

Page 1 of 18
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 04.01.2023 / 0025
Replacing version dated / version: 01.11.2021 / 0024
Valid from: 04.01.2023
PDF print date: 05.01.2023
SCHMUTZLÖSER RADIKAL

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

SCHMUTZLÖSER RADIKAL

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

Relevant identified uses of the substance or mixture:

Basic cleaner

For industry, large kitchens, food-processing plants

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

DREITURM GmbH

Postach 11 40

36392 Steinau an der Straße

Tel.: +49 (0) 66 63 / 970 - 0

Fax: +49 (0) 66 63 / 970 - 490

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:

+1 872 5888271 (DTR)

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 / 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
Tetrasodium ethylene diamine tetraacetate
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

Potassium hydroxide	
Registration number (REACH)	01-2119487136-33-XXXX
Index	019-002-00-8
EINECS, ELINCS, NLP, REACH-IT List-No.	215-181-3
CAS	1310-58-3
content %	5-<10
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Met. Corr. 1, H290 Acute Tox. 4, H302 Skin Corr. 1A, H314 Eye Dam. 1, H318
Specific Concentration Limits and ATE	Skin Corr. 1A, H314: >=5 % Skin Corr. 1B, H314: >=2 % Skin Irrit. 2, H315: >=0,5 % Eye Irrit. 2, H319: >=0,5 %

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

GB

Page 3 of 18
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.01.2023 / 0025
 Replacing version dated / version: 01.11.2021 / 0024
 Valid from: 04.01.2023
 PDF print date: 05.01.2023
 SCHMUTZLÖSER RADIKAL

CAS	111-76-2
content %	5-<10
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Acute Tox. 3, H331 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319
Specific Concentration Limits and ATE	ATE (oral): 1200 mg/kg ATE (as inhalation, Vapours): 3 mg/l

Tetrasodium ethylene diamine tetraacetate	
Registration number (REACH)	01-2119486762-27-XXXX
Index	607-428-00-2
EINECS, ELINCS, NLP, REACH-IT List-No.	200-573-9
CAS	64-02-8
content %	1-<5
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Dam. 1, H318 STOT RE 2, H373

Disodium metasilicate, pentahydrate	
Registration number (REACH)	---
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 Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335

2-Propenoic acid, homopolymer	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	---
CAS	9003-01-4
content %	1-<5
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Eye Irrit. 2, H319

Impurities, test data and additional information may have been taken into account in classifying and labelling the product.
 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

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.

Keep Data Sheet available

Eye contact

Page 4 of 18

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

Revision date / version: 04.01.2023 / 0025

Replacing version dated / version: 01.11.2021 / 0024

Valid from: 04.01.2023

PDF print date: 05.01.2023

SCHMUTZLÖSER RADIKAL

Wash thoroughly for several minutes using copious water - call doctor immediately, have Data Sheet available.

Ingestion

Give copious water to drink - consult doctor immediately.

Keep Data Sheet available.

Do not induce vomiting.

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:

Oesophageal perforation

Gastric perforation

Danger of blindness.

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.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water jet spray

CO₂

Foam

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

Toxic pyrolysis products.

5.3 Advice for firefighters

For personal protective equipment see Section 8.

Alkali-resistant protection clothing.

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.

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.

Do not pour down the drain undiluted.

Prevent penetration into drains, cellars, working pits or other places in which accumulation could be hazardous.

6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent) and dispose of according to Section 13.

Flush residue using copious water.

Neutralising is possible (only from a specialist).

6.4 Reference to other sections

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

Page 5 of 18

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

Revision date / version: 04.01.2023 / 0025

Replacing version dated / version: 01.11.2021 / 0024

Valid from: 04.01.2023

PDF print date: 05.01.2023

SCHMUTZLÖSER RADIKAL

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

Observe directions on label and instructions for use.

Only use working methods according to operating instructions.

Ensure good ventilation.

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.

Do not use alkali sensitive materials.

Not to be stored in gangways or stair wells.

Store product closed.

Do not store with oxidizing agents.

