

FLYLEAF






Article: 8546

Roti®-Prep Plasmid MINI-XL

Date of compilation: 2015-08-06

1 Composition/information on ingredients

Bill of materials

Name of substance	Number of pieces	Classification acc. to GHS	Pictograms
Resuspension Buffer RB	1		
Lysis Buffer LS	1	Skin Irrit. 2 / H315 Eye Dam. 1 / H318	
Neutralization Buffer NB	1	Met. Corr. 1 / H290 Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319	 
Washing Buffer PA	1	Flam. Liq. 2 / H225 Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 STOT SE 3 / H336	 
Washing Solution PB	1		
Elution Buffer XEB	1		

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Roti®-Prep Plasmid MINI-XL

2 Hazards identification

2.1 Label elements

Signal word Danger

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Pictograms



Hazard statement(s)

H225	Highly flammable liquid and vapour
H290	May be corrosive to metals
H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye damage
H336	May cause drowsiness or dizziness

Precautionary statements

Precautionary statements - prevention

P210	Keep away from heat, hot surfaces, sparks, open flames, hot surfaces. No smoking
P280	Wear protective gloves/protective clothing/eye protection/face protection

Precautionary statements - response

P302+P352	IF ON SKIN: wash with plenty of soap and 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
P312	Call a POISON CENTER/doctor if you feel unwell

Hazardous ingredients for labelling	Propan-2-ol Guanadine hydrochloride
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3 Transport information

3.1	UN number	3316
3.2	UN proper shipping name	CHEMICAL KIT
3.3	Transport hazard class(es)	9
3.4	Packing group	II
3.5	Environmental hazards	No

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3.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

3.7 Information for each of the UN Model Regulations

The cargo is not intended to be carried in bulk.

3.8 Information for each of the UN Model Regulations

• Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

UN number	3316
Proper shipping name	CHEMICAL KIT
Particulars in the transport document	UN3316, CHEMICAL KIT, 9, II, (E)
Class	9
Classification code	M11
Packing group	II
Labels acc. to ADR/RID/ADN	9



Special provisions (SP)	251, 340
Excepted quantities (EQ)	See SP340
Limited quantities (LQ)	See SP251
Transport category (TC)	2
Tunnel restriction code (TRC)	E

• International Maritime Dangerous Goods Code (IMDG)

UN number	3316
Proper shipping name	CHEMICAL KIT
Particulars in the shipper's declaration	UN3316, CHEMICAL KIT, 9, II
Class	9
Packing group	II
Labels acc. to the IMDG Code	9



Special provisions (SP)	251, 340
Excepted quantities (EQ)	-> SP 340
Limited quantities (LQ)	-> SP 251
EmS	F-A, S-P
Stowage category	A

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Neutralization Buffer NB

Version: 1.0 en

date of compilation: 2015-08-06

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

1.1 Product identifier

Identification of the substance **Neutralization Buffer NB**
Article number
Registration number (REACH) not relevant (mixture)

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

Identified uses: laboratory chemical

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG
Schoemperlenstr. 3-5
D-76185 Karlsruhe
Germany

Telephone: +49 (0) 721 - 56 06 0

Telefax: +49 (0) 721 - 56 06 149

e-mail: sicherheit@carlroth.de

Website: www.carlroth.de

Competent person responsible for the safety data sheet : Department Health, Safety and Environment

e-mail (competent person) : sicherheit@carlroth.de

1.4 Emergency telephone number

Emergency information service **Poison Centre Munich: +49/(0)89 19240**

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Classification acc. to GHS			
Section	Hazard class	Hazard class and category	Hazard statement
2.16	corrosive to metals	(Met. Corr. 1)	H290
3.10	acute toxicity (oral)	(Acute Tox. 4)	H302
3.2	skin corrosion/irritation	(Skin Irrit. 2)	H315
3.3	serious eye damage/eye irritation	(Eye Irrit. 2)	H319

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according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Neutralization Buffer NB

Remarks

For full text of H-phrases: see SECTION 16.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal word

Warning

Pictograms



Hazard statements

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

Precautionary statements

Precautionary statements - prevention

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements - response

P301+P312	IF SWALLOWED: call a POISON CENTER/doctor if you feel unwell.
P302+P352	IF ON SKIN: wash with plenty of 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.
P312	Call a POISON CENTER/doctor if you feel unwell.

Hazardous ingredients for labelling: guanadine hydrochloride

Labelling of packages where the contents do not exceed 125 ml

Signal word: **Warning**

Symbol(s)



contains: Guanadine hydrochloride

2.3 Other hazards

There is no additional information.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description of the mixture

Composition/information on ingredients.

Name of substance	Identifier	wt%	Classification acc. to 1272/2008/EC	Pictograms
guanadine hydrochloride	CAS No 50-01-1 EC No 200-002-3 Index No 607-148-00-0	25 - 50	Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319	
acetic acid, of a concentration of more than 10 per cent, by weight, of acetic acid	CAS No 64-19-7 EC No 200-580-7 Index No 607-002-00-6 REACH Reg. No 01-2119475328-30-XXXX	10 - < 25	Flam. Liq. 3 / H226 Met. Corr. 1 / H290 Skin Corr. 1A / H314 Eye Dam. 1 / H318	

Remarks

For full text of abbreviations: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off contaminated clothing.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower. In all cases of doubt, or when symptoms persist, seek medical advice.

Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.

Following ingestion

Rinse mouth with water (only if the person is conscious). Call a doctor.

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according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



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4.2 Most important symptoms and effects, both acute and delayed

Vomiting, Causes slight to moderate irritation

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings
water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Combustible.

Hazardous combustion products

In case of fire may be liberated: May produce toxic fumes of carbon monoxide if burning.

5.3 Advice for firefighters

Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains.

Advices on how to clean up a spill

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provision of sufficient ventilation.

Advice on general occupational hygiene

Do not to eat, drink and smoke in work areas. Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice

Not required.

• Ventilation requirements

Use local and general ventilation.

• Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [mg/m ³]	STEL [mg/m ³]	Source
EU	acetic acid	64-19-7	IOELV	25		91/322/EEC

Notation

STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period unless otherwise specified

TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average

Relevant DNELs/DMELs/PNECs and other threshold levels

• relevant DNELs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
acetic acid, of a concentration of more than 10 per cent, by weight, of acetic acid	64-19-7	DNEL	25 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
acetic acid, of a concentration of more than 10 per cent, by weight, of acetic acid	64-19-7	DNEL	25 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects

Neutralization Buffer NB

• relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment	Exposure time
acetic acid, of a concentration of more than 10 per cent, by weight, of acetic acid	64-19-7	PNEC	1,136	marine sediment	continuous
acetic acid, of a concentration of more than 10 per cent, by weight, of acetic acid	64-19-7	PNEC	0,3058	marine water	continuous
acetic acid, of a concentration of more than 10 per cent, by weight, of acetic acid	64-19-7	PNEC	30,58	air	continuous
acetic acid, of a concentration of more than 10 per cent, by weight, of acetic acid	64-19-7	PNEC	11,36	freshwater sediment	continuous
acetic acid, of a concentration of more than 10 per cent, by weight, of acetic acid	64-19-7	PNEC	3,058	freshwater	continuous
acetic acid, of a concentration of more than 10 per cent, by weight, of acetic acid	64-19-7	PNEC	85	sewage treatment plant (STP)	continuous

8.2 Exposure controls

Individual protection measures (personal protective equipment)



Eye/face protection

Use safety goggles with side protection.

Skin protection

• hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

• type of material

NBR (Nitrile rubber)

• material thickness

0,4 mm.

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- **breakthrough times of the glove material**

>480 minutes (permeation: level 6)

- **other protection measures**

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection

Respiratory protection necessary at: Aerosol or mist formation. Type: A (against organic gases and vapours with a boiling point of > 65 °C , colour code: Brown).

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid (fluid)
Colour	colourless
Odour	like: Acetic acid
Odour threshold	No data available

Other physical and chemical parameters

pH (value)	4 at 20 °C
Melting point/freezing point	0 °C
Initial boiling point and boiling range	This information is not available.
Flash point	not determined
Evaporation rate	no data available
Flammability (solid, gas)	not relevant (fluid)
<u>Explosive limits</u>	
• lower explosion limit (LEL)	this information is not available
• upper explosion limit (UEL)	this information is not available
Explosion limits of dust clouds	not relevant
Vapour pressure	16 hPa at 20 °C
Density	1,115 g/cm ³
Vapour density	This information is not available.
Bulk density	Not applicable
Relative density	Information on this property is not available.

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according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Neutralization Buffer NB

Solubility(ies)

Water solubility miscible in any proportion

Partition coefficient

n-octanol/water (log KOW) This information is not available.

Auto-ignition temperature 485 °C

Viscosity not determined

Explosive properties none

Oxidising properties none

9.2 Other information

There is no additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity

corrosive to metals

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: Strong oxidiser

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

different metals

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

Acute toxicity

• Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	ATE
guanadine hydrochloride	50-01-1	oral	475
acetic acid, of a concentration of more than 10 per cent, by weight, of acetic acid	64-19-7	dermal	1.060

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Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant

• Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

• Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

vomiting

• If in eyes

Causes serious eye irritation

• If inhaled

data are not available

• If on skin

Frequently or prolonged contact with skin may cause dermal irritation

Other information

None.

SECTION 12: Ecological information

12.1 Toxicity

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
guanadine hydrochloride	50-01-1	LC50	1.759 mg/l	orfe (Leuciscus idus)	48 hours
acetic acid, of a concentration of more than 10 per cent, by weight, of acetic acid	64-19-7	LC50	75 mg/l	bluegill (Lepomis macrochirus)	96 hours

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Neutralization Buffer NB

12.2 Process of degradability

Data are not available.

Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time
acetic acid, of a concentration of more than 10 per cent, by weight, of acetic acid	64-19-7	biotic/abiotic	99 %	30 d

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	Log KOW
guanadine hydrochloride	50-01-1	-1,7
acetic acid, of a concentration of more than 10 per cent, by weight, of acetic acid	64-19-7	-0,17

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Slightly hazardous to water.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulation.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.


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according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Neutralization Buffer NB

SECTION 14: Transport information

14.1	UN number	2790
14.2	UN proper shipping name	ACETIC ACID SOLUTION
	Hazardous ingredients	Acetic acid, of a concentration of more than 10 per cent, by weight, of acetic acid
14.3	Transport hazard class(es)	
	Class	8 (corrosive substances)
14.4	Packing group	III (substance presenting low danger)
14.5	Environmental hazards	none (non-environmentally hazardous acc. to the dangerous goods regulations)
14.6	Special precautions for user	
	Provisions for dangerous goods (ADR) should be complied within the premises.	
14.7	Transport in bulk according to Annex II of MARPOL and the IBC Code	
	The cargo is not intended to be carried in bulk.	
14.8	Information for each of the UN Model Regulations	
	• Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)	
	UN number	2790
	Proper shipping name	ACETIC ACID SOLUTION
	Particulars in the transport document	UN2790, ACETIC ACID SOLUTION, mixture, 8, III, (E)
	Class	8
	Classification code	C3
	Packing group	III
	Danger label(s)	8
		
	Special provisions (SP)	597, 647
	Excepted quantities (EQ)	E1
	Limited quantities (LQ)	5 L
	Transport category (TC)	3
	Tunnel restriction code (TRC)	E
	Hazard identification No	80


safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Neutralization Buffer NB

• International Maritime Dangerous Goods Code (IMDG)

UN number	2790
Proper shipping name	ACETIC ACID SOLUTION
Particulars in the shipper's declaration	UN2790, ACETIC ACID SOLUTION, mixture, 8, III
Class	8
Packing group	III
Danger label(s)	8
	
Special provisions (SP)	-
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-A, S-B
Stowage category	A
Segregation group	1 - Acids

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

- **Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)**

None of the ingredients are listed.

- **Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)**

None of the ingredients are listed.

- **Regulation 850/2004/EC on persistent organic pollutants (POP)**

None of the ingredients are listed.

- **Restrictions according to REACH, Annex XVII**

None of the ingredients are listed.

- **List of substances subject to authorisation (REACH, Annex XIV)**

None of the ingredients are listed.

- **Limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products (2004/42/EC, Deco-Paint Directive)**

VOC content 10 - <25 %

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Neutralization Buffer NB

• Directive on industrial emissions (VOCs, 2010/75/EU)

VOC content 10 - <25 %

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

None of the ingredients are listed.

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

None of the ingredients are listed.

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

None of the ingredients are listed.

