

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

1.1. Product identifier

Name of product

CaliMat buffer solution pH 9.00

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

Recommended intended purpose(s)

Chemical analytics

1.3. Details of the supplier of the safety data sheet

Manufacturer/distributor

Knick Elektronische Messgeräte GmbH & Co. KG
Beuckestr. 22, D-14163 Berlin
Phone +49 30 80191 - 0, Fax +49 30 80191 - 200
Email: info@knick.de
Web: www.knick.de

Advice

Development, Product Safety, Chemicals/Sensors
Phone +49 30 80191 370
Email (competent person):
sdb@knick.de

1.4. Emergency telephone number

Emergency advice

Gemeinsames Giftinformationszentrum der Länder M-V, Sachsen,
Sachsen-Anhalt und Thüringen (GGIZ)
Phone (German) +49-361-73 07 30

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Reproductive toxicity

Category 1B, H360FD

2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP/GHS]



Signal word

Danger

Hazard statements

H360FD - May damage fertility. Suspected of damaging the unborn child.

Safety instructions

P201 - Obtain special instructions before use.

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

P308 + P313 - If exposed or concerned: Get medical advice/attention.

For professional users only

2.3. Other hazards

Results of PBT and vPvB assessment

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Description

Aqueous solution.

Buffer solution (boric acid/sodium hydroxide)

Hazardous ingredients

CAS no.	EC no.	Designation	[wt%]	Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
10043-35-3	233-139-2	Boric acid	≥ 0.1 - 0.9	Repr. 1B, H360FD

SECTION 4: First aid measures

4.1. Description of first aid measures

General Notes

Remove contaminated clothing.

In case of inhalation

Ensure fresh air.

Refer for medical treatment.

In case of skin contact

In case of contact with skin wash off immediately with plenty of water.

In case of eye contact

Remove contact lenses.

In case of contact with eyes rinse carefully with plenty of lukewarm water and seek medical treatment.

In case of ingestion

In case of illness, seek medical advice.

Give plenty of water to drink in small sips.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3. Indication of any immediate medical attention or special treatment needed

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Product does not burn; fire-extinguishing activities according to surrounding fire.

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Non-flammable.

5.3. Advice for firefighters

Special protective equipment for firefighters

Use breathing apparatus with independent air supply (isolated).

Firefighting operations, rescue, and clearing work where combustion and smolder gases are present may only be carried out with heavy breathing apparatus.



Additional information

Cool endangered containers with water spray jet.

Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment, and emergency procedures

Ensure adequate ventilation.

Use personal protective clothing.

Use breathing apparatus if exposed to vapors/dust/aerosol.

6.2. Environmental precautions

Collect contaminated water/firefighting water separately.

Do not discharge into the drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning

Absorb in liquid-binding material (e.g., sand, diatomite, acid binder, general-purpose binder, sawdust).

Use chemical neutralizers.

After collecting, dispose of the material according to regulations.

Additional information

Information on safe handling: see section 7.

Information on personal protective equipment: see section 8.

Information on disposal: see section 13.

6.4. Reference to other sections

No information available.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Take the usual precautions when handling chemicals.

General protective measures

Avoid contact with eyes and skin.

Do not inhale aerosols.

Hygiene measures

Observe work hygiene regulations.

During work do not eat, drink, smoke, or take drugs.

Remove soiled or soaked clothing immediately.

Wash hands before breaks and after work.

Advice on protection against fire and explosion

No special measures necessary.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and containers

Only use containers that are approved specifically for the substance/product.

Further information on storage conditions

Keep containers tightly closed and store in a cool, well-ventilated place.

Avoid exposure to direct sunlight.

Storage class 11

7.3. Specific end use(s)

Recommendation(s) for intended use

Ready-to-use pH buffer solutions for use in industrial processes and in the laboratory

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ingredients with limit values that require monitoring at the workplace

CAS no.	Designation	Type	[mg/m ³]	[ppm]	Peak	Remark
10043-35-3	Boric acid and sodium borates	8 hours	0.5		2(l)	AGS, Y, 10

8.2. Exposure controls

Respiratory protection

Breathing apparatus in the event of aerosol or mist formation.

Hand protection

Glove material specification [make/type, thickness, permeation time/life, wetting resistance]: Nitrile; 0.1 mm; 480 min; 60 min, e.g., "Dermatril L" made by KCL email: Vertrieb@kcl.de

The selection of a suitable glove depends not only on the material but also on other quality aspects and varies from manufacturer to manufacturer.