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Chemical Name	Potassium hydroxide		
WEL-TWA: ---	WEL-STEL: 2 mg/m ³	---	
Monitoring procedures:	ISO 15202 (Workplace air - Determination of metals and metalloids in airborne particulate matter by Inductively Coupled Plasma Atomic Emission Spectrometry), Part 1-3 - 2012(Part 1), 2012(Part 2), 2004 (Part 3) - NIOSH 7401 (Alkaline dusts) - 1994 OSHA ID-121 (Metal and metalloid particulates in workplace atmospheres (Atomic absorption)) - 2002 - EU project BC/CEN/ENTR/000/2002-16 card 44-5 - (2004)		
BMGV: ---	Other information: ---		

Chemical Name	2-Butoxyethanol		
WEL-TWA: 25 ppm (123 mg/m ³) (WEL), 20 ppm (98 mg/m ³) (EU)	WEL-STEL: 50 ppm (246 mg/m ³) (WEL, EU)	---	
Monitoring procedures:	- Compur - KITA-190 U(C) (548 873) DFG Meth.-Nr. 2 (D) (Lösungsmittelgemische 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)		

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/m ³	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	1	mg/m ³	

Page 6 of 18

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

Revision date / version: 04.01.2023 / 0025

Replacing version dated / version: 01.11.2021 / 0024

Valid from: 04.01.2023

PDF print date: 05.01.2023

SCHMUTZLÖSER RADIKAL

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/m ³	
Consumer	Human - dermal	Short term, systemic effects	DNEL	44,5	mg/kg bw/d	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	426	mg/m ³	
Consumer	Human - oral	Short term, systemic effects	DNEL	13,4	mg/kg bw/d	
Consumer	Human - inhalation	Short term, local effects	DNEL	123	mg/m ³	
Consumer	Human - dermal	Long term, systemic effects	DNEL	38	mg/kg bw/d	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	49	mg/m ³	
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/m ³	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	246	mg/m ³	
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/m ³	

Tetrasodium ethylene diamine tetraacetate

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	2,2	mg/l	
	Environment - marine		PNEC	0,22	mg/l	
	Environment - sewage treatment plant		PNEC	43	mg/l	
	Environment - soil		PNEC	0,72	mg/kg	
Consumer	Human - inhalation	Long term, local effects	DNEL	0,6	mg/m ³	
Consumer	Human - oral	Long term, systemic effects	DNEL	25	mg/kg bw/d	

Page 7 of 18

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

Revision date / version: 04.01.2023 / 0025

Replacing version dated / version: 01.11.2021 / 0024

Valid from: 04.01.2023

PDF print date: 05.01.2023

SCHMUTZLÖSER RADIKAL

Workers / employees	Human - inhalation	Long term, local effects	DNEL	1,5	mg/m ³	
---------------------	--------------------	--------------------------	------	-----	-------------------	--

2,2',2"-nitrioltriethanol						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,32	mg/l	
	Environment - marine		PNEC	0,032	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	5,12	mg/l	
	Environment - sewage treatment plant		PNEC	10	mg/l	
	Environment - sediment, freshwater		PNEC	1,7	mg/kg	
	Environment - sediment, marine		PNEC	0,17	mg/kg	
	Environment - soil		PNEC	0,151	mg/kg dry weight	
Consumer	Human - dermal	Long term, systemic effects	DNEL	2,66	mg/kg bw/day	
Consumer	Human - oral	Long term, systemic effects	DNEL	3	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	1,25	mg/m ³	
Consumer	Human - inhalation	Long term, local effects	DNEL	0,4	mg/m ³	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	6,3	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	5	mg/m ³	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	1	mg/m ³	

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.

Page 8 of 18

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

Revision date / version: 04.01.2023 / 0025

Replacing version dated / version: 01.11.2021 / 0024

Valid from: 04.01.2023

PDF print date: 05.01.2023

SCHMUTZLÖSER RADIKAL

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).

Face protection (EN 166).

Skin protection - Hand protection:

Use alkali resistant protective gloves (EN ISO 374).

Protective gloves in butyl rubber (EN ISO 374).

Minimum layer thickness in mm:

0,5

Protective gloves made of natural rubber latex (EN ISO 374).

Protective Neoprene® / polychloroprene gloves (EN ISO 374).

Protective nitrile gloves (EN ISO 374).

Protective PVC gloves (EN ISO 374).

Protective gloves made of vinyl (EN ISO 374).

With long-term contact:

Permeation time (penetration time) in minutes:

> 240

With short-term contact:

Permeation time (penetration time) in minutes:

> 60

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 hand cream recommended.