15.2 Chemical Safety Assessment

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

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
91/322/EEC	Commission Directive on establishing indicative limit values by implementing Council Directive 80/1107/EEC
Acute Tox.	acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EmS	Emergency Schedule
Eye Dam.	seriously damaging to the eye
Eye Irrit.	irritant to the eye
Flam. Liq.	flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IMDG	International Maritime Dangerous Goods Code
index No	the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
log KOW	n-octanol/water
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
Met. Corr.	corrosive to metals
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Neutralization Buffer NB

Abbr.	Descriptions of used abbreviations
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	corrosive to skin
Skin Irrit.	irritant to skin
VOC	Volatile Organic Compounds
vPvB	very Persistent and very Bioaccumulative

Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H226	flammable liquid and vapour
H290	may be corrosive to metals
H302	harmful if swallowed
H314	causes severe skin burns and eye damage
H315	causes skin irritation
H318	causes serious eye damage
H319	causes serious eye irritation

Disclaimer

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

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Washing Buffer PA

Version: 1.0 en

date of compilation: 2015-08-06

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

1.1 Product identifier

Identification of the substance **Washing Buffer PA**
Article number
Registration number (REACH) not relevant (mixture)

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

Identified uses: laboratory chemical

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG
Schoemperlenstr. 3-5
D-76185 Karlsruhe
Germany

Telephone: +49 (0) 721 - 56 06 0

Telefax: +49 (0) 721 - 56 06 149

e-mail: sicherheit@carlroth.de

Website: www.carlroth.de

Competent person responsible for the safety data sheet : Department Health, Safety and Environment

e-mail (competent person) : sicherheit@carlroth.de

1.4 Emergency telephone number

Emergency information service **Poison Centre Munich: +49/(0)89 19240**

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Classification acc. to GHS			
Section	Hazard class	Hazard class and category	Hazard statement
2.6	flammable liquids	(Flam. Liq. 2)	H225
3.1O	acute toxicity (oral)	(Acute Tox. 4)	H302
3.2	skin corrosion/irritation	(Skin Irrit. 2)	H315
3.3	serious eye damage/eye irritation	(Eye Irrit. 2)	H319
3.8D	specific target organ toxicity - single exposure (narcotic effects, drowsiness)	(STOT SE 3)	H336

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Washing Buffer PA

Remarks

For full text of H-phrases: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

Narcotic effects.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal word

Danger

Pictograms



Hazard statements

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Precautionary statements

Precautionary statements - prevention

P210	Keep away from heat, hot surfaces, sparks, open flames, hot surfaces. No smoking.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements - response

P303+P361+P353	IF ON SKIN (or hair): take off immediately all contaminated clothing. Rinse skin with water/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.
P312	Call a POISON CENTER/doctor if you feel unwell.

Hazardous ingredients for labelling:

propan-2-ol, guanadine hydrochloride

Labelling of packages where the contents do not exceed 125 ml

Signal word: **Danger**

Symbol(s)



contains: Propan-2-ol, Guanadine hydrochloride

2.3 Other hazards

There is no additional information.

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according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU






Washing Buffer PA

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description of the mixture

Composition/information on ingredients.

Name of substance	Identifier	wt%	Classification acc. to 1272/2008/EC	Pictograms
propan-2-ol	CAS No 67-63-0 EC No 200-661-7 Index No 603-117-00-0 REACH Reg. No 01-2119457558-25-XXXX	25 - 50	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319 STOT SE 3 / H336	 
guanadine hydrochloride	CAS No 50-01-1 EC No 200-002-3 Index No 607-148-00-0	25 - 50	Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319	

Remarks

For full text of abbreviations: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off contaminated clothing.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower. In all cases of doubt, or when symptoms persist, seek medical advice.

Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.

Following ingestion

Rinse mouth with water (only if the person is conscious). Call a doctor.

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4.2 Most important symptoms and effects, both acute and delayed

Vomiting, Causes slight to moderate irritation, Irritation

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings
water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Combustible. Vapours may form explosive mixtures with air.

Hazardous combustion products

In case of fire may be liberated: May produce toxic fumes of carbon monoxide if burning.

5.3 Advice for firefighters

Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. Avoid contact with skin and eyes.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains.

Advices on how to clean up a spill

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

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according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Washing Buffer PA

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provision of sufficient ventilation.

- **Measures to prevent fire as well as aerosol and dust generation**



Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharge. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches.

Advice on general occupational hygiene

Do not to eat, drink and smoke in work areas. Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice

Ground/bond container and receiving equipment.

- **Ventilation requirements**

Use local and general ventilation.

- **Specific designs for storage rooms or vessels**

Recommended storage temperature: 15 - 25 °C.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [mg/m ³]	STEL [mg/m ³]	Source
UK	propan-2-ol	67-63-0	WEL	999	1.250	EH40/2005

Notation

STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period unless otherwise specified

TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average

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Relevant DNELs/DMELs/PNECs and other threshold levels

• relevant DNELs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
propan-2-ol	67-63-0	DNEL	888 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
propan-2-ol	67-63-0	DNEL	500 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects

• relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment	Exposure time
propan-2-ol	67-63-0	PNEC	552	marine sediment	continuous
propan-2-ol	67-63-0	PNEC	141	marine water	continuous
propan-2-ol	67-63-0	PNEC	552	freshwater sediment	continuous
propan-2-ol	67-63-0	PNEC	141	freshwater	continuous
propan-2-ol	67-63-0	PNEC	28	soil	continuous

8.2 Exposure controls

Individual protection measures (personal protective equipment)



Eye/face protection

Use safety goggle with side protection.

Skin protection

• hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

• type of material

Butyl caoutchouc (butyl rubber)

• material thickness

0,65 mm.

• breakthrough times of the glove material

>480 minutes (permeation: level 6)

Washing Buffer PA**• other protection measures**

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Flame-retardant protective clothing.

Respiratory protection

Respiratory protection necessary at: Aerosol or mist formation. Type: A (against organic gases and vapours with a boiling point of > 65 °C, colour code: Brown).

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

Environmental exposure controls

Keep away from drains, surface and ground water.

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

Physical state	liquid (fluid)
Colour	colourless
Odour	characteristic
Odour threshold	No data available

Other physical and chemical parameters

pH (value) This information is not available.

Melting point/freezing point not determined

Initial boiling point and boiling range 82 °C

Flash point 12 - 20 °C

Evaporation rate no data available

Flammability (solid, gas) not relevant (fluid)

Explosive limits

• lower explosion limit (LEL) 2 vol%

• upper explosion limit (UEL) 13,4 vol%

Explosion limits of dust clouds not relevant

• lower explosion limit (LEL) 50 g/m³

• upper explosion limit (UEL) 330 g/m³

Vapour pressure 43 hPa at 20 °C

Density 1,063 g/cm³

Vapour density This information is not available.

