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 10000 ML
Art.: 9028374

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

Relevant identified uses of the substance or mixture:
Universal cleaner
Sector of use [SU]:
SU 0 - Other
SU 1 - Agriculture, forestry, fishery
SU19 - Building and construction work
SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Chemical product category [PC]:
PC35 - Washing and cleaning products
Process category [PROC]:
PROC10 - Roller application or brushing
Uses advised against:
No information available at present.

1.3 Details of the supplier of the safety data sheet

GB
BTI Befestigungstechnik GmbH & Co. KG, Salzstr. 51, 74653 Ingelfingen, Germany
Phone:+49 7940 141 141, Fax:+49 7940 141 9141
info@bti.de, 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)

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 %).
Note pH value
High pH-value can be harmful to water.

SECTION 3: Composition/information on ingredients

3.1 Substance
n.a.
3.2 Mixture

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	203-905-0

CAS	111-76-2
content %	1-<5
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 4, H302 Eye Irrit. 2, H319 Skin Irrit. 2, H315 Acute Tox. 4, H312 Acute Tox. 4, H332

Alcohols, C9-11, ethoxylated	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP	---
CAS	68439-46-3
content %	1-<5
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 4, H302 Eye Dam. 1, H318

Alcohols, C12-14, ethoxylated, sulfates, sodium salts	**Substance with specific conc. limit(s) acc. to REACh-registration**
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP	500-234-8 (NLP)
CAS	68891-38-3
content %	1-<5
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 3, H412

Disodium metasilicate, pentahydrate	
Registration number (REACH)	01-2119449811-37-XXXX
Index	014-010-00-8
EINECS, ELINCS, NLP	229-912-9
CAS	10213-79-3
content %	1-<5
Classification according to Regulation (EC) 1272/2008 (CLP)	Met. Corr. 1, H290 Skin Corr. 1B, H314 STOT SE 3, H335 Eye Dam. 1, H318

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
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
Ensure sufficient supply of air.
Avoid contact with eyes or skin.
If applicable, caution - risk of slipping.
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 (D) (Loesungsmittelgemische 3), DFG (E) (Solvent mixtures 3) - 1998, 2002 - EU project BC/CEN/ENTR/000/2002-16 card 32-		
	- 2 (2004)		
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	
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	

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	

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	

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 (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). | 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.

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. BS EN 14042.
BS 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 374).
If applicable
Safety gloves made of butyl (EN 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 374)
Protective Viton® / fluoroelastomer gloves (EN 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
Odour threshold:	Not determined
pH-value:	13 (20°C)
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	100 °C (Not determined)
Flash point:	Not determined
Evaporation rate:	Not determined
Flammability (solid, gas):	n.a.
Lower explosive limit:	Not determined
Upper explosive limit:	Not determined
Vapour pressure:	Not determined
Vapour density (air = 1):	Not determined
Density:	1,03 g/cm3 (20°C)
Bulk density:	n.a.
Solubility(ies):	Not determined
Water solubility:	Soluble
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	n.a.
Decomposition temperature:	Not determined
Viscosity:	Not determined
Explosive properties:	Product is not explosive.
Oxidising properties:	No

9.2 Other information

Miscibility:	Not determined
Fat solubility / solvent:	Not determined
Conductivity:	Not determined
Surface tension:	Not determined
Solvents content:	Not determined

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 toxicological effects

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

UNIVERSAL CLEANER 10000 ML Art.: 9028374						
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:	ATE	>2000	mg/kg			calculated value
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.

2-butoxyethanol						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:	LD50	1746	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by oral route:	LD50	1300	mg/kg	Guinea pig		
Acute toxicity, by dermal route:	LD50	1060	mg/kg	Rabbit		
Acute toxicity, by dermal route:	LD50	2275	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	Does not conform with EU classification .
Acute toxicity, by inhalation:	LC50	2-20	mg/l	Rat		
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)	Not sensitizising
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse 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)	

Alcohols, C9-11, ethoxylated						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:	LD50	300-2000	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			

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)	Irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Risk of serious damage to eyes.
Serious eye damage/irritation:		>=10	%			Eye Dam. 1
Serious eye damage/irritation:		>=5	%			Eye Irrit. 2
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitizising
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:					OECD 475 (Mammalian Bone Marrow Chromosome Aberration Test)	Negative
Germ cell mutagenicity:					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

Disodium metasilicate, pentahydrate						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:	LD50	1152-1349	mg/kg	Rat		
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

SECTION 12: Ecological information

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

UNIVERSAL CLEANER 10000 ML Art.: 9028374							
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. Other adverse effects:							n.d.a.
Other information:							According to the recipe, contains no AOX.