The exact breakthrough time of the glove material is to be requested from the protective glove manufacturer and must be strictly adhered to.

Eye protection

Protective goggles with side protection

Skin protection

Protective clothing

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form Liquid	Color	Odor
Odor threshold	Blue	Odorless
No data available		

Important health, safety, and environmental information

	Value	Temperature	at	Method	Remark
pH value in delivery state	9	20 °C			
Boiling temperature	approx. 100 °C		1013 hPa		
Flash point	Not applicable				
Flammability (solid)					Not applicable
Flammability (gas)					Not applicable
Ignition temperature					Not applicable
Auto-ignition					The product is not self-igniting.
Lower explosion limit	Not determined				
Upper explosion limit	Not determined				
Vapor pressure	23 hPa	20 °C			
Relative density	approx. 1 g/cm ³	20 °C			
Vapor density					No data available

	Value	Temperature	at	Method	Remark
Solubility in water					Miscible
Partition coefficient (log POW)					No data available
Viscosity					No data available
Solvent concentration					Not applicable
Vaporization rate Not applicable					
Explosive properties The product is not explosive.					
9.2. Other information No information available.					

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

No information available.

10.3. Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

With regard to possible decomposition products, refer to section 5.

Thermal decomposition

Remark No decomposition if used as directed.

Additional information

No decomposition if used as directed.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity/Irritability/sensitization

	Value/Validation	Species	Method	Remark
LD50 acute oral				No data available
LD50 acute dermal				No data available
LC50 acute inhalation				No data available
Skin irritability	Low irritant effect – not necessary to label			

	Value/Validation	Species	Method	Remark
Eye irritability	Low irritant effect – not necessary to label			
Skin sensitization	Non-sensitizing			
Respiratory system sensitization	Non-sensitizing			
Specific target organ toxicity (single exposure)				
Not applicable				
Specific target organ toxicity (repeated exposure)				
Not applicable				
Aspiration hazard				
Not applicable				
Experience from practice				
Contact with the skin and eyes may cause irritation. Hazardous properties cannot be ruled out but are relatively improbable due to the low concentration of the dissolved substance(s). For boron compounds in general: After absorption, nausea and vomiting, agitation, convulsions, CNS disorders, cardiovascular disorders.				
General remarks				
The product is to be handled with the caution usual with chemicals.				

SECTION 12: Environmental information

12.1. Toxicity

No information available.

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No bioaccumulation

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

Not applicable

12.6. Other adverse effects

General Notes

Do not allow undiluted or large quantities to reach groundwater, water bodies, or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recommendations for the product

There are no harmonized regulations on the disposal of chemicals in the member states of the EU. In Germany, the Recycling and Waste Management Act (KrW/AbfG) stipulates recycling as a requirement. This means that a distinction must be made between "waste for recycling" and "waste for disposal". Particular aspects – in the main concerning delivery – are also governed by the federal states.

Recommendations for packaging

Disposal in accordance with local regulations.

Recommended cleaning agent

Water

General information

The waste code must be allocated in compliance with the EWC regulation referring to the specific process and the sector.

SECTION 14: Transport information

Further information on transport

Not dangerous goods as defined by the transport regulations - ADR/RID, IMDG, ICAO/IATA-DGR.

Special precautions for the user

No information available.

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

Not applicable

SECTION 15: Regulatory information

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

National regulations

Information on employment restrictions

Observe employment restrictions for young people.

Observe national laws concerning employment restrictions. National and local regulations concerning chemicals must be observed.

Water hazard class

1

Mixing rule according to Annex 4 of the VwVwS (General Administrative Regulation under the Federal Water Act on the Classification of Substances Hazardous to Water in Water Hazard Classes), dated 1999
Low hazards to waters

Hazardous Incident Ordinance

Not subject to the Hazardous Incident Ordinance.

15.2. Chemical safety assessment

For mixtures, a chemical safety assessment is generally not possible or required.

SECTION 16: Other information

Recommended uses and restrictions

National and local regulations concerning chemicals must be observed.

Further information

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

Please observe the following disclaimer! --- Our safety data sheets have been compiled according to effective EU-directives, WITHOUT taking into account the special national directives concerning the handling of hazardous substances. Each user is responsible for the implementation of the national special regulations.

Wording of the hazard statements specified in section 3 (not the classification of the mixture!)

H360FD May damage fertility. Suspected of damaging the unborn child.