Skin protection - Other:

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

Respiratory protection:

Normally not necessary.

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:

Characteristic

Melting point/freezing point:

There is no information available on this parameter.

Page 9 of 18

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

Revision date / version: 04.01.2023 / 0025

Replacing version dated / version: 01.11.2021 / 0024

Valid from: 04.01.2023

PDF print date: 05.01.2023

SCHMUTZLÖSER RADIKAL

Boiling point or initial boiling point and boiling range:	There is no information available on this parameter.
Flammability:	There is no information available on this parameter.
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:	There is no information available on this parameter.
Decomposition temperature:	There is no information available on this parameter.
pH:	14
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:	1,0115 g/ml
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

The product has not been tested.

Not to be expected

10.2 Chemical stability

Stable with proper storage and handling.

10.3 Possibility of hazardous reactions

Hazardous reactions will not occur during storage and handling under normal conditions.

10.4 Conditions to avoid

None known

10.5 Incompatible materials

Contact with strong acids leads to strong exothermic reaction.

Avoid contact with alkali sensitive materials.

Nonferrous alloys - (development of hydrogen gas possible)

Aluminium

Tin

Zinc

Halogens

Light metals

10.6 Hazardous decomposition products

Hydrogen gas

Danger of explosion.

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).

SCHMUTZLÖSER RADIKAL

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:						n.d.a.
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.

Page 10 of 18

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

Revision date / version: 04.01.2023 / 0025

Replacing version dated / version: 01.11.2021 / 0024

Valid from: 04.01.2023

PDF print date: 05.01.2023

SCHMUTZLÖSER RADIKAL

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
Skin corrosion/irritation:					OECD 431 (In Vitro Skin Corrosion - Human Skin Model Test)	Corrosive
Skin corrosion/irritation:						Skin Corr. 1A
Serious eye damage/irritation:						Eye Dam. 1
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Corrosive
Respiratory or skin sensitisation:				Guinea pig		Not sensitising
Germ cell mutagenicity:					in vivo	Negative
Germ cell mutagenicity:					(Ames-Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative

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:	ATE	3	mg/l			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

Page 11 of 18

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

Revision date / version: 04.01.2023 / 0025

Replacing version dated / version: 01.11.2021 / 0024

Valid from: 04.01.2023

PDF print date: 05.01.2023

SCHMUTZLÖSER RADIKAL

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
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)	

Tetrasodium ethylene diamine tetraacetate

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	1780	mg/kg	Rat		Analogous conclusion
Acute toxicity, by inhalation:	LC50	1-5	mg/l/4h			Analogous conclusion, Dust, Mist
Serious eye damage/irritation:						Irritant

Disodium metasilicate, pentahydrate

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	847	mg/kg	Rat		
Skin corrosion/irritation:						Corrosive
Serious eye damage/irritation:						Risk of serious damage to eyes.
Respiratory or skin sensitisation:						Not sensitizing

2-Propenoic acid, homopolymer

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Skin corrosion/irritation:						Not irritant
Serious eye damage/irritation:						Eye Irrit. 2
Symptoms:						mucous membrane irritation

11.2. Information on other hazards

SCHMUTZLÖSER RADIKAL

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.

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.01.2023 / 0025
 Replacing version dated / version: 01.11.2021 / 0024
 Valid from: 04.01.2023
 PDF print date: 05.01.2023
 SCHMUTZLÖSER RADIKAL

SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).
 Neutralisation possible.
 High pH-value can be harmful to water.

SCHMUTZLÖSER RADIKAL							
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:							DOC-elimination degree(complexing organic substance)>= 80%/28d: n.a.

Potassium hydroxide

Page 13 of 18

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

Revision date / version: 04.01.2023 / 0025

Replacing version dated / version: 01.11.2021 / 0024

Valid from: 04.01.2023

PDF print date: 05.01.2023

SCHMUTZLÖSER RADIKAL

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.4. Mobility in soil:							Not to be expected
12.1. Toxicity to fish:	LC50	96h	80	mg/l	Gambusia affinis		
12.1. Toxicity to daphnia:	EC50	48h	40,4	mg/l	Ceriodaphnia spec.		
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-Butoxyethanol

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to daphnia:	EC50	48h	1550	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation 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			
Toxicity to bacteria:	EC10	16h	>700	mg/l	Pseudomonas putida	DIN 38412 T.8	

