

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2022

Reviewed on 05/24/2022

## 1 Identification

- **Product identifier**
- **Trade name:** TBE Buffer (10x)
- **Article number:** 39320, 42557
- **Application of the substance / the mixture:** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
SERVA Electrophoresis GmbH  
Carl-Benz-Str. 7  
D-69115 Heidelberg  
Tel.: +49 6221 13840-0  
FAX: +49 6221 13840-10  
msds.info@serva.de
- **Information department:** Product Safety department Tel.: +49 6221 13840-35
- **Emergency telephone number:**  
Medical Emergency Information in case of poisoning:  
Poison Information Center Mainz - Phone: +49 (0) 6131 19240  
(advisory service in German or English language)



## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08

Repr. 1B H360 May damage fertility or the unborn child.

- **Label elements**
- **GHS label elements**  
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:** GHS08
- **Signal word:** Danger
- **Hazard-determining components of labeling:**  
boric acid
- **Hazard statements:**  
May damage fertility or the unborn child.
- **Precautionary statements**  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Wear protective gloves/protective clothing/eye protection/face protection.  
IF exposed or concerned: Get medical advice/attention.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 2  
Fire = 0  
Reactivity = 0

(Contd. on page 2)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2022

Reviewed on 05/24/2022

Trade name: TBE Buffer (10x)

(Contd. of page 1)

· **HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment:**

- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** aqueous buffer solution

· **Dangerous components:**

10043-35-3	boric acid	2.5-7%
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· **Additional information:**

the product contains no further substances which shall be indicated according to REACH-Regulation (Regulation (EC) No. 1907/2006).

For the wording of the listed hazard phrases refer to section 16.

### 4 First-aid measures

· **Description of first aid measures**

· **After inhalation:** Supply fresh air or oxygen; call for doctor.

· **After skin contact:**

Immediate wash with copious amounts of water and soap; rinse thoroughly; seek medical advice.

· **After eye contact:**

Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing. Consult ophthalmologist immediately.

· **After swallowing:**

Wash out mouth instantly. Drink copious amounts of water and provide fresh air. Call for doctor immediately.

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### 5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

CO<sub>2</sub> extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **Special hazards arising from the substance or mixture**

Formation of dangerous gases or vapours is possible in case of fire.

· **Advice for firefighters**

· **Protective equipment:** Wear self-contained respiratory protective device.

### 6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Wear protective clothing.

Avoid contact with the eyes and skin.

· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2022

Reviewed on 05/24/2022

Trade name: TBE Buffer (10x)

(Contd. of page 2)

- **Methods and material for containment and cleaning up**

Dispose contaminated material as waste according to item 13.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

- **Protective Action Criteria for Chemicals**

- **PAC-1:**

77-86-1	trometamol	18 mg/m <sup>3</sup>
10043-35-3	boric acid	6 mg/m <sup>3</sup>
6381-92-6	Disodium dihydrogen ethylenediaminetetraacetate dihydrate	30 mg/m <sup>3</sup>

- **PAC-2:**

77-86-1	trometamol	190 mg/m <sup>3</sup>
10043-35-3	boric acid	23 mg/m <sup>3</sup>
6381-92-6	Disodium dihydrogen ethylenediaminetetraacetate dihydrate	330 mg/m <sup>3</sup>

- **PAC-3:**

77-86-1	trometamol	1,200 mg/m <sup>3</sup>
10043-35-3	boric acid	830 mg/m <sup>3</sup>
6381-92-6	Disodium dihydrogen ethylenediaminetetraacetate dihydrate	2,000 mg/m <sup>3</sup>

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

- **Precautions for safe handling:**

Avoid contact with eyes and skin.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

- **Information about protection against explosions and fires:** Keep respiratory protective device available.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.

- **Information about storage in one common storage facility:** Store away from oxidizing agents.

- **Further information about storage conditions:**

Store under lock and key and with access restricted to technical experts or their assistants only.

Keep receptacle tightly sealed and store in dry conditions.

- **Specific end use(s):** No further relevant information available.

## 8 Exposure controls/personal protection

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**

- **Additional information about design of technical systems:** No further data; see item 7.

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Store protective clothing separately.

Immediately remove all soiled and contaminated clothing.

Avoid contact with the eyes and skin.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2022

Reviewed on 05/24/2022

**Trade name: TBE Buffer (10x)**

(Contd. of page 3)

Wash hands before breaks and at the end of work.

· **Breathing equipment:**

Short term filter device:

Filter P2

· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves:**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material:**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Natural rubber, NR

Nitrile rubber, NBR

· **Eye protection:** Safety glasses

· **Body protection:** Protective work clothing

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information:**

· **Color:**

Colorless

· **Odor:**

Odorless

· **Odor threshold:**

no information available

· **Melting point/Melting range:**

no information available

· **Boiling point/Boiling range:**

no information available

· **Flammability (solid, gaseous):**

no information available

· **Explosion limits:**

· **Lower:**

no information available

· **Upper:**

no information available

· **Flash point:**

no information available

· **Decomposition temperature:**

no information available

· **pH-value at 20 °C (68 °F):**

8.1-8.5

· **Viscosity:**

· **Kinematic viscosity:**

no information available

· **Dynamic viscosity:**

no information available

· **Solubility in / Miscibility with:**

· **Water:**

Fully miscible.

· **Partition coefficient (n-octanol/water):**

no information available

· **Vapor pressure:**

no information available

· **Density:**

no information available

· **Relative density:**

no information available

(Contd. on page 5)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2022

Reviewed on 05/24/2022

Trade name: TBE Buffer (10x)

(Contd. of page 4)

- **Other information**
- **Appearance:**
- **Form:** Solution
- **Important information on protection of health and environment, and on safety:**
- **Danger of explosion:** no information available
- **VOC %:**
- **VOC content:** 0.00 %

## 10 Stability and reactivity

- **Reactivity:** No further relevant informations available
- **Chemical stability:**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No further relevant informations available.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No further relevant informations available.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

### 10043-35-3 boric acid

Oral	LD50	2,660 mg/kg (rat)
	LC50/96h	5,600 mg/l (trout)

- **Reproductive toxicity:** May damage fertility or the unborn child.
- **Additional toxicological information:**

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity:**

- **Aquatic toxicity:**

### 10043-35-3 boric acid

EC50/48h	658-875 mg/l (Daphnia magna)
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- **Persistence and degradability:** No further relevant information available.
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.
- **Results of PBT and vPvB assessment:**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2022

Reviewed on 05/24/2022

Trade name: TBE Buffer (10x)

(Contd. of page 5)

- **Other adverse effects:**
- **Additional ecological information:**
- **General notes:**  
Do not allow product to reach ground water, water course or sewage system.  
Water hazard class 2 (Self-assessment): hazardous for water

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Disposal must be made according to official regulations.  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:**  
Disposal of uncleaned packagings must be made according to official regulations in the same manner as the product.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

- |  |  |
|--|--|
| · <b>UN-Number</b>   | Void   |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   | Void   |
| · <b>UN proper shipping name</b>   | Void   |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   | Void   |
| · <b>Transport hazard class(es)</b>  | Void   |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   | Void   |
| · <b>Class</b>   | Void   |
| · <b>Packing group</b>   | Void   |
| · <b>DOT, ADR, IMDG, IATA</b>  | Void   |
| · <b>Environmental hazards</b>   | No   |
| · <b>Marine pollutant:</b>   | No   |
| · <b>Special precautions for user</b>  | Not applicable.                                      |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.                                      |
| · <b>Transport/Additional information:</b>                                       | Not dangerous according to the above specifications. |
| · <b>UN "Model Regulation":</b>  | Void   |

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
No further relevant information available.

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

7732-18-5 water, distilled, conductivity or of similar purity

ACTIVE

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2022

Reviewed on 05/24/2022

Trade name: TBE Buffer (10x)

(Contd. of page 6)

77-86-1	trametamol	ACTIVE
10043-35-3	boric acid	ACTIVE

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**

None of the ingredients is listed.

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

10043-35-3	boric acid	I (oral)
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· **TLV (Threshold Limit Value)**

10043-35-3	boric acid	A4
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· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms** GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**

boric acid

· **Hazard statements**

May damage fertility or the unborn child.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

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

IF exposed or concerned: Get medical advice/attention.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Product safety department

· **Contact:** +49 6221 13840-35

· **Date of preparation / last revision** 05/24/2022 / 7

· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

SVHC: Substance of Very High Concern (REACH)

PBT: persistent, bioaccumulative, toxic substance (REACH)

vPvB: very persistent, very bioaccumulative substance (REACH)

(Contd. on page 8)



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**Trade name: TBE Buffer (10x)**

(Contd. of page 7)

*REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals**CLP: Regulation on classification, labelling and packaging of substances and mixtures**bw: body weight**ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**DOT: US Department of Transportation**IATA: International Air Transport Association**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**NFPA: National Fire Protection Association (USA)**HMIS: Hazardous Materials Identification System (USA)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**NIOSH: National Institute for Occupational Safety**OSHA: Occupational Safety & Health**TLV: Threshold Limit Value**PEL: Permissible Exposure Limit**REL: Recommended Exposure Limit**Repr. 1B: Reproductive toxicity – Category 1B*