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 fish:	LC50	96h	1490	mg/l	Lepomis macrochirus		
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)	
12.3. Bioaccumulative potential:	BCF		3,2				

12.3. Bioaccumulative potential:	Log Pow		0,83				Negative
12.4. Mobility in soil:	H (Henry)		0,000 0016	atm*m 3/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:	EC0	16h	700	mg/l	Pseudomonas putida	DIN 38412 T.8	

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)	
Toxicity to bacteria:	EC50	4h	410	mg/l			Analogous conclusion
Water solubility:							Soluble

Alcohols, C12-14, ethoxylated, sulfates, sodium salts							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
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
12.1. Toxicity to fish:	NOEC/NOEL	28d	0,2	mg/l	Oncorhynchus mykiss	OECD 204 (Fish, Prolonged Toxicity Test - 14-Day Study)	
12.1. Toxicity to fish:	LC50	96h	7,1	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
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	2,6	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
12.3. 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	

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

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:	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:	C9
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. Transport in bulk according to Annex II of MARPOL and the IBC Code

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): 4,03 %

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: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16
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.
H312 Harmful in contact with skin.
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
Eye Irrit. — Eye irritation
Skin Irrit. — Skin irritation
Acute Tox. — Acute toxicity - dermal
Acute Tox. — Acute toxicity - inhalation
Aquatic Chronic — Hazardous to the aquatic environment - chronic
STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation

Any abbreviations and acronyms used in this document:

AC Article Categories
acc., acc. to according, according to
ACGIH American Conference of Governmental Industrial Hygienists
ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
AOEL Acceptable Operator Exposure Level
AOX Adsorbable organic halogen compounds
approx. approximately
Art., Art. no. Article number
ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)
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
BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)
BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)
BMGV Biological monitoring guidance value (EH40, UK)
BOD Biochemical oxygen demand
BSEF Bromine Science and Environmental Forum
bw body weight
CAS Chemical Abstracts Service
CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids
CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques

CIPAC Collaborative International Pesticides Analytical Council
CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
CMR carcinogenic, mutagenic, reproductive toxic
COD Chemical oxygen demand
CTFA Cosmetic, Toiletry, and Fragrance Association
DMEL Derived Minimum Effect Level
DNEL Derived No Effect Level
DOC Dissolved organic carbon
DT50 Dwell Time - 50% reduction of start concentration
DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)
dw dry weight
e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
EC European Community
ECHA European Chemicals Agency
EEA European Economic Area
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)
ERC Environmental Release Categories
ES Exposure scenario
etc. et cetera
EU European Union
EWC European Waste Catalogue
Fax. Fax number
gen. general
GHS Globally Harmonized System of Classification and Labelling of Chemicals
GWP Global warming potential
HET-CAM Hen's Egg Test - Chorionallantoic Membrane
HGWP Halocarbon Global Warming Potential
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IBC Intermediate Bulk Container
IBC (Code) International Bulk Chemical (Code)
IC Inhibitory concentration
IMDG-code International Maritime Code for Dangerous Goods
incl. including, inclusive
IUCLID International Uniform ChemicaL Information Database
LC lethal concentration
LC50 lethal concentration 50 percent kill
LCLo lowest published lethal concentration
LD Lethal Dose of a chemical
LD50 Lethal Dose, 50% kill
LDLo Lethal Dose Low
LOAEL Lowest Observed Adverse Effect Level
LOEC Lowest Observed Effect Concentration
LOEL Lowest Observed Effect Level
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 of Occupational Safety and Health (United States of America)
NOAEC No Observed Adverse Effective Concentration
NOAEL No Observed Adverse Effect Level
NOEC No Observed Effect Concentration
NOEL No Observed Effect Level
ODP Ozone Depletion Potential
OECD Organisation for Economic Co-operation and Development
org. organic
PAH polycyclic aromatic hydrocarbon
PBT persistent, bioaccumulative and toxic
PC Chemical product category
PE Polyethylene
PNEC Predicted No Effect Concentration
POCP Photochemical ozone creation potential
ppm parts per million
PROC Process category
PTFE Polytetrafluorethylene
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)
SADT Self-Accelerating Decomposition Temperature
SAR Structure Activity Relationship
SU Sector of use
SVHC Substances of Very High Concern
Tel. Telephone
ThOD Theoretical oxygen demand
TOC Total organic carbon
TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))
VOC Volatile organic compounds
vPvB very persistent and very bioaccumulative
WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).
WHO World Health Organization
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.