Bulk density Not applicable

Relative density Information on this property is not available.

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Solubility(ies)

Water solubility miscible in any proportion

Partition coefficient

n-octanol/water (log KOW) This information is not available.

Auto-ignition temperature 425 °C

Viscosity not determined

Explosive properties none

Oxidising properties none

9.2 Other information

There is no additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity

risk of ignition, Vapours can form explosive mixtures with air

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: Strong oxidiser

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

Acute toxicity

• Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	ATE
guanadine hydrochloride	50-01-1	oral	475

Skin corrosion/irritation

Causes skin irritation.

Washing Buffer PA

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant

- **Specific target organ toxicity - single exposure**

May cause drowsiness or dizziness.

- **Specific target organ toxicity - repeated exposure**

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

- **If swallowed**

data are not available

- **If in eyes**

Causes serious eye irritation

- **If inhaled**

narcosis

- **If on skin**

Frequently or prolonged contact with skin may cause dermal irritation

Other information

None.

SECTION 12: Ecological information

12.1 Toxicity

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
propan-2-ol	67-63-0	EC50	>13.000 mg/l	daphnia magna	48 hours
propan-2-ol	67-63-0	EC50	>1.000 mg/l	Scenedesmus quadricauda	72 hours
propan-2-ol	67-63-0	LC50	1.400 mg/l	bluegill (Lepomis macrochirus)	96 hours
guanadine hydrochloride	50-01-1	LC50	1.759 mg/l	orfe (Leuciscus idus)	48 hours

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12.2 Process of degradability

Data are not available.

Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time
propan-2-ol	67-63-0	biotic/abiotic	95 %	21 d
propan-2-ol	67-63-0		95 %	21 d

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	Log KOW
propan-2-ol	67-63-0	0,05
guanadine hydrochloride	50-01-1	-1,7

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Slightly hazardous to water.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulation.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.


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SECTION 14: Transport information

14.1	UN number	1219
14.2	UN proper shipping name	ISOPROPANOL
	Hazardous ingredients	Propan-2-ol
14.3	Transport hazard class(es)	
	Class	3 (flammable liquids)
14.4	Packing group	II (substance presenting medium danger)
14.5	Environmental hazards	none (non-environmentally hazardous acc. to the dangerous goods regulations)
14.6	Special precautions for user	
	Provisions for dangerous goods (ADR) should be complied within the premises.	
14.7	Transport in bulk according to Annex II of MARPOL and the IBC Code	
	The cargo is not intended to be carried in bulk.	
14.8	Information for each of the UN Model Regulations	
	• Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)	
	UN number	1219
	Proper shipping name	ISOPROPANOL
	Particulars in the transport document	UN1219, ISOPROPANOL, mixture, 3, II, (D/E)
	Class	3
	Classification code	F1
	Packing group	II
	Danger label(s)	3
		
	Special provisions (SP)	601
	Excepted quantities (EQ)	E2
	Limited quantities (LQ)	1 L
	Transport category (TC)	2
	Tunnel restriction code (TRC)	D/E
	Hazard identification No	33


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Washing Buffer PA

• International Maritime Dangerous Goods Code (IMDG)

UN number	1219
Proper shipping name	ISOPROPANOL
Particulars in the shipper's declaration	UN1219, ISOPROPANOL, mixture, 3, II, 12 °C c.c.
Class	3
Packing group	II
Danger label(s)	3
	
Special provisions (SP)	-
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
EmS	F-E, S-D
Stowage category	B

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

- **Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)**

None of the ingredients are listed.

- **Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)**

None of the ingredients are listed.

- **Regulation 850/2004/EC on persistent organic pollutants (POP)**

None of the ingredients are listed.

- **Restrictions according to REACH, Annex XVII**

None of the ingredients are listed.

- **List of substances subject to authorisation (REACH, Annex XIV)**

None of the ingredients are listed.

- **Seveso Directive**

96/82/EC (Seveso II)				
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes)		Notes
7b	highly flammable	5.000	50.000	24)

Notation

24) Highly flammable liquids: substances and preparations having a flash point lower than 21 °C and which are not extremely flammable (risk phrase R 11, second indent)

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2012/18/EU (Seveso III)

No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements		Notes
P5c	flammable liquids (cat. 2, 3)	5.000	50.000	51)

Notation

51) Flammable liquids, categories 2 or 3 not covered by P5a and P5b

• Limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products (2004/42/EC, Deco-Paint Directive)

VOC content 25 - 50 %

• Directive on industrial emissions (VOCs, 2010/75/EU)

VOC content 25 - 50 %

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

None of the ingredients are listed.

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

None of the ingredients are listed.

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

None of the ingredients are listed.

15.2 Chemical Safety Assessment

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

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits, Table 1: List of approved workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)
EmS	Emergency Schedule
Eye Dam.	seriously damaging to the eye

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Abbr.	Descriptions of used abbreviations
Eye Irrit.	irritant to the eye
Flam. Liq.	flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IMDG	International Maritime Dangerous Goods Code
index No	the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
log KOW	n-octanol/water
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	corrosive to skin
Skin Irrit.	irritant to skin
STOT SE	specific target organ toxicity - single exposure
VOC	Volatile Organic Compounds
vPvB	very Persistent and very Bioaccumulative

Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H225	highly flammable liquid and vapour
H302	harmful if swallowed
H315	causes skin irritation
H319	causes serious eye irritation
H336	may cause drowsiness or dizziness

Disclaimer

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

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Resuspension Buffer RB

Version: 1.0 en

date of compilation: 2015-08-05

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

1.1 Product identifier

Identification of the substance	Resuspension Buffer RB
Article number	
Registration number (REACH)	not relevant (mixture)

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

Identified uses:	laboratory chemical
-------------------------	---------------------

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG
Schoemperlenstr. 3-5
D-76185 Karlsruhe
Germany

Telephone: +49 (0) 721 - 56 06 0

Telefax: +49 (0) 721 - 56 06 149

e-mail: sicherheit@carlroth.de

Website: www.carlroth.de

Competent person responsible for the safety data sheet	: Department Health, Safety and Environment
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e-mail (competent person)	: sicherheit@carlroth.de
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1.4 Emergency telephone number

Emergency information service	Poison Centre Munich: +49/(0)89 19240
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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

not required

Signal word	not required
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2.3 Other hazards

There is no additional information.

