

Safety data sheet

format according to Regulation (EC) No.1907/2006 (REACH)

Trade name: Calibration liquid pH10

Revision: 18.03.2024
Version: 2 en

Date of compilation: 20.09.2022
Replaces version of: 20.09.2022

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

1.1 Product identifier

Identification of the substance: Calibration liquid pH10.
Registration number (REACH): This substance is exempted under Article 2(7) and Annex V of REACH.
UFI number: USNG-W029-A00X-HSCW

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

Relevant identified uses: Calibration of pH electrodes.

1.3 Details of the supplier of the safety data sheet

Supplier: TriOS Mess- und Datentechnik GmbH
Address: Bürgermeister-Brötje-Straße 25, 26180 Rastede, Germany
Telephone: +49 (0) 4402 69670-0
Fax: +49 (0) 4402 69670-20
E-Mail: safety@trios.de
Website: www.trios.de

Competent person responsible for the safety data sheet:

E-Mail: safety@trios.de

1.4 Emergency telephone number

Telephone number: Giftinformationszentrum Nord (Germany)
+49 551-19240

Section 2: Hazards identification

2.1 Classification of the substance or mixture


This mixture is classified according to regulation (EC) No 1272/2008 as follows:
Repr. 1B, H360FD: Reproductive toxicity, Category 1B, H360FD

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2.2 Label elements

Hazard pictograms:	GHS08 
Signal word:	Danger
Hazard statements:	H360FD: May damage fertility. May damage 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.
Additional information:	For industrial users only.

2.3 Other hazards

None known.

PBT: not applicable; vPVB: not applicable

Section 3: Composition/information on ingredients

3.2 Mixtures

Name of substance:	Disodium tetraborate
CAS No:	1330-43-4
EC No:	215-540-4
Registration number (REACH):	-
Ratio:	≥ 0,3 - ≤ 2,5 %
Classification according to Regulation (EC) No 1272/2008 (CLP):	Repr. 1B, H360FD
Additional information:	Substance of Very High Concern (SVHC); Listed in Candidate list (Repr. A57c)

Candidate list: Substances meeting the criteria referred to in Article 57 and for eventual inclusion in Annex XIV Repr. A57c Toxic for reproduction (article 57c)

Section 4: First aid measures

4.1 Description of first aid measures

General notes:	No special measures are necessary.
Following inhalation:	Provide fresh air.
Following skin contact:	Clear with water.
Following eye contact:	Rinse cautiously with water for several minutes.
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.

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4.3 Indication of any immediate medical attention and special treatment needed

None.

Section 5: Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing media:

Match the extinguishing measures to the surrounding area.
Standard extinguishing agents such as carbon dioxide, foam, powder and water mist can be used.

Unsuitable extinguishing media:

None.

5.2 Special hazards arising from the substance or mixture

No information available.

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

Section 6: Accidental release measure

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

Use appropriate protective equipment in accordance with Section 8 to prevent contamination of skin, eyes, and personal clothing.

Operational forces:

Protective equipment see section 8.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid binders, universal binders, sawdust) and place in suitable container for disposal.

Rinse residues with water.

6.4 Reference to other sections

For information on safe handling, see section 7.

For information on personal protective equipment, see section 8.

For information on disposal, see section 13.

Section 7: Handling and storage

7.1 Precautions for safe handling

Read the safety data sheet, before handling the product.

Avoid releasing the mixture into the environment.

Keep the product away from food.

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7.2 Conditions for safe storage, including any incompatibilities

Information on the storage condition:	Keep container tightly closed. Observe hints for combined storage.
Special designs for storage rooms and containers:	Recommended storage temperature 15-25 °C 6.1D (Non-flammable acutely toxic or chronically active substances)
Storage class:	6.1D (Non-flammable acutely toxic or chronically active substances)

7.3 Specific end use(s)

No information available.

Section 8: Exposure controls/personal protection

8.1 Control parameters

National limit value (Germany)

Occupational exposure limit value (Workplace Exposure Limits):

Name of substance	CAS No	TWA [ppm]	TWA [mg/m ³]	remark	Data Source
Disodium tetraborate	1330-43-4	-	0,5	2 (I), Y, 10	TRGS 900

Note:

TWA (Time-Weighted value; long-term exposure limit): The time-weighted average measured or calculated for a reference period of eight hours (unless otherwise specified).

Y: The substance is not teratogenic; if you work within the occupational exposure limit value and the biological limit value (BGW).

10: The occupational exposure limit refers to the element content of the corresponding metal.

Category I: Substances for which the local effect is limit-determining or which are respiratory sensitisers.

8.2 Exposure controls

Suitable technical control device	Not required
Individual protection measures (personal protective equipment)	Eye/face protection: Use safety goggle with side protection.
	Hand protection: Wear suitable protective gloves. The hand protection material must be impermeable and resistant to the substance.
	Respiratory protection: Respiratory protection recommended.
Limitation and monitoring of environmental exposure:	Keep away from drains, surface and ground water.

