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

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1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses of the substance or mixture:
Cleaner
Uses advised against:
No information available at present.

1.3 Details of the supplier of the safety data sheet
GB

DR.SCHNELL GmbH & Co. KGaA, Taunusstr. 19, 80807 München, Germany
Phone:089/350608-0, Fax:089/350608-47
info@dr-schnell.com

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 (DSC)

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.

P260-Do not breathe vapours or spray. P280-Wear protective gloves / protective clothing and 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 or shower. 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.

Potassium hydroxide
Ethanolamine
Isotridecanol, ethoxylated

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 %).

SECTION 3: Composition/information on ingredients

3.1 Substance

n.a.

3.2 Mixture

Potassium hydroxide	
Registration number (REACH)	01-2119487136-33-XXXX
Index	019-002-00-8
EINECS, ELINCS, NLP	215-181-3
CAS	1310-58-3
content %	1-5
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Corr. 1A, H314 Acute Tox. 4, H302 Met. Corr. 1, H290 Eye Dam. 1, H318

2-(2-butoxyethoxy)ethanol	**Substance for which an EU exposure limit value applies.**
Registration number (REACH)	01-2119475104-44-XXXX
Index	603-096-00-8
EINECS, ELINCS, NLP	203-961-6
CAS	112-34-5
content %	1-5
Classification according to Regulation (EC) 1272/2008 (CLP)	Eye Irrit. 2, H319

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

(1-hydroxyethylidene)bisphosphonic acid, potassium salt	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP	267-956-0
CAS	67953-76-8
content %	1-<5
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 4, H302 Eye Irrit. 2, H319

Ethanolamine	
Registration number (REACH)	01-2119486455-28-XXXX
Index	603-030-00-8
EINECS, ELINCS, NLP	205-483-3
CAS	141-43-5
content %	1-5
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Corr. 1B, H314 Aquatic Chronic 3, H412 Eye Dam. 1, H318

Isotridecanol, ethoxylated	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP	931-138-8 (REACH-IT List-No.)
CAS	69011-36-5
content %	1-2,5
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 4, H302 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.
Cauterizations not treated lead to wounds difficult to heal.

Eye contact

Remove contact lenses.
Wash thoroughly for several minutes using copious water - call doctor immediately, have Data Sheet available.
Protect uninjured eye.
Follow-up examination by an ophthalmologist

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.
In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

Corrosive burns on skin as well as mucous membrane possible.
Necrosis
Risk of serious damage to eyes.
Corneal damage.
Danger of blindness
Ingestion:
Pain in the mouth and throat
Gastrointestinal disturbances
Oesophageal perforation
Gastric perforation

4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Adapt to the nature and extent of fire.
Water jet spray/foam/CO2/dry extinguisher

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 phosphorus
Oxides of sulphur
Oxides of nitrogen
Toxic gases

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

Do not take any measures that are associated with personal risk or have not been sufficiently trained.
Keep unprotected persons away.
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.
Fill the absorbed material into lockable containers.
Neutralising is possible (only from a specialist).
Diluting with water is possible.
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 contact with eyes or skin.
Handle and open container with care.
There should be an eyewash station and safety shower located near the area of use.
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 store with acids.
Do not use alkali sensitive materials.
Store at room temperature.
Store in a dry place.

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

GB	**Chemical Name**	Potassium hydroxide	Content %:1-5
WEL-TWA: ---	WEL-STEL: 2 mg/m3	---	
Monitoring procedures:	- ISO 15202 (Determination of metals and metalloids in airborne particulate matter by inductive coupled plasma emission spectrometry) - 2000(Part 1), 2001(Part 2), 2004 (Part 3) - DFG (E), DFG (D) (Alkali metal hydroxides and alkali earth hydroxides) - 2001, 1998 - EU project BC/CEN/ENTR/000/2002-16 card 44-2 (2004) - OSHA ID-121 (Metal and metalloid particulates in workplace atmospheres) - 2002 - EU project BC/CEN/ENTR/000/2002-16 card 44-5 (2004) - NIOSH 7401 (Alkaline dusts) - 1994	
BMGV: ---	Other information: ---		

