

pH 4.00 Calibration Buffer

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

1.1 - Product identifier

Trade name/designation pH 4.00 Calibration Buffer
Chemical name
Product-type Mixture
Product code EMpHbuf400
CAS No.

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

Relevant identified uses - Reagent for calibrating pH probes
Uses advised against - Other

1.3 - Details of the supplier of the safety data sheet

Water-I.D. GmbH
Daimlerstr. 20
76344 Eggenstein Germany
+49 (0) 721 - 78 20 29 - 0 Fax+49 (0) 721 - 78 20 29 - 11
EHS / Compliance: lab@water-id.com

1.4 - Emergency telephone number

- 포이즌 컨트롤 센터 뮌헨
전화 : +49 (0) 89/19 24 0
독일
24 시간 서비스
언어 : 독일어, 영어
다음에서 전화하십시오 : Korea, Republic of

SECTION 2: Hazards identification

2.1 - Classification of the substance or mixture

Not Classified	Not classified
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2.2 - Label elements

Signal word
Hazard pictograms
Hazard statements

Precautionary statements

2.3 - Other hazards

PBT-substance. - No information available.
vPvB-substance. - No information available.
Other hazards which do not result in classification - No information available.

SECTION 3: Composition / information on ingredients

- Not applicable

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3.1 - Substances

Not applicable

3.2 - Mixtures

Chemical name	No	%	Class	Spec. concentrations
water	CAS No. : 7732-18-5 Index No. : EC No. : 231-791-2	90 - 100		Not applicable
citric acid	CAS No. : 77-92-9 Index No. : EC No. : 201-069-1	< 5		Not applicable
hydrpchloric acid	CAS No. : 7647-01-0 Index No. : 017-002-01-X EC No. : 231-595-7	< 1		Not applicable
sodium hydroxide	CAS No. : 1310-73-2 Index No. : 011-002-00-6 EC No. : 215-185-5	< 1		Not applicable

SECTION 4: First aid measures

4.1 - Description of first aid measures

Following inhalation

- No special measures are necessary.
- Provide fresh air.

Following skin contact

- Wash immediately with: Water
- When in doubt or if symptoms are observed, get medical advice.

After eye contact

- Rinse immediately carefully and thoroughly with eye-bath or water.
- In case of eye irritation consult an ophthalmologist.

After ingestion

- Rinse mouth thoroughly with water.
- Do NOT induce vomiting.

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

Symptoms and effects - Following inhalation

- No information available.

Symptoms and effects - Following skin contact

- No information available.

Symptoms and effects - After eye contact

- No information available.

Symptoms and effects - After ingestion

- No information available.

4.3 - Indication of any immediate medical attention and special treatment needed

SECTION 5: Firefighting measures

5.1 - Extinguishing media

Suitable extinguishing media

- ABC-powder
- Carbon dioxide (CO₂)
- Foam
- Extinguishing powder

Unsuitable extinguishing media

- Full water jet

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5.2 - Special hazards arising from the substance or mixture

Special hazards arising from the substance or mixture - No information available.

5.3 - Advice for firefighters

- Co-ordinate fire-fighting measures to the fire surroundings.

SECTION 6: Accidental release measures

6.1 - Personal precautions, protective equipment and emergency procedures

For non-emergency personnel - Use personal protection equipment.
- Provide adequate ventilation.

For emergency responders - No information available.

6.2 - Environmental precautions

- No information available.

6.3 - Methods and material for containment and cleaning up

Methods and material for containment - No information available.

Methods and material for cleaning up - Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
- Wash with plenty of water.

Inappropriate techniques - No information available.

SECTION 7: Handling and storage

7.1 - Precautions for safe handling

Recommendation - No special technical protective measures are necessary.

Advices on general occupational hygiene - No information available.

7.2 - Conditions for safe storage, including any incompatibilities

- No information available.

SECTION 8: Exposure controls/personal protection

8.1 - Control parameters

8.2 - Exposure controls

Appropriate engineering controls - No information available.