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Resuspension Buffer RB

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description of the mixture

This mixture does not meet the criteria for classification.

SECTION 4: First aid measures

4.1 Description of first aid measures



Following inhalation

Provide fresh air.

Following skin contact

Rinse skin with water/shower. In case of skin irritation, consult a physician.

Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings
water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Non-combustible.

Hazardous combustion products

In case of fire may be liberated: May produce toxic fumes of carbon monoxide if burning.

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Resuspension Buffer RB

5.3 Advice for firefighters

Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Wipe up with absorbent material (e.g. cloth, fleece).

6.2 Environmental precautions

Keep away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up

Other information relating to spills and releases

Place in appropriate containers for disposal.

Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

No special measures are necessary.

Advice on general occupational hygiene

Do not to eat, drink and smoke in work areas. Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice

Not required.

• Ventilation requirements

Use local and general ventilation.

• Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C.

7.3 Specific end use(s)

No information available.

Resuspension Buffer RB

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

not relevant

8.2 Exposure controls

Individual protection measures (personal protective equipment)



Eye/face protection

Use safety goggle with side protection.

Skin protection

- **hand protection**

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

- **type of material**

NBR (Nitrile rubber)

- **material thickness**

>0,11 mm.

- **breakthrough times of the glove material**

>480 minutes (permeation: level 6)

- **other protection measures**

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection

Usually no personal respirative protection necessary.

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Colour	this information is not available
Odour	this information is not available
Odour threshold	No data available

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Resuspension Buffer RB

Other physical and chemical parameters

pH (value)	This information is not available.
Melting point/freezing point	0 °C
Initial boiling point and boiling range	100 °C
Flash point	not determined
Evaporation rate	no data available
Flammability (solid, gas)	not relevant (fluid)
<u>Explosive limits</u>	
• lower explosion limit (LEL)	this information is not available
• upper explosion limit (UEL)	this information is not available
Explosion limits of dust clouds	not relevant
Vapour pressure	This information is not available.
Density	This information is not available.
Vapour density	This information is not available.
Bulk density	Not applicable
Relative density	Information on this property is not available.
<u>Solubility(ies)</u>	
Water solubility	miscible in any proportion
<u>Partition coefficient</u>	
n-octanol/water (log KOW)	This information is not available.
Auto-ignition temperature	Information on this property is not available.
Viscosity	not determined
Explosive properties	none
Oxidising properties	none

9.2 Other information

There is no additional information.

Resuspension Buffer RB

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: Strong oxidiser

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant

- **Specific target organ toxicity - single exposure**

Shall not be classified as a specific target organ toxicant (single exposure).

- **Specific target organ toxicity - repeated exposure**

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

- **If swallowed**

data are not available

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according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Resuspension Buffer RB

- **If in eyes**

data are not available

- **If inhaled**

data are not available

- **If on skin**

data are not available

Other information

None.

SECTION 12: Ecological information

12.1 Toxicity

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

12.2 Process of degradability

The substance is readily biodegradable.

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Non-hazardous to water.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Consult the appropriate local waste disposal expert about waste disposal.

Sewage disposal-relevant information

Do not empty into drains.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Resuspension Buffer RB

SECTION 14: Transport information

- | | | |
|------|---|--|
| 14.1 | UN number | (not subject to transport regulations) |
| 14.2 | UN proper shipping name | not relevant |
| 14.3 | Transport hazard class(es) | not relevant |
| | Class | - |
| 14.4 | Packing group | not relevant |
| 14.5 | Environmental hazards | none (non-environmentally hazardous acc. to the dangerous goods regulations) |
| 14.6 | Special precautions for user | |
| | There is no additional information. | |
| 14.7 | Transport in bulk according to Annex II of MARPOL and the IBC Code | |
| | The cargo is not intended to be carried in bulk. | |
| 14.8 | Information for each of the UN Model Regulations | |
| | • Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) | |
| | Not subject to ADR, RID and ADN. | |
| | • International Maritime Dangerous Goods Code (IMDG) | |
| | Not subject to IMDG. | |

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

- **Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)**

None of the ingredients are listed.

- **Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)**

None of the ingredients are listed.

- **Regulation 850/2004/EC on persistent organic pollutants (POP)**

None of the ingredients are listed.

- **Restrictions according to REACH, Annex XVII**

None of the ingredients are listed.

- **List of substances subject to authorisation (REACH, Annex XIV)**

None of the ingredients are listed.

- **Limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products (2004/42/EC, Deco-Paint Directive)**

VOC content 0 %

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Resuspension Buffer RB

• Directive on industrial emissions (VOCs, 2010/75/EU)

VOC content 0 %

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

None of the ingredients are listed.

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

None of the ingredients are listed.

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

None of the ingredients are listed.

15.2 Chemical Safety Assessment

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

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
IMDG	International Maritime Dangerous Goods Code
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
PBT	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
VOC	Volatile Organic Compounds
vPvB	very Persistent and very Bioaccumulative

Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)

List of relevant phrases (code and full text as stated in chapter 2 and 3)

not relevant.

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Resuspension Buffer RB

Disclaimer

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

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Washing Solution PB

Version: 1.0 en

date of compilation: 2015-08-06

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

1.1 Product identifier

Identification of the substance	Washing Solution PB
Article number	
Registration number (REACH)	not relevant (mixture)

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

Identified uses:	laboratory chemical
------------------	---------------------

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG
Schoemperlenstr. 3-5
D-76185 Karlsruhe
Germany

Telephone: +49 (0) 721 - 56 06 0

Telefax: +49 (0) 721 - 56 06 149

e-mail: sicherheit@carlroth.de

Website: www.carlroth.de

Competent person responsible for the safety data sheet	: Department Health, Safety and Environment
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e-mail (competent person)	: sicherheit@carlroth.de
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1.4 Emergency telephone number

Emergency information service	Poison Centre Munich: +49/(0)89 19240
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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

not required

Signal word	not required
--------------------	--------------

2.3 Other hazards

There is no additional information.

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Washing Solution PB

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description of the mixture

This mixture does not meet the criteria for classification.

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off contaminated clothing.

Following inhalation

Provide fresh air.

Following skin contact

Rinse skin with water/shower.

Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings
water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

The product itself does not burn.

Washing Solution PB

Hazardous combustion products

In case of fire may be liberated: May produce toxic fumes of carbon monoxide if burning.