GB	**Chemical Name**	2-(2-butoxyethoxy)ethanol	Content %:1-5
WEL-TWA: 10 ppm (67,5 mg/m3) (WEL, EU)	WEL-STEL: 15 ppm (101,2 mg/m3) (WEL, EU)	---	
Monitoring procedures:	---		
BMGV: ---	Other information: ---		

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)		

GB	**Chemical Name**	Ethanolamine	Content %:1-5
WEL-TWA: 1 ppm (2,5 mg/m3) (WEL-TWA, EU)	WEL-STEL: 3 ppm (7,6 mg/m3) (WEL-STEL, EU)	---	

Monitoring procedures:	- Compur - KITA-224 SA (548 634) DFG (D) (Alkanolamine), DFG (E) (Alkanolamines (2-aminoethanol, diethanolamin, triethanolamin)) - 2000, 2003 - EU project - BC/CEN/ENTR/000/2002-16 card 49-1 (2004) OSHA PV2111 (Ethanolamine) - 1988 - EU project BC/CEN/ENTR/000/2002-16 - card 49-5 (2004) - NIOSH 2007 (Aminoethanol compounds) - 1994
BMGV: ---	Other information: Sk (WEL, EU)

Potassium hydroxide

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Consumer	Human - inhalation	Long term, local effects	DNEL	1	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	1	mg/m3	

2-(2-butoxyethoxy)ethanol

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	1,1	mg/l	
	Environment - marine		PNEC	0,11	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	11	mg/l	
	Environment - sediment, freshwater		PNEC	4,4	mg/kg	
	Environment - sediment, marine		PNEC	0,44	mg/kg	
	Environment - soil		PNEC	0,32	mg/kg	
	Environment - sewage treatment plant		PNEC	200	mg/l	
Consumer	Human - inhalation	Short term, local effects	DNEL	60,7	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	50	mg/kg bw/d	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	40,5	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	5	mg/kg bw/d	
Consumer	Human - inhalation	Long term, local effects	DNEL	60,7	mg/m3	
Workers / employees	Human - oral	Long term, local effects	DNEL	67,5	mg/m3	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	89	mg/kg bw/d	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	83	mg/kg bw/d	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	101,2	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	67,5	mg/m3	

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	

Ethanolamine

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,085	mg/l	
	Environment - marine		PNEC	0,0085	mg/l	
	Environment - periodic release		PNEC	0,025	mg/l	
	Environment - sediment, freshwater		PNEC	0,425	mg/kg dry weight	
	Environment - sediment, marine		PNEC	0,0425	mg/kg dry weight	
	Environment - soil		PNEC	0,035	mg/kg	
	Environment - sewage treatment plant		PNEC	100	mg/l	
Consumer	Human - dermal	Long term, systemic effects	DNEL	0,24	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	2	mg/m3	
Consumer	Human - inhalation	Long term, local effects	DNEL	2	mg/m3	

Consumer	Human - oral	Long term, systemic effects	DNEL	3,75	mg/kg bw/day	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	1	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	3,3	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	3,3	mg/m3	

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).
If applicable
Face protection (EN 166)

Skin protection - Hand protection:
Use alkali resistant protective gloves (EN 374).
If applicable
Safety gloves made of butyl (EN 374)
Protective nitrile gloves (EN 374)
Protective PVC gloves (EN 374)
Protective Viton® / fluoroelastomer gloves (EN 374)
Minimum layer thickness in mm:
0,5
Permeation time (penetration time) in minutes:
>= 480
Protective hand cream recommended.
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.

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.
Filter A P2 (EN 14387), code colour brown, white
Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:
Not applicable

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:	Characteristic
Odour threshold:	Not determined
pH-value:	14 (100 %)
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
Flash point:	Not determined
Evaporation rate:	Not determined
Flammability (solid, gas):	Not determined
Lower explosive limit:	Not determined
Upper explosive limit:	Not determined
Vapour pressure:	Not determined
Vapour density (air = 1):	Not determined
Density:	1,000 g/cm3
Bulk density:	n.a.
Solubility(ies):	Not determined
Water solubility:	Mixable
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	Not determined
Explosive properties:	Not determined
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
Product corrodes metals.
Contact with strong acids leads to strong exothermic reaction.

