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

### 1.1. Product identifier

**Name of product** CaliMat buffer solution pH 2.00

### 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](mailto:info@knick.de)  
Web: [www.knick.de](http://www.knick.de)

**Advice**

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

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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/GHS]**

**Additional information**

This mixture is not classified as hazardous according to Directive (EC) No. 1272/2008 [GHS].

### 2.2. Label elements

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

**Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]**

**Remark**

This product is not classified as hazardous according to Directive (EC) No. 1272/2008 [GHS].

### 2.3. Other hazards

**Results of PBT and vPvB assessment**

Not applicable

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Description

Aqueous solution.

Buffer solution (Citric acid / Sodium hydroxide / Hydrogen chloride)

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## 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.

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## 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.

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## 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.

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## 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

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## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No information available.

### 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" from the company 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

**Odor threshold**

No data available.

**Color**

colorless

**Odor**

Odorless

### Important health, safety, and environmental information

	Value	Temperature	at	Method	Remark
<b>pH value in delivery state</b>	2	20 °C			Determined undiluted
<b>Boiling temperature</b>	approx. 100 °C		1013 hPa		
<b>Flash point</b>	Not applicable				
<b>Flammability (solid)</b>					Not applicable
<b>Ignition temperature</b>					Not applicable
<b>Auto-ignition</b>					The product is not self-igniting.
<b>Lower explosion limit</b>	Not determined				
<b>Upper explosion limit</b>	Not determined				
<b>Vapor pressure</b>	23 hPa	20 °C			
<b>Relative density</b>	approx. 1 g/cm <sup>3</sup>	20 °C			
<b>Bulk density</b>					Not applicable
<b>Vapor density</b>					No data available
<b>Solubility in water</b>		20 °C			Miscible
<b>Partition coefficient (log POW)</b>					No data available
<b>Viscosity</b>					No data available
<b>Solvent separation test</b>					Not applicable
<b>Solvent concentration</b>					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**

**Materials to avoid**

No hazardous reactions known.

**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
<b>LD50 acute oral</b>				No data available
<b>LD50 acute dermal</b>				No data available
<b>LC50 acute inhalation</b>				No data available
<b>Skin irritability</b>	Low irritant effect – not necessary to label			
<b>Eye irritability</b>	Low irritant effect – not necessary to label			
<b>Skin sensitization</b>	Non-sensitizing			
<b>Sensitization respiratory system</b>	Non-sensitizing			

**Specific target organ toxicity (single exposure)**

Not applicable

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**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).

**General remarks**

The product is to be handled with the caution usual with chemicals.

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## 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.

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## 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 Notes**

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

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## 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.

<b>Water hazard class</b>	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
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<b>Hazardous Incident Ordinance</b>	Not subject to the Hazardous Incident Ordinance.
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### 15.2. Chemical safety assessment

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

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## 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.