Tetrasodium ethylene diamine tetraacetate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>100	mg/l			
12.1. Toxicity to daphnia:	EC50	24h	>500	mg/l	Daphnia magna		
12.1. Toxicity to algae:	EC50	72h	>100	mg/l			
12.2. Persistence and degradability:							Not readily biodegradable

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		

Page 14 of 18

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

Revision date / version: 04.01.2023 / 0025

Replacing version dated / version: 01.11.2021 / 0024

Valid from: 04.01.2023

PDF print date: 05.01.2023

SCHMUTZLÖSER RADIKAL

12.1. Toxicity to daphnia:	EC50	48h	1700	mg/l	Daphnia magna		
12.1. Toxicity to algae:	EC50	72h	207	mg/l	Scenedesmus subspicatus		
12.2. Persistence and degradability:							Inorganic products cannot be eliminated from water through biological purification methods.

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.

Neutralisation possible by an expert

E.g. suitable incineration plant.

For contaminated packing material


Pay attention to local and national official regulations.

15 01 10 packaging containing residues of or contaminated by hazardous substances


SECTION 14: Transport information

General statements

Transport by road/by rail (ADR/RID),

14.1. UN number or ID number:	1719	
14.2. UN proper shipping name:	UN 1719 CAUSTIC ALKALI LIQUID, N.O.S. (POTASSIUM HYDROXIDE, SOLUTION, DISODIUM TRIOXOSILICATE)	
14.3. Transport hazard class(es):	8	
14.4. Packing group:	II	
14.5. Environmental hazards:	Not applicable	
Tunnel restriction code:	E	
Classification code:	C5	
LQ:	1 L	
Transport category:	2	

Transport by sea (IMDG-code)

14.1. UN number or ID number:	1719	
14.2. UN proper shipping name:	UN 1719 CAUSTIC ALKALI LIQUID, N.O.S. (POTASSIUM HYDROXIDE, SOLUTION, DISODIUM TRIOXOSILICATE)	
14.3. Transport hazard class(es):	8	
14.4. Packing group:	II	
14.5. Environmental hazards:	Not applicable	
Marine Pollutant:	Not applicable	
EmS:	F-A, S-B	

Transport by air (IATA)

14.1. UN number or ID number:	1719	
14.2. UN proper shipping name:	UN 1719 Caustic alkali liquid, n.o.s. (POTASSIUM HYDROXIDE, SOLUTION, DISODIUM TRIOXOSILICATE)	

Page 15 of 18

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

Revision date / version: 04.01.2023 / 0025

Replacing version dated / version: 01.11.2021 / 0024

Valid from: 04.01.2023

PDF print date: 05.01.2023

SCHMUTZLÖSER RADIKAL

14.3. Transport hazard class(es): 8
 14.4. Packing group: II
 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)!

Regulation (EC) No 1907/2006, Annex XVII

2-Butoxyethanol

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): 6 %
 Directive 2010/75/EU (VOC): 66,9 g/l

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: 3, 11, 12, 15

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.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

Page 16 of 18
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 04.01.2023 / 0025
Replacing version dated / version: 01.11.2021 / 0024
Valid from: 04.01.2023
PDF print date: 05.01.2023
SCHMUTZLÖSER RADIKAL

H331 Toxic if inhaled.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

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 RE — Specific target organ toxicity - repeated exposure
STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation

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

Page 17 of 18

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

Revision date / version: 04.01.2023 / 0025

Replacing version dated / version: 01.11.2021 / 0024

Valid from: 04.01.2023

PDF print date: 05.01.2023

SCHMUTZLÖSER RADIKAL

EPA United States Environmental Protection Agency (United States of America)

ErCx, E_mCx, 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

IUPAC International 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.

These statements were made by:

Chemical Check GmbH, Chemical Check Platz 1-7, D-32839 Steinheim, Tel.: +49 5233 94 17 0, Fax: +49 5233 94 17 90

© by Chemical Check GmbH Gefahrstoffberatung. The copying or changing of this document



Page 18 of 18
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 04.01.2023 / 0025
Replacing version dated / version: 01.11.2021 / 0024
Valid from: 04.01.2023
PDF print date: 05.01.2023
SCHMUTZLÖSER RADIKAL

is forbidden except with consent of the Chemical Check GmbH Gefahrstoffberatung.