10.2 Chemical stability
Stable with proper storage and handling.

10.3 Possibility of hazardous reactions
Avoid contact with strong acids (exothermic reaction possible).
Avoid contact with certain metals e.g. aluminium (development of hydrogen gas possible).

10.4 Conditions to avoid
None known

10.5 Incompatible materials
Avoid contact with strong acids.
Avoid contact with strong oxidizing agents.
Avoid contact with alkali sensitive materials.
Avoid contact with certain metals e.g. aluminium.
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).

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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			calculated value, Vapours
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.

Potassium hydroxide						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:	LD50	333-388	mg/kg	Rat	OECD 425 (Acute Oral Toxicity - Up-and-Down Procedure)	1 week observation
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Corrosive

2-(2-butoxyethoxy)ethanol						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	2764	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Negative

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:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration 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:				Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative, Analogous conclusion
Symptoms:						breathing difficulties, respiratory distress, diarrhoea, coughing, mucous membrane irritation, dizziness, watering eyes, nausea

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 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)	

Ethanolamine

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	1515	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	2504	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	Does not conform with EU classification.
Acute toxicity, by inhalation:	LC50	>1,3	mg/l/6h	Rat		Mist
Acute toxicity, by inhalation:	LC50	1,49	mg/l/4h	Rat		Vapours, Maximum achievable concentration.
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Corrosive
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Risk of serious damage to eyes.
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:					(Ames-Test)	Negative
Reproductive toxicity:						Negative

Symptoms:						ataxia, respiratory distress, drowsiness, coughing, mucous membrane irritation, nausea

Isotridecanol, ethoxylated						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:	LD50	>300-2000	mg/kg	Rat		References
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat		References
Skin corrosion/irritation:				Rabbit		Not irritant, References
Serious eye damage/irritation:				Rabbit		Eye Dam. 1>10% solution
Respiratory or skin sensitisation:				Guinea pig		Negative, References
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative, References
Reproductive toxicity:	NOAEL	>250	mg/kg bw/d	Rat	OECD 416 (Two-generation Reproduction Toxicity Study)	References
Aspiration hazard:						n.a.
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	50	mg/kg bw/d	Rat		Target organ(s): heart, Target organ(s): liver, Target organ(s): kidneys, References

SECTION 12: Ecological information

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

ASK INDUSTRIEREINIGER							
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(compl y) 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:							DOC-elimination degree(complexing organic substance)>= 80%/28d: No

Potassium hydroxide							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:	LC50	96h	80	mg/l	Gambusia affinis		
12.1. Toxicity to fish:	LC50	24h	165	mg/l	Poecilia reticulata		
12.2. Persistence and degradability:							Not relevant for inorganic substances.
12.3. Bioaccumulative potential:							Not to be expected
Toxicity to bacteria:	EC50	15min	22	mg/l	Photobacterium phosphoreum		

2-(2-butoxyethoxy)ethanol							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to algae:	NOEC/NOEL	96h	>100	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	

12.1. Toxicity to daphnia:	NOEC/NOEL	48h	>=100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
Toxicity to bacteria:	EC10	30min	>1995	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
12.1. Toxicity to fish:	LC50	96h	1300	mg/l	Lepomis macrochirus	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	>100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.2. Persistence and degradability:		28d	76	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	
12.2. Persistence and degradability:		28d	100	%	activated sludge	OECD 302 B (Inherent Biodegradability - Zahn-Wellens/EMPA Test)	
Other information:							Does not contain any organically bound halogens which can contribute to the AOX value in waste water.