8.3. - Individual protection measures, such as personal protective equipment

- Suitable protective clothing: lab coat



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SECTION 9: Physical and chemical properties

9.1 - Information on basic physical and chemical properties

<u>Physical state</u>	Liquid	<u>Appearance</u>	Liquid
<u>Colour</u>	red	<u>Odour</u>	odourless
Odour threshold		No data available	
pH		4 @ 20°C	
Melting point		No data available	
Freezing point		No data available	
Boiling point		100 °C	
Flash point		No data available	
Evaporation rate		No data available	
flammability		No data available	
Lower explosion limit		No data available	
Upper explosion limit		No data available	
Vapour pressure		No data available	
Vapour density		No data available	
Relative density		No data available	
Density		1,001 g/cm ³ @ 20°C	
Solubility (Water)		No data available	
Solubility (Ethanol)		No data available	
Solubility (Acetone)		No data available	
Solubility (Organic solvents)		No data available	
Log KOC		No data available	
Auto-ignition temperature		No data available	
Decomposition temperature		No data available	
Kinematic viscosity		No data available	
Dynamic viscosity		No data available	

9.2 - Other information

VOC content	No data available
Minimum ignition energy	No data available
Conductivity	No data available

SECTION 10: Stability and reactivity

10.1 - Reactivity

- This material is considered to be non-reactive under normal use conditions.

10.2 - Chemical stability

- The product is chemically stable under recommended conditions of storage, use and temperature.

10.3 - Possibility of hazardous reactions

- No hazardous reaction when handled and stored according to provisions.

10.4 - Conditions to avoid

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- No information available.

10.5 - Incompatible materials

- No information available.

10.6 - Hazardous decomposition products

- Does not decompose when used for intended uses.

SECTION 11: Toxicological information

11.1 - Information on toxicological effects

Acute toxicity - Not classified

Toxicity : Mixture

LD50 oral (rat)	No data available
LD50 dermal (rat)	No data available
LD50 dermal (rabbit)	No data available
LC50 inhalation (rat)	No data available
LC50 inhalation dusts and mists (rat)	No data available
LC50 inhalation vapours (rat)	No data available

- Based on available data, the classification criteria are not met.

Toxicity : Substances

citric acid (77-92-9)

LD50 oral (rat)	> 3000 mg/kg (TOXNET)
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Skin corrosion/irritation - Not classified

Serious eye damage/eye irritation - Not classified

Respiratory or skin sensitisation - Not classified

Germ cell mutagenicity - Not classified

Carcinogenicity - Not classified

Reproductive toxicity - Not classified

STOT-single exposure - Not classified

STOT-repeated exposure - Not classified

Aspiration hazard - Not classified

SECTION 12: Ecological information

12.1 - Toxicity

Toxicity : Mixture

EC50 48 hr crustacea	No data available
LC50 96 hr fish	No data available

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ErC50 algae	No data available
ErC50 other aquatic plants	No data available
NOEC chronic fish	No data available
NOEC chronic crustacea	No data available
NOEC chronic algae	No data available
NOEC chronic other aquatic plants	No data available

Toxicity : Substances

citric acid (77-92-9)

LC50 96 hr fish	440 mg/l
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- The substance/mixture does not fulfill the criteria of the acute aquatic toxicity according to Regulation (EC) No 1272/2008 [CLP], Annex I.

12.2 - Persistence and degradability

Biochemical oxygen demand (BOD)	No data available
Chemical oxygen demand (COD)	No data available
% of biodegradation in 28 days	No data available

- No information available.

12.3 - Bioaccumulative potential

Bioconcentration factor (BCF)	No data available
Log KOC	No data available

- No indication of bioaccumulation potential.

12.4 - Mobility in soil

- No information available.

12.6 - Other adverse effects

- No information available.

SECTION 13: Disposal considerations

13.1 - Waste treatment methods

Waste treatment methods - Dispose of waste according to applicable legislation.

Sewage disposal - No information available.

Special precautions for waste treatment - No information available.

Community or national or regional provisions - No information available.

SECTION 14: Transport information

14.1 - UN number

UN number (ADR) : Not applicable

UN number (RID) : Not applicable

UN number (IMDG) : Not applicable

UN number (IATA) : Not applicable

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14.2 - UN proper shipping name

14.3 - Transport hazard class(es)

ADR Classification code: :

14.4 - Packing group

14.5 - Environmental hazards

Environmental hazards :

Marine pollutant :

14.6 - Special precautions for user

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

SECTION 15: Regulatory information

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

VOC content No data available

- Substance/product listed in the following inventories:

Community safety, health and environmental provisions, national laws Existing Chemicals List (KECI) (CAS No. : 7732-18-5, CAS No. : 77-92-9, CAS No. : 7647-01-0, CAS No. : 1310-73-2).
K-REACH registration exemption substances list (CAS No. : 7732-18-5).
Designated existing substances List (First Batch) (CAS No. : 7647-01-0, CAS No. : 1310-73-2).

15.2 - Chemical Safety Assessment

Chemical safety assessment carried out for the product - No information available.

SECTION 16: Other information

SDS versions

Version	Issue date	Description of the amendments
1	22.04.2020	Creation

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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