



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 14.08.2015

Version 3.6

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

1.1 Product identifier

Catalogue No. 109438

Product name Buffer solution (boric acid/potassium chloride/sodium hydroxide), traceable to SRM from NIST and PTB pH 10.00 (20°C) Certipur®

REACH Registration Number This product is a mixture. REACH Registration Number see section 3.

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

Identified uses Reagent for analysis

For additional information on uses please refer to the Merck Chemicals portal (www.merckgroup.com).

1.3 Details of the supplier of the safety data sheet

Company Merck KGaA * 64271 Darmstadt * Germany * Phone: +49 6151 72-0

Responsible Department EQ-RS * e-mail: prodsafe@merckgroup.com

1.4 Emergency telephone number Please contact the regional company representation in your country.

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

This mixture is not classified as dangerous according to European Union legislation.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

Safety data sheet available on request.

2.3 Other hazards

None known.

SECTION 3. Composition/information on ingredients

Chemical nature Aqueous solution of inorganic and organic compounds.

3.1 Substance

Not applicable

3.2 Mixture

Hazardous components (REGULATION (EC) No 1272/2008)

Chemical Name (Concentration)

CAS-No.	Registration number	Classification
orthoboric acid, sodium salt (1:n)	($\geq 0,3\%$ - $< 0,5\%$)	
13840-56-7	*)	

Reproductive toxicity, Category 1B, H360FD

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Catalogue No.	109438
Product name	Buffer solution (boric acid/potassium chloride/sodium hydroxide), traceable to SRM from NIST and PTB pH 10.00 (20°C) Certipur®

*) A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

For the full text of the H-Statements mentioned in this Section, see Section 16.

Hazardous components (1999/45/EC)

Chemical Name (Concentration)

CAS-No.	Classification
orthoboric acid, sodium salt (1:n) (< 0,5 %)	
13840-56-7	Repr.Cat.2; R60-61

For the full text of the R-phrases mentioned in this Section, see Section 16.

SECTION 4. First aid measures

4.1 Description of first aid measures

After inhalation: fresh air.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.

After eye contact: rinse out with plenty of water.

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed

We have no description of any toxic symptoms.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Not combustible.

Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Special protective equipment for firefighters

In the event of fire, wear self-contained breathing apparatus.

Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert.

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Catalogue No.	109438
Product name	Buffer solution (boric acid/potassium chloride/sodium hydroxide), traceable to SRM from NIST and PTB pH 10.00 (20°C) Certipur®

Advice for emergency responders: Protective equipment see section 8.

6.2 Environmental precautions

Do not empty into drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10).

Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

Indications about waste treatment see section 13.

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Observe label precautions.

Hygiene measures

Change contaminated clothing. Wash hands after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed.

Recommended storage temperature see product label.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection

Safety glasses

Hand protection

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Catalogue No.	109438
Product name	Buffer solution (boric acid/potassium chloride/sodium hydroxide), traceable to SRM from NIST and PTB pH 10.00 (20°C) Certipur®

splash contact:	Break through time:	> 480 min
	Glove material:	Nitrile rubber
	Glove thickness:	0,11 mm
	Break through time:	> 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Other protective equipment
protective clothing

Respiratory protection
Not required; except in case of aerosol formation.

Environmental exposure controls
Do not empty into drains.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid
Colour	colourless
Odour	odourless
Odour Threshold	Not applicable
pH	10,0 at 20 °C
Melting point	-6 °C
Boiling point/boiling range	110 °C at 1.013 hPa
Flash point	Not applicable
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Catalogue No.	109438
Product name	Buffer solution (boric acid/potassium chloride/sodium hydroxide), traceable to SRM from NIST and PTB pH 10.00 (20°C) Certipur®

Vapour pressure	No information available.
Relative vapour density	No information available.
Density	1,00 g/cm ³ at 20 °C
Relative density	No information available.
Water solubility	at 20 °C soluble
Partition coefficient: n-octanol/water	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none

9.2 Other data

none

SECTION 10. Stability and reactivity

10.1 Reactivity

See section 10.3

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Because of low concentration of the dissolved substance(s): none; exception: the generally known reaction partners of water.

10.4 Conditions to avoid

no information available

10.5 Incompatible materials

no information available

10.6 Hazardous decomposition products

no information available

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Mixture

Acute oral toxicity

This information is not available.

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Catalogue No.	109438
Product name	Buffer solution (boric acid/potassium chloride/sodium hydroxide), traceable to SRM from NIST and PTB pH 10.00 (20°C) Certipur®

Acute inhalation toxicity

This information is not available.

Acute dermal toxicity

This information is not available.

Skin irritation

This information is not available.

Eye irritation

This information is not available.

Sensitisation

This information is not available.

Germ cell mutagenicity

This information is not available.

Carcinogenicity

This information is not available.

Reproductive toxicity

This information is not available.

Teratogenicity

This information is not available.

Specific target organ toxicity - single exposure

This information is not available.

Specific target organ toxicity - repeated exposure

This information is not available.

Aspiration hazard

This information is not available.

11.2 Further information

Hazardous properties cannot be excluded, but are relatively improbable due to the low concentration of the dissolved substance(s).

Handle in accordance with good industrial hygiene and safety practice.

Components

orthoboric acid, sodium salt (1:n)

No information available.

SECTION 12. Ecological information

Mixture

12.1 Toxicity

No information available.

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Substance(s) in the mixture do(es) not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII, or a PBT/vPvB assessment was not conducted.

12.6 Other adverse effects

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Catalogue No.	109438
Product name	Buffer solution (boric acid/potassium chloride/sodium hydroxide), traceable to SRM from NIST and PTB pH 10.00 (20°C) Certipur®

Discharge into the environment must be avoided.

Components

orthoboric acid, sodium salt (1:n)

No information available.

SECTION 13. Disposal considerations

Waste treatment methods

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14. Transport information

Land transport (ADR/RID)

14.1 - 14.6	Not classified as dangerous in the meaning of transport regulations.
--------------------	--

Inland waterway transport (ADN)

Not relevant

Air transport (IATA)

14.1 - 14.6	Not classified as dangerous in the meaning of transport regulations.
--------------------	--

Sea transport (IMDG)

14.1 - 14.6	Not classified as dangerous in the meaning of transport regulations.
--------------------	--

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

SECTION 15. Regulatory information

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

EU regulations

Major Accident Hazard	SEVESO III
Legislation	Not applicable

National legislation

Storage class	10 - 13
---------------	---------

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Catalogue No.	109438
Product name	Buffer solution (boric acid/potassium chloride/sodium hydroxide), traceable to SRM from NIST and PTB pH 10.00 (20°C) Certipur®

SECTION 16. Other information

Full text of H-Statements referred to under sections 2 and 3.

H360FD May damage fertility. May damage the unborn child.

Full text of R-phrases referred to under sections 2 and 3

R60 May impair fertility.

R61 May cause harm to the unborn child.

Training advice

Provide adequate information, instruction and training for operators.

Labelling (67/548/EEC or 1999/45/EC)

The product does not need to be labelled in accordance with EC directives or respective national laws.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Regional representation

This information is given on the authorised Safety Data Sheet for your country.

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.