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)	
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)		0,0000016	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:	EC0	16h	700	mg/l	Pseudomonas putida	DIN 38412 T.8	

Ethanolamine

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	170	mg/l	Carassius auratus		
12.1. Toxicity to fish:	NOEC/NOEL	30d	1,2	mg/l	Oryzias latipes		
12.2. Persistence and degradability:		28d	96	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Readily biodegradable
12.2. Persistence and degradability:	DOC	21d	>91	%	activated sludge	OECD 301 A (Ready Biodegradability - DOC Die-Away Test)	
12.3. Bioaccumulative potential:							Not to be expected
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	0,85	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.3. Bioaccumulative potential:	Log Pow		-1,91				25°C
12.1. Toxicity to daphnia:	EC50	48h	65	mg/l	Daphnia magna	84/449/EEC C.2	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	0,85	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	

12.1. Toxicity to algae:	EC50	72h	2,5	mg/l	Selenastrum capricornutum	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOAEC	72h	1	mg/l	Selenastrum capricornutum	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to fish:	NOEC/NOEL	30d	1,2	mg/l	Oryzias latipes		
12.1. Toxicity to fish:	LC50	96h	349	mg/l	Cyprinus caprio	84/449/EEC C.1	
12.1. Toxicity to daphnia:	EC50	48h	65	mg/l	Daphnia magna	84/449/EEC C.2	
12.2. Persistence and degradability:		21d	>90	%		OECD 302 A (Inherent Biodegradability - Modified SCAS Test)	Readily biodegradable
12.2. Persistence and degradability:	DOC	21d	>91	%	activated sludge	OECD 301 A (Ready Biodegradability - DOC Die-Away Test)	
12.1. Toxicity to algae:	EC50	72h	2,5	mg/l	Selenastrum capricornutum	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	EC50	72h	22	mg/l	Scenedesmus subspicatus	84/449/EEC C.3	
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50	3h	>1000	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Other information:	BOD	5d	800	mg/g			

Isotridecanol, ethoxylated

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	10-100	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	LC50	96h	1 - 10	mg/l	Cyprinus caprio	OECD 203 (Fish, Acute Toxicity Test)	References
12.1. Toxicity to daphnia:	EC50	48h	>1-10	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	References
12.1. Toxicity to daphnia:	EC10	21d	2,6	mg/l		OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to algae:	EC50	72h	>10-100	mg/l	Scenedesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	EC50	72h	>1-10	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	References

12.2. Persistence and degradability:		28d	>70	%		OECD 301 A (Ready Biodegradability - DOC Die-Away Test)	References
12.2. Persistence and degradability:		28d	>60	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	References
12.4. Mobility in soil:	Koc		>5000				Adsorption in ground.
12.4. Mobility in soil:	Kow		>5000				Adsorption in ground.
12.5. Results of PBT and vPvB assessment							No PBT substance
Toxicity to bacteria:	EC50		140	mg/l	activated sludge		
Toxicity to bacteria:	EC50		>10000	mg/l	Pseudomonas putida	ISO 10712	
Other organisms:	NOEC/NOEL		10	mg/kg		OECD 208 (Terrestrial Plants, Growth Test)	
Toxicity to annelids:	LC50	14d	>1000	mg/kg	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Tests)	

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.
15 01 02 plastic packaging

SECTION 14: Transport information

General statements

14.1. UN number: 1760

Transport by road/by rail (ADR/RID)

14.2. UN proper shipping name:
UN 1760 CORROSIVE LIQUID, N.O.S. (POTASSIUM HYDROXIDE,ETHANOLAMINE)
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:
CORROSIVE LIQUID, N.O.S. (POTASSIUM HYDROXIDE,ETHANOLAMINE)

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:
Corrosive liquid, n.o.s. (POTASSIUM HYDROXIDE,ETHANOLAMINE)

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 maternity protection (national implementation of the Directive 92/85/EEC)!
Regulation (EC) No 1907/2006, Annex XVII
2-(2-butoxyethoxy)ethanol
Comply with trade association/occupational health regulations.

Directive 2010/75/EU (VOC): 7 %

REGULATION (EC) No 648/2004

less than 5 %
amphoteric surfactants
anionic surfactants
non-ionic surfactants
phosphonates

BENZISOTHIAZOLINONE

National rules/regulation for the compliance with maximum quantities with regard to phosphates and or phosphorous compounds must be observed and complied with.

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 10, 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).
H314 Causes severe skin burns and eye damage.
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.
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

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.
These statements were made by:

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