

Revision date 10-Mar-2022

Revision Number 1.1

1. IDENTIFICATION

Product identifier

Product Name 10X TBE Buffer

Other means of identification

Catalogue Number(s) 1610733, 1610770, 1610770EDU, 1610733EDU, 1610161

Registration Number(s) No information available

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

Supplier's details

Corporate Headquarters

Bio-Rad Laboratories Inc.
1000 Alfred Nobel Drive
Hercules, CA 94547
USA

Manufacturer

Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547
USA

Legal Entity / Contact Address

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Bio-Rad House
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122005
Haryana India

Bio-Rad Laboratories (Pty) Ltd.
34 Bolton Road
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Technical Service

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South Africa: 27-11-442-85-08
India: support.india@bio-rad.com
South Africa: cdg_techsupport_eemea@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC India: 000-800-100-7141
CHEMTREC South Africa: 0-800-983-611

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Not a hazardous substance or mixture according to the Globally Harmonised System (GHS)

Reproductive toxicity

Category 1B

GHS Label elements, including precautionary statements



Signal word

Danger

Hazard statements

May damage fertility or the unborn child

Precautionary Statements - Prevention

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

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

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Precautionary Statements - Disposal

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Other hazards which do not result in classification

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS**Substance**

Not applicable

Mixture

| Chemical name | CAS No | Weight-% |
|--|------------|----------|
| Boric acid (H ₃ BO ₃) 10043-35-3 | 10043-35-3 | 5.19 |

4. FIRST AID MEASURES**Description of necessary first aid measures**

| | |
|-----------------------|--|
| General advice | Show this safety data sheet to the doctor in attendance. |
| Inhalation | Remove to fresh air. |
| Skin contact | Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician. |
| Eye contact | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. |
| Ingestion | Rinse mouth thoroughly with water. |

For emergency responders

| | |
|---|---------------------------|
| Self-protection of the first aider | No information available. |
|---|---------------------------|

Most important symptoms and effects, both acute and delayed

| | |
|-----------------|---------------------------|
| Symptoms | No information available. |
|-----------------|---------------------------|

Indication of immediate medical attention and special treatment needed, if necessary

| | |
|---------------------------|------------------------|
| Note to physicians | Treat symptomatically. |
|---------------------------|------------------------|

5. FIREFIGHTING MEASURES**Suitable Extinguishing Media**

| | |
|-------------------------------------|---|
| Suitable Extinguishing Media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
|-------------------------------------|---|

Large Fire

CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media

Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical**Specific hazards arising from the chemical**

No information available.

Special protective actions for fire-fighters**Special protective equipment and precautions for fire-fighters**

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures****Personal precautions**

Ensure adequate ventilation.

Environmental precautions**Environmental precautions**

See Section 12 for additional Ecological Information.

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

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Pick up and transfer to properly labeled containers.

Prevention of secondary hazards

Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE**Precautions for safe handling****Advice on safe handling**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes.

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

Store locked up.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters****Exposure guidelines**

| Chemical name | ACGIH TLV | OSHA PEL | Ontario | European Union |
|--|---|----------|---|----------------|
| Boric acid (H ₃ BO ₃) 10043-35-3 | STEL: 6 mg/m ³ inhalable particulate matter TWA: 2 mg/m ³ inhalable particulate matter | - | TWA: 2 mg/m ³ STEL: 6 mg/m ³ | - |

Appropriate engineering controls**Engineering controls**Showers
Eyewash stations
Ventilation systems.**Individual protection measures, such as personal protective equipment**

| | |
|---------------------------------------|--|
| Eye/face protection | Wear safety glasses with side shields (or goggles). |
| Skin and body protection | Wear suitable protective clothing. |
| Hand protection | Wear suitable gloves. |
| Respiratory protection | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. |
| General hygiene considerations | Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. |