5.3 Advice for firefighters

Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Wipe up with absorbent material (e.g. cloth, fleece).

6.2 Environmental precautions

Keep away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

No special measures are necessary.

Advice on general occupational hygiene

Do not to eat, drink and smoke in work areas. Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice

Not required.

• Ventilation requirements

Use local and general ventilation.

• Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C.

7.3 Specific end use(s)

No information available.

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Washing Solution PB

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

not relevant

8.2 Exposure controls

Individual protection measures (personal protective equipment)



Eye/face protection

Use safety goggle with side protection.

Skin protection

• hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

• type of material

NBR (Nitrile rubber)

• material thickness

>0,11 mm.

• breakthrough times of the glove material

>480 minutes (permeation: level 6)

• other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection

Usually no personal respirative protection necessary.

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Colour	this information is not available
Odour	this information is not available
Odour threshold	No data available

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Washing Solution PB

Other physical and chemical parameters

pH (value)	This information is not available.
Melting point/freezing point	0 °C
Initial boiling point and boiling range	100 °C
Flash point	not determined
Evaporation rate	no data available
Flammability (solid, gas)	not relevant (fluid)
<u>Explosive limits</u>	
• lower explosion limit (LEL)	this information is not available
• upper explosion limit (UEL)	this information is not available
Explosion limits of dust clouds	not relevant
Vapour pressure	This information is not available.
Density	This information is not available.
Vapour density	This information is not available.
Bulk density	Not applicable
Relative density	Information on this property is not available.
<u>Solubility(ies)</u>	
Water solubility	miscible in any proportion
<u>Partition coefficient</u>	
n-octanol/water (log KOW)	This information is not available.
Auto-ignition temperature	Information on this property is not available.
Viscosity	not determined
Explosive properties	none
Oxidising properties	none

9.2 Other information

There is no additional information.

Washing Solution PB

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: Strong oxidiser

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant

- **Specific target organ toxicity - single exposure**

Shall not be classified as a specific target organ toxicant (single exposure).

- **Specific target organ toxicity - repeated exposure**

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

- **If swallowed**

data are not available

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Washing Solution PB

- **If in eyes**

data are not available

- **If inhaled**

data are not available

- **If on skin**

data are not available

Other information

None.

SECTION 12: Ecological information

12.1 Toxicity

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

12.2 Process of degradability

The substance is readily biodegradable.

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Non-hazardous to water.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Consult the appropriate local waste disposal expert about waste disposal.

Sewage disposal-relevant information

Do not empty into drains.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Washing Solution PB

SECTION 14: Transport information

- | | | |
|------|---|--|
| 14.1 | UN number | (not subject to transport regulations) |
| 14.2 | UN proper shipping name | not relevant |
| 14.3 | Transport hazard class(es) | not relevant |
| | Class | - |
| 14.4 | Packing group | not relevant |
| 14.5 | Environmental hazards | none (non-environmentally hazardous acc. to the dangerous goods regulations) |
| 14.6 | Special precautions for user | |
| | There is no additional information. | |
| 14.7 | Transport in bulk according to Annex II of MARPOL and the IBC Code | |
| | The cargo is not intended to be carried in bulk. | |
| 14.8 | Information for each of the UN Model Regulations | |
| | • Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) | |
| | Not subject to ADR, RID and ADN. | |
| | • International Maritime Dangerous Goods Code (IMDG) | |
| | Not subject to IMDG. | |

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

- **Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)**

None of the ingredients are listed.

- **Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)**

None of the ingredients are listed.

- **Regulation 850/2004/EC on persistent organic pollutants (POP)**

None of the ingredients are listed.

- **Restrictions according to REACH, Annex XVII**

None of the ingredients are listed.

- **List of substances subject to authorisation (REACH, Annex XIV)**

None of the ingredients are listed.

- **Limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products (2004/42/EC, Deco-Paint Directive)**

VOC content 0 %

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Washing Solution PB

• Directive on industrial emissions (VOCs, 2010/75/EU)

VOC content 0 %

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

None of the ingredients are listed.

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

None of the ingredients are listed.

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

None of the ingredients are listed.

15.2 Chemical Safety Assessment

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

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
IMDG	International Maritime Dangerous Goods Code
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
PBT	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
VOC	Volatile Organic Compounds
vPvB	very Persistent and very Bioaccumulative

Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)

List of relevant phrases (code and full text as stated in chapter 2 and 3)

not relevant.

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Washing Solution PB

Disclaimer

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

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Elution Buffer XEB

Version: 1.0 en

date of compilation: 2015-08-06

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

1.1 Product identifier

Identification of the substance	Elution Buffer XEB
Article number	
Registration number (REACH)	not relevant (mixture)

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

Identified uses:	laboratory chemical
-------------------------	---------------------

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG
Schoemperlenstr. 3-5
D-76185 Karlsruhe
Germany

Telephone: +49 (0) 721 - 56 06 0

Telefax: +49 (0) 721 - 56 06 149

e-mail: sicherheit@carlroth.de

Website: www.carlroth.de

Competent person responsible for the safety data sheet	: Department Health, Safety and Environment
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e-mail (competent person)	: sicherheit@carlroth.de
----------------------------------	--

1.4 Emergency telephone number

Emergency information service	Poison Centre Munich: +49/(0)89 19240
-------------------------------	--

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

not required

Signal word	not required
--------------------	--------------

2.3 Other hazards

There is no additional information.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description of the mixture

This mixture does not meet the criteria for classification.

SECTION 4: First aid measures

4.1 Description of first aid measures



Following inhalation

Provide fresh air.

Following skin contact

Rinse skin with water/shower. In case of skin irritation, consult a physician.

Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings
water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

The product itself does not burn.

Hazardous combustion products

In case of fire may be liberated: May produce toxic fumes of carbon monoxide if burning.

5.3 Advice for firefighters

Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Wipe up with absorbent material (e.g. cloth, fleece).

6.2 Environmental precautions

Keep away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provision of sufficient ventilation.

Advice on general occupational hygiene

Do not to eat, drink and smoke in work areas. Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice

Not required.

• Ventilation requirements

Use local and general ventilation.

• Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

not relevant

8.2 Exposure controls

Individual protection measures (personal protective equipment)



Eye/face protection

Use safety goggles with side protection.

Skin protection

- **hand protection**

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

- **type of material**

NBR (Nitrile rubber)

- **material thickness**

>0,11 mm.

- **breakthrough times of the glove material**

>480 minutes (permeation: level 6)

- **other protection measures**

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection

Usually no personal respiratory protection necessary.

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Colour	acc. to product description
Odour	this information is not available
Odour threshold	No data available

Other physical and chemical parameters

pH (value)	This information is not available.
Melting point/freezing point	0 °C
Initial boiling point and boiling range	100 °C
Flash point	not determined
Evaporation rate	no data available
Flammability (solid, gas)	not relevant (fluid)
<u>Explosive limits</u>	
• lower explosion limit (LEL)	this information is not available
• upper explosion limit (UEL)	this information is not available
Explosion limits of dust clouds	not relevant
Vapour pressure	This information is not available.
Density	This information is not available.
Vapour density	This information is not available.
Bulk density	Not applicable
Relative density	Information on this property is not available.
<u>Solubility(ies)</u>	
Water solubility	miscible in any proportion
<u>Partition coefficient</u>	
n-octanol/water (log KOW)	This information is not available.
Auto-ignition temperature	Information on this property is not available.
Viscosity	not determined
Explosive properties	none
Oxidising properties	none

9.2 Other information

There is no additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: Strong oxidiser

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant

• Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

• Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

data are not available

- **If in eyes**

data are not available

- **If inhaled**

data are not available

- **If on skin**

data are not available

Other information

None.

SECTION 12: Ecological information

12.1 Toxicity

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

12.2 Process of degradability

The substance is readily biodegradable.

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Strongly hazardous to water.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Consult the appropriate local waste disposal expert about waste disposal.

Sewage disposal-relevant information

Do not empty into drains.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

SECTION 14: Transport information

- | | | |
|-------------|--|--|
| 14.1 | UN number | (not subject to transport regulations) |
| 14.2 | UN proper shipping name | not relevant |
| 14.3 | Transport hazard class(es) | not relevant |
| | Class | - |
| 14.4 | Packing group | not relevant |
| 14.5 | Environmental hazards | none (non-environmentally hazardous acc. to the dangerous goods regulations) |
| 14.6 | Special precautions for user | |
| | There is no additional information. | |
| 14.7 | Transport in bulk according to Annex II of MARPOL and the IBC Code | |
| | The cargo is not intended to be carried in bulk. | |
| 14.8 | Information for each of the UN Model Regulations | |
| | <ul style="list-style-type: none"> • Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
Not subject to ADR, RID and ADN. • International Maritime Dangerous Goods Code (IMDG)
Not subject to IMDG. | |

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- Relevant provisions of the European Union (EU)**
- **Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)**
None of the ingredients are listed.
 - **Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)**
None of the ingredients are listed.
 - **Regulation 850/2004/EC on persistent organic pollutants (POP)**
None of the ingredients are listed.
 - **Restrictions according to REACH, Annex XVII**
None of the ingredients are listed.
 - **List of substances subject to authorisation (REACH, Annex XIV)**
None of the ingredients are listed.
 - **Limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products (2004/42/EC, Deco-Paint Directive)**
VOC content 0 %
 - **Directive on industrial emissions (VOCs, 2010/75/EU)**
VOC content 0 %

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

None of the ingredients are listed.

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

None of the ingredients are listed.

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

None of the ingredients are listed.

15.2 Chemical Safety Assessment

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

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
IMDG	International Maritime Dangerous Goods Code
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
PBT	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
VOC	Volatile Organic Compounds
vPvB	very Persistent and very Bioaccumulative

Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)

List of relevant phrases (code and full text as stated in chapter 2 and 3)

not relevant.

Disclaimer

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

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according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Lysis Buffer LS

Version: 1.0 en

date of compilation: 2015-08-05

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

1.1 Product identifier

Identification of the substance **Lysis Buffer LS**

Article number

Registration number (REACH) not relevant (mixture)

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

Identified uses: laboratory chemical

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG
Schoemperlenstr. 3-5
D-76185 Karlsruhe
Germany

Telephone: +49 (0) 721 - 56 06 0

Telefax: +49 (0) 721 - 56 06 149

e-mail: sicherheit@carlroth.de

Website: www.carlroth.de

Competent person responsible for the safety data sheet : Department Health, Safety and Environment

e-mail (competent person) : sicherheit@carlroth.de

1.4 Emergency telephone number

Emergency information service **Poison Centre Munich: +49/(0)89 19240**

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Classification acc. to GHS			
Section	Hazard class	Hazard class and category	Hazard statement
3.2	skin corrosion/irritation	(Skin Irrit. 2)	H315
3.3	serious eye damage/eye irritation	(Eye Dam. 1)	H318

Remarks

For full text of H-phrases: see SECTION 16.

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according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



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2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal word **Danger**

Pictograms



Hazard statements

H315 Causes skin irritation.
H318 Causes serious eye damage.

Precautionary statements

Precautionary statements - prevention

P280 Wear protective gloves/eye protection/face protection.

Precautionary statements - response

P302+P352 IF ON SKIN: wash with plenty of 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.

Hazardous ingredients for labelling: sodium dodecyl sulphate

Labelling of packages where the contents do not exceed 125 ml

Signal word: **Danger**

Symbol(s)



H318 Causes serious eye damage.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
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.
contains: Sodium dodecyl sulphate

2.3 Other hazards

There is no additional information.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description of the mixture

Composition/information on ingredients.

Name of substance	Identifier	wt%	Classification acc. to 1272/2008/EC	Pictograms
sodium dodecyl sulphate	CAS No 151-21-3 EC No 205-788-1 REACH Reg. No 01-2119489463-28	1 - 2,5	Flam. Sol. 2 / H228 Acute Tox. 4 / H302 Acute Tox. 4 / H332 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 STOT SE 3 / H335 Aquatic Chronic 3 / H412	  
caustic soda	CAS No 1310-73-2 EC No 215-185-5 Index No 011-002-00-6 REACH Reg. No 01-2119457892-27-XXXX	0,5 - < 1	Met. Corr. 1 / H290 Skin Corr. 1A / H314 Eye Dam. 1 / H318	

Remarks

For full text of abbreviations: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Self-protection of the first aider.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower. In all cases of doubt, or when symptoms persist, seek medical advice.

Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

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Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Risk of serious damage to eyes, Causes slight to moderate irritation

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings
water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

The product itself does not burn.

Hazardous combustion products

In case of fire may be liberated: May produce toxic fumes of carbon monoxide if burning.

5.3 Advice for firefighters

Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. Avoid contact with eyes.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains.

Advices on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

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Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provision of sufficient ventilation.

Advice on general occupational hygiene

Do not to eat, drink and smoke in work areas. Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice

Not required.

- **Ventilation requirements**

Use local and general ventilation.

- **Specific designs for storage rooms or vessels**

Recommended storage temperature: 15 - 25 °C.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

not relevant

Relevant DNELs/DMELs/PNECs and other threshold levels

- **relevant DNELs of components of the mixture**

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
sodium dodecyl sulphate	151-21-3	DNEL	4.060 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
sodium dodecyl sulphate	151-21-3	DNEL	285 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
caustic soda	1310-73-2	DNEL	1 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
caustic soda	1310-73-2	DNEL	1 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects

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• relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment	Exposure time
sodium dodecyl sulphate	151-21-3	PNEC	0,358	marine sediment	continuous
sodium dodecyl sulphate	151-21-3	PNEC	0,01	marine water	continuous
sodium dodecyl sulphate	151-21-3	PNEC	3,58	freshwater sediment	continuous
sodium dodecyl sulphate	151-21-3	PNEC	0,102	freshwater	continuous
sodium dodecyl sulphate	151-21-3	PNEC	1.084	sewage treatment plant (STP)	continuous
sodium dodecyl sulphate	151-21-3	PNEC	0,654	soil	continuous

8.2 Exposure controls

Individual protection measures (personal protective equipment)



Eye/face protection

Use safety goggle with side protection.

Skin protection

• hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

• type of material

NBR (Nitrile rubber)

• material thickness

>0,11 mm.

• breakthrough times of the glove material

>480 minutes (permeation: level 6)

• other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection

Usually no personal respiratory protection necessary.

Environmental exposure controls

Keep away from drains, surface and ground water.

Lysis Buffer LS**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****Appearance**

Physical state	liquid (fluid)
Colour	this information is not available
Odour	this information is not available
Odour threshold	No data available

Other physical and chemical parameters

pH (value)	>12 at 20 °C
Melting point/freezing point	0 °C
Initial boiling point and boiling range	100 °C
Flash point	not determined
Evaporation rate	no data available
Flammability (solid, gas)	not relevant (fluid)
<u>Explosive limits</u>	
• lower explosion limit (LEL)	this information is not available
• upper explosion limit (UEL)	this information is not available
Explosion limits of dust clouds	not relevant
Vapour pressure	This information is not available.
Density	This information is not available.
Vapour density	This information is not available.
Bulk density	Not applicable
Relative density	Information on this property is not available.
<u>Solubility(ies)</u>	
Water solubility	miscible in any proportion
<u>Partition coefficient</u>	
n-octanol/water (log KOW)	This information is not available.
Auto-ignition temperature	Information on this property is not available.
Viscosity	not determined
Explosive properties	none
Oxidising properties	none

Lysis Buffer LS**9.2 Other information**

There is no additional information.

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

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: Strong oxidiser

Exothermic reaction with: Acids

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information**11.1 Information on toxicological effects**

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

Acute toxicity**• Acute toxicity of components of the mixture**

Name of substance	CAS No	Exposure route	ATE
sodium dodecyl sulphate	151-21-3	oral	1.427

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant

• Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

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• Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

data are not available

• If in eyes

data are not available

• If inhaled

data are not available

• If on skin

Frequently or prolonged contact with skin may cause dermal irritation

Other information

None.

SECTION 12: Ecological information

12.1 Toxicity

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
sodium dodecyl sulphate	151-21-3	EC50	6 mg/l	daphnia magna	48 hours
sodium dodecyl sulphate	151-21-3	EC50	53 mg/l	Grünalge	72 hours
sodium dodecyl sulphate	151-21-3	LC50	4,5 mg/l	bluegill (Lepomis macrochirus)	96 hours

12.2 Process of degradability

Data are not available.

Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time
sodium dodecyl sulphate	151-21-3	biotic/abiotic	90 %	28 d

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

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Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW	BOD5/COD
sodium dodecyl sulphate	151-21-3		1,6	

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Slightly hazardous to water.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulation.

Sewage disposal-relevant information

Do not empty into drains.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

SECTION 14: Transport information

- 14.1 UN number (not subject to transport regulations)
- 14.2 UN proper shipping name not relevant
- 14.3 Transport hazard class(es) not relevant
- Class -
- 14.4 Packing group not relevant
- 14.5 Environmental hazards none (non-environmentally hazardous acc. to the dangerous goods regulations)
- 14.6 Special precautions for user
There is no additional information.
- 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code
The cargo is not intended to be carried in bulk.

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according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



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14.8 Information for each of the UN Model Regulations

- **Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)**

Not subject to ADR, RID and ADN.

- **International Maritime Dangerous Goods Code (IMDG)**

Not subject to IMDG.

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

- **Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)**

None of the ingredients are listed.

- **Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)**

None of the ingredients are listed.

- **Regulation 850/2004/EC on persistent organic pollutants (POP)**

None of the ingredients are listed.

- **Restrictions according to REACH, Annex XVII**

None of the ingredients are listed.

- **List of substances subject to authorisation (REACH, Annex XIV)**

None of the ingredients are listed.

- **Limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products (2004/42/EC, Deco-Paint Directive)**

VOC content 0 %

- **Directive on industrial emissions (VOCs, 2010/75/EU)**

VOC content 0 %

- **Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II**

None of the ingredients are listed.

- **Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)**

None of the ingredients are listed.

- **Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)**

None of the ingredients are listed.

15.2 Chemical Safety Assessment

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

Lysis Buffer LS

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Chronic	hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
BCF	BioConcentration Factor
BOD	Biochemical Oxygen Demand
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
COD	chemical oxygen demand
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
Eye Dam.	seriously damaging to the eye
Eye Irrit.	irritant to the eye
Flam. Sol.	flammable solid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IMDG	International Maritime Dangerous Goods Code
index No	the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
log KOW	n-octanol/water
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
Met. Corr.	corrosive to metals
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	corrosive to skin
Skin Irrit.	irritant to skin
STOT SE	specific target organ toxicity - single exposure
VOC	Volatile Organic Compounds
vPvB	very Persistent and very Bioaccumulative

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according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Lysis Buffer LS

Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H228	flammable solid
H290	may be corrosive to metals
H302	harmful if swallowed
H314	causes severe skin burns and eye damage
H315	causes skin irritation
H318	causes serious eye damage
H332	harmful if inhaled
H335	may cause respiratory irritation
H412	harmful to aquatic life with long lasting effects

Disclaimer

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