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Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Colourless
Odour:	Odorless
Melting point/Freezing point:	0 °C
Boiling point or initial boiling point and boiling range:	100 °C
Flammability:	Not applicable.
Lower and upper explosion limits:	No data available.
Flash point:	Not applicable.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
pH value:	10 at 20 °C
Kinematic viscosity:	No data available.
Solubility:	Completely mixable.
Partition coefficient: n-octanol/water:	No data available.
Vapour pressure:	23 hPa at 20 °C
Density:	1.0291 g/cm ³ at 20 °C
relative vapour density:	No data available.
Particle characteristics:	Not applicable.

9.2 Other Information

None.

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 conditions of temperature.

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

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

10.5 Incompatible materials

data not available.

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10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

Section 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity:	Shall not be classified as acutely toxic.
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.
Germ cell mutagenicity:	Shall not be classified as germ cell mutagenic.
Carcinogenicity:	Shall not be classified as carcinogenic.
Reproductive toxicity:	May damage fertility. May damage the unborn child
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.

Information on the substances contained in the mixture:

Disodium tetraborate

Acute toxicity:

Exposure route	Endpoint	Value	Species	Method
oral	LD50	2660 mg/kg	rat	No specification

11.2 Information about other hazards

There is no other information available.

Section 12: Ecological information

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.

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12.5 Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0.1%.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

Data are not available.

Information on the substances contained in the mixture:

Disodium tetraborate:

Aquatic toxicity:

Endpoint	Value	Species	Exposure time
LC50	141 mg/L	Crustaceans	96 h
EC50	15.4 mg/L	Algae	48 h

Section 13: Disposal considerations

13.1 Waste treatment methods

Consult the appropriate local waste disposal expert about waste disposal. Do not allow to enter drains.

Hazardous properties of the waste:

HP 10: toxic for reproduction

Section 14: Transport information

The product is not dangerous, according to the regulations in force in the field of road transport of dangerous goods (ADR), by rail (RID), by sea (IMDG Code) and by air (IATA).

14.1 UN number or ID number

Not subject to transport regulations.

14.2 UN proper shipping name

Not assigned.

14.3 Transport hazard class(es)

None.

14.4 Packing group

Not assigned.

14.5 Environmental hazards

Non-environmentally hazardous acc. to the dangerous goods regulations.

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14.6 Special precautions for user

There is no additional information.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

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):

Restriction according to REACH, Annex XVII: Restriction condition 3 and 30.

National inventories

Follow national regulation for work with chemical agents.

Germany:

Water hazard class (WGK): 1 (slightly hazardous to water)

Storage class (LGK) according to TRGS 510: 6.1D (Non-flammable acutely toxic or chronically active substances)

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

Section 16: Other information

Indication of changes (revised safety data sheet):

Section 1: UFI number added.

Section 2: This mixture is classified according to Regulation (EC) No 1272/2008 as follows: Repr. 1B, H360FD: Reproductive toxicity, Category 1B, H360FD. Hazard pictograms, signal word, hazard statements and precautionary statements adapted.

Section 3: Disodium tetraborate

Section 5: Special hazards arising from the substance or mixture: no information available.

Section 8: Parameters to be monitored: AGW, Disodium tetraborate, Change in personal protective equipment

Section 9: Colour, melting point/freezing point, boiling point or initial boiling point and boiling range, flash point, vapour pressure, density

Section 11: Reproductive toxicity: 6.1D (Non-flammable acutely toxic or chronically active substances)

Section 12: Bioaccumulative potential: no information available

Section 13: Waste treatment methods; Hazardous properties of waste:

HP 10: toxic for reproduction

Section 15: Safety, health and environmental regulations/legislation specific for the substance or mixture: Restriction according to REACH, Annex XVII: Restriction condition 3 and 30; Storage class (LGK) according to TRGS 510: 6.1D (Non-flammable acutely toxic or chronically active substances)

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Abkürzungen und Akronyme:

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 relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road).
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.
DGR	Dangerous Goods Regulations (see IATA/DGR).
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (eg on growth) during a specified time interval.
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).
EINECS	European Inventory of Existing Commercial Chemical Substances.
ELINCS	European List of Notified Chemical Substances.
IATA	International Air Transport Association.
IMDG	International Maritime Dangerous Goods Code.
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval.
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval.
LGK	Lagerklasse gemäß TRGS 510, Germany (Storage class).
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).
TWA	Time-Weighted value (Limit value for long-term exposure): Time-weighted average measured or calculated for a reference period of eight hours (unless otherwise specified).
TRGS	Technische Regeln für GefahrStoffe; Germany (Technical Rules for Hazardous Substances).
vPvB	Very Persistent and very Bioaccumulative.

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Key literature references and sources for data:

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations

concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Technical Rules for Hazardous Substances (TRGS)
