Pseudomonas putida	DIN 38412 T.8	

Disodium metasilicate, pentahydrate							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:	LC50	96h	210	mg/l	Brachydanio rerio	ISO 7346	
12.1. Toxicity to daphnia:	EC50	48h	1700	mg/l	Daphnia magna	84/449/EEC C.2	
12.1. Toxicity to algae:	EC50	72h	207	mg/l	Scenedesmus subspicatus	DIN 38412 T.9	
12.3. Bioaccumulative potential:							Not relevant for inorganic substances.

12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

Alcohols, C12-14, ethoxylated, sulfates, sodium salts							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:	LC50	96h	7,1	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	NOEC/NOEL	28d	0,1	mg/l	Oncorhynchus mykiss	OECD 204 (Fish, Prolonged Toxicity Test - 14-Day Study)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	0,27	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to daphnia:	EC50	48h	7,2	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	NOEC/NOEL	96h	0,95	mg/l		OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	EC50	72h	27,7	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	95	%		OECD 301 E (Ready Biodegradability - Modified OECD Screening Test)	Readily biodegradable
12.2. Persistence and degradability:		28d	>70	%		OECD 301 A (Ready Biodegradability - DOC Die-Away Test)	Readily biodegradable

12.2. Persistence and degradability:	DOC	28d	100	%	activated sludge	Regulation (EC) 440/2008 C.4-C (DETERMINATION OF 'READY' BIODEGRADABILITY - CO2 EVOLUTION TEST)	Readily biodegradable
12.3. Bioaccumulative potential:	BCF		-1,38				Low
12.4. Mobility in soil:	Koc		191				calculated value
12.5. Results of PBT and vPvB assessment							No PBT substance
Toxicity to bacteria:	EC50	16h	>10	g/l	Pseudomonas putida	DIN 38412 T.8	

SECTION 13: Disposal considerations

13.1 Waste treatment methods
For the substance / mixture / residual amounts
EC disposal code no.:
The waste codes are recommendations based on the scheduled use of this product.
Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)
20 01 29 detergents containing hazardous substances
Recommendation:
Sewage disposal shall be discouraged.
Pay attention to local and national official regulations.
E.g. suitable incineration plant.
E.g. dispose at suitable refuse site.
For contaminated packing material
Pay attention to local and national official regulations.
Empty container completely.
Uncontaminated packaging can be recycled.
Dispose of packaging that cannot be cleaned in the same manner as the substance.
Recommended cleaner:
Water
15 01 10 packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

General statements

14.1. UN number or ID number: 1719

Transport by road/by rail (ADR/RID)

14.2. UN proper shipping name:
UN 1719 CAUSTIC ALKALI LIQUID, N.O.S (SODIUM METASILICATE,POTASSIUM HYDROXIDE)

14.3. Transport hazard class(es): 8
14.4. Packing group: III
Classification code: C5
LQ: 5 L
14.5. Environmental hazards: Not applicable
Tunnel restriction code: E

Transport by sea (IMDG-code)

14.2. UN proper shipping name:
CAUSTIC ALKALI LIQUID, N.O.S (SODIUM METASILICATE,POTASSIUM HYDROXIDE)

14.3. Transport hazard class(es): 8
14.4. Packing group: III
EmS: F-A, S-B
Marine Pollutant: n.a
14.5. Environmental hazards: Not applicable

Transport by air (IATA)

14.2. UN proper shipping name:
Caustic alkali liquid, n.o.s (SODIUM METASILICATE,POTASSIUM HYDROXIDE)

14.3. Transport hazard class(es): 8
14.4. Packing group: III
14.5. Environmental hazards: Not applicable

14.6. Special precautions for user

Persons employed in transporting dangerous goods must be trained.
All persons involved in transporting must observe safety regulations.
Precautions must be taken to prevent damage.

14.7. Maritime transport in bulk according to IMO instruments

Freighted as packaged goods rather than in bulk, therefore not applicable.
Minimum amount regulations have not been taken into account.
Danger code and packing code on request.
Comply with special provisions.

SECTION 15: Regulatory information

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

Observe restrictions:
Comply with national regulations/laws governing the protection of young people at work (national implementation of the Directive 94/33/EC)!
Comply with national regulations/laws governing maternity protection (national implementation of the Directive 92/85/EEC)!
Comply with trade association/occupational health regulations.

Directive 2010/75/EU (VOC): 4.027 %

REGULATION (EC) No 648/2004

less than 5 %

anionic surfactants
non-ionic surfactants

perfumes
CITRAL
LIMONENE

15.2 Chemical safety assessment
A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 14
Employee training in handling dangerous goods is required.
These details refer to the product as it is delivered.
Employee instruction/training in handling hazardous materials is required.

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Eye Dam. 1, H318	Classification based on the pH value.
Met. Corr. 1, H290	Classification based on test data.
Skin Corr. 1, H314	Classification based on the pH value.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).
H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Eye Dam. — Serious eye damage
Met. Corr. — Substance or mixture corrosive to metals
Skin Corr. — Skin corrosion
Acute Tox. — Acute toxicity - oral
Acute Tox. — Acute toxicity - inhalation
Skin Irrit. — Skin irritation
Eye Irrit. — Eye irritation
STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation
Aquatic Chronic — Hazardous to the aquatic environment - chronic

Key literature references and sources for data:
Regulation (EC) No 1907/2006 (REACH) and Regulation (EC) No 1272/2008 (CLP) as amended.

Guidelines for the preparation of safety data sheets as amended (ECHA).
Guidelines on labelling and packaging according to the Regulation (EG) Nr. 1272/2008 (CLP) as amended (ECHA).
Safety data sheets for the constituent substances.
ECHA Homepage - Information about chemicals.
GESTIS Substance Database (Germany).
German Environment Agency "Rigoletto" information site on substances that are hazardous to water (Germany).
EU Occupation Exposure Limits Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164, (EU) 2019/1831, each as amended.
National Lists of Occupational Exposure Limits for each country as amended.
Regulations on the transport of hazardous goods by road, rail, sea and air (ADR, RID, IMDG, IATA) as amended.

Any abbreviations and acronyms used in this document:

acc., acc. to according, according to
ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
AOX Adsorbable organic halogen compounds
approx. approximately
Art., Art. no. Article number
ASTM ASTM International (American Society for Testing and Materials)
ATE Acute Toxicity Estimate
BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)
BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
BCF Bioconcentration factor
BSEF The International Bromine Council
bw body weight
CAS Chemical Abstracts Service
CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
CMR carcinogenic, mutagenic, reproductive toxic
DMEL Derived Minimum Effect Level
DNEL Derived No Effect Level
DOC Dissolved organic carbon
dw dry weight
e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
EbCx, EyCx, EbLx (x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass (algae, plants)
EC European Community
ECHA European Chemicals Agency
ECx, ELx (x = 0, 3, 5, 10, 20, 50, 80, 100) Effect Concentration/Level for x % effect
EEC European Economic Community
EINECS European Inventory of Existing Commercial Chemical Substances
ELINCS European List of Notified Chemical Substances
EN European Norms
EPA United States Environmental Protection Agency (United States of America)

ErCx, EμCx, ErLx (x = 10, 50) Effect Concentration/Level of x % on inhibition of the growth rate (algae, plants)
etc. et cetera
EU European Union
EVAL Ethylene-vinyl alcohol copolymer
Fax. Fax number
gen. general
GHS Globally Harmonized System of Classification and Labelling of Chemicals
GWP Global warming potential
Koc Adsorption coefficient of organic carbon in the soil
Kow octanol-water partition coefficient
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IBC (Code) International Bulk Chemical (Code)
IMDG-code International Maritime Code for Dangerous Goods
incl. including, inclusive
IUCLID International Uniform Chemical Information Database
IUPACInternational Union for Pure Applied Chemistry
LC50 Lethal Concentration to 50 % of a test population
LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)
Log Koc Logarithm of adsorption coefficient of organic carbon in the soil
Log Kow, Log Pow Logarithm of octanol-water partition coefficient
LQ Limited Quantities
MARPOL International Convention for the Prevention of Marine Pollution from Ships
n.a. not applicable
n.av. not available
n.c. not checked
n.d.a. no data available
NIOSH National Institute for Occupational Safety and Health (USA)
NLP No-longer-Polymer
NOEC, NOEL No Observed Effect Concentration/Level
OECD Organisation for Economic Co-operation and Development
org. organic
OSHA Occupational Safety and Health Administration (USA)
PBT persistent, bioaccumulative and toxic
PE Polyethylene
PNEC Predicted No Effect Concentration
ppm parts per million
PVC Polyvinylchloride
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.
RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
SVHC Substances of Very High Concern
Tel. Telephone
TOC Total organic carbon
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
VOC Volatile organic compounds

vPvB very persistent and very bioaccumulative
wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.
No responsibility.