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|---|-------------------|--------------------------|--------------------------|
| Physical state | Liquid | Odour | Odourless |
| Appearance | aqueous solution | Odour threshold | No information available |
| Colour | colourless | | |
| Property | Values | Remarks • Method | |
| pH | 8.3 | No information available | |
| Melting point / freezing point | | No information available | |
| Boiling point / boiling range | 100 °C / 212 °F | No information available | |
| Flash point | | No information available | |
| Evaporation rate | | No information available | |
| Flammability (solid, gas) | | No information available | |
| Upper/lower flammability or explosive limits | | | |
| Upper flammability or explosive limits | Not applicable | | |
| Lower flammability or explosive limits | Not applicable | | |
| Vapour pressure | | No information available | |
| Vapour density | | No information available | |
| Relative density | | No information available | |
| Solubility(ies) | | | |
| Water solubility | Miscible in water | | |
| Solubility in other solvents | | No information available | |
| Partition coefficient | | No information available | |
| Autoignition temperature | | No information available | |
| Decomposition temperature | | No information available | |
| Viscosity | | | |
| Kinematic viscosity | | No information available | |
| Dynamic viscosity | | | |

Other information

| | |
|-----------------------------|----------------|
| Oxidising properties | Not applicable |
|-----------------------------|----------------|

10. STABILITY AND REACTIVITY

Reactivity

| | |
|-------------------|---------------------------|
| Reactivity | No information available. |
|-------------------|---------------------------|

Chemical stability

| | |
|------------------|---------------------------------|
| Stability | Stable under normal conditions. |
|------------------|---------------------------------|

Explosion data

| | |
|---|------|
| Sensitivity to mechanical impact | None |
|---|------|

Sensitivity to static discharge None.

Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Conditions to avoid

Conditions to avoid None known based on information supplied.

Incompatible materials

Incompatible materials None known based on information supplied.

Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available.

Symptoms No information available.

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 27,211.9459 mg/kg
ATEmix (dermal) 21,624.50 mg/kg

Component Information

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|--------------------|----------------------|-------------------------|-------------------------|
| Boric acid (H3BO3) | = 2660 mg/kg (Rat) | > 2000 mg/kg (Rabbit) | > 2.12 mg/L (Rat) 4 h |

Delayed and immediate effects and also chronic effects from short and long term exposure

Skin corrosion/irritation No information available.

Serious eye damage/irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

| Chemical name | IARC |
|---------------|------|
|---------------|------|

| | |
|---------------------------------|---|
| Boric acid (H3BO3) | Group 2A |
| Reproductive toxicity | Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May damage fertility or the unborn child. |
| STOT - single exposure | No information available. |
| STOT - repeated exposure | No information available. |
| Aspiration hazard | No information available. |

12. ECOLOGICAL INFORMATION

Toxicity

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Ecotoxicity

| Chemical name | Algae/aquatic plants | Fish | Crustacea |
|--------------------|----------------------|------|--|
| Boric acid (H3BO3) | - | - | EC50: 115 - 153mg/L (48h, <i>Daphnia magna</i>) |

Persistence and degradability

No information available.

Bioaccumulative potential

There is no data for this product.

Mobility

Mobility in soil No information available.

Mobility No information available.

| Chemical name | Partition coefficient |
|--------------------|-----------------------|
| Boric acid (H3BO3) | -0.757 |

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

IMDG Not regulated
Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

IATA Not regulated

| | |
|-------------------------------------|--|
| <u>RID</u> | Not regulated |
| <u>ADR</u> | Not regulated |
| <u>ADN</u> | Not regulated |
| Special precautions for user | Special provisions from the regulations relative to the specified mode of transport are noted by numeric code. Refer to the regulations for the full text of special provisions. |

15. REGULATORY INFORMATION

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

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

Contact supplier for inventory compliance status

16. OTHER INFORMATION

Prepared By Bio-Rad Laboratories, Environmental Health and Safety

Revision date 10-Mar-2022

Revision Note Reformatted and updated existing information.

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| | | | |
|---------|-----------------------------|------|----------------------------------|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |
| C | Carcinogen | | |

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet