

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

**Identification of the substance or mixture**

**Product code** B52  
**Product name** 10X TBE Electrophoresis Buffer

**Company/undertaking identification**

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**24 hour Emergency Response for Hazardous Materials [or Dangerous Goods] Incident. Spill, Leak, Fire, Exposure, or Accident. Call CHEMTREC** Within the USA + Canada: 1-800-424-9300 and 1-703-527-3887  
Outside the USA + Canada: 1-703-741-5970

**Country Specific Emergency Number (if available):**

**For research use only. Not for use in diagnostic procedures**

## SECTION 2: Hazards identification

**GHS Classification**

**Signal Word**  
DANGER

**Hazard pictograms**

**Health hazards**

Reproductive Toxicity

Category 1B

**Physical hazards**

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Not classified

### Environmental hazards

Not classified

### Hazard Statements

H360FD - May damage fertility. May damage the unborn child

### Precautionary Statements

#### Prevention

P201 - Obtain special instructions before use

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P202 - Do not handle until all safety precautions have been read and understood

#### Response

P308 + P313 - IF exposed or concerned: Get medical advice/attention

#### Storage

Not Applicable

#### Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

### Other hazards

Not Applicable

### HMIS

Health	4 * Chronic Hazard
Flammability	0
Reactivity	0

## SECTION 3: Composition/information on ingredients

Chemical Name	CAS No.	Common name	EINECS-No	Weight-%
boric acid	10043-35-3	Not applicable	233-139-2	3-7

We recommend handling all chemicals with caution.

## SECTION 4: First aid measures

### Description of first aid measures

<b>Skin contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Immediate medical attention is required.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
<b>Ingestion</b>	Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. If swallowed, rinse mouth with water (only if the person is conscious). Risk of serious damage to the lungs (by aspiration). Get medical attention if symptoms occur.
<b>Inhalation</b>	Remove to fresh air. If not breathing, give artificial respiration. If symptoms persist, call a physician.
<b>Notes to Physician</b>	Treat symptomatically.

### Most important symptoms and effects, both acute and delayed

H360FD - May damage fertility. May damage the unborn child

### Indication of any immediate medical attention and special treatment needed

Wear protective gloves/protective clothing and eye/face protection. IF exposed or concerned: Get medical advice/attention.

## SECTION 5: Firefighting measures

### Extinguishing media

**Suitable extinguishing media**  
**Unsuitable extinguishing media**

Water spray. Carbon dioxide (CO<sub>2</sub>). Foam. Dry chemical.  
No information available.

### Special hazards arising from the substance or mixture

No data

### Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation  
Avoid contact with skin, eyes or clothing  
Use personal protection equipment  
See section 8 for more information

### Environmental precautions

No special environmental precautions required. Avoid discharge into drains and waterways whenever possible.

### Methods and material for containment and cleaning up

Soak up with inert absorbent material. Scoop absorbed substance into closing containers.

### Reference to other sections

See section 8 for more information.

## SECTION 7: Handling and storage

### Precautions for safe handling

Always wear recommended Personal Protective Equipment. Wash hands before breaks and immediately after handling the product. Do not get in eyes, on skin, or on clothing. Avoid breathing vapors or mists. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. See section 8 for more information.

### Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Keep in properly labeled containers. Store in accordance with local regulations.

### Storage Conditions

Store at 15 °C to 25 °C.

### Specific end use(s)

For research use only. Not for use in diagnostic procedures.

## SECTION 8: Exposure controls/personal protection

### Control parameters

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
boric acid	None	None	2 mg/m <sup>3</sup>	6 mg/m <sup>3</sup>

Chemical Name	Brazil - OEL - TWAs (LTs)	Brazil - OEL - Ceilings	Brazil - OEL - Skin Designations
boric acid	2 mg/m <sup>3</sup> Borate compounds, inorganic 2 mg/m <sup>3</sup>	None	None

**Engineering Measures** Ensure adequate ventilation, especially in confined areas.

### Exposure controls

#### Personal Protective Equipment

**Respiratory protection** In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.

**Hand protection** Glove material: Nitrile rubber. with thickness (mm): .5. Break through time (hours): >1.  
Recommended glove type has not been tested for use with product. Information is based on professional Knowledge.

**Eye protection** Tight sealing safety goggles.

**Skin and Body Protection** Wear laboratory coat for body protection.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice

#### Environmental exposure controls

No special environmental precautions required. Avoid discharge into drains and waterways whenever possible.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Physical state</b>	liquid	
<b>Color</b>	No data	
<b>Odor</b>	Mixture has not been tested	
<b>Odor Threshold</b>	Mixture has not been tested	
<b>Molecular Weight</b>	No data	
<b>Melting point / melting range</b>	°C No data	°F No data
<b>Boiling point / boiling range</b>	°C No data	°F No data
<b>Flammability (solid, gas)</b>	Not Applicable	
<b>Lower explosion limit</b>	No data	
<b>Upper explosion limit</b>	No data	
<b>Flash point</b>	°C No data	°F No data
<b>Autoignition Temperature</b>	°C No data	°F No data
<b>Decomposition temperature</b>	°C No data	°F No data
<b>Evaporation rate</b>	No data	
<b>Viscosity</b>	Mixture has not been tested	
<b>Solubility</b>	Mixture has not been tested	
<b>Partition coefficient: n-octanol/water</b>	No data	
<b>Vapor Pressure</b>	No data	
<b>Specific gravity</b>	No data	
<b>Relative density</b>	No data	
<b>Vapor density</b>	No data	
<b>Explosive properties</b>	Mixture has not been tested	
<b>Oxidizing properties</b>	Mixture has not been tested	
<b>Particle characteristics</b>	No data	

### Other information

#### Information with regard to physical hazard classes

No information available

#### Other safety characteristics

No information available

## SECTION 10: Stability and reactivity

<b>Reactivity</b>	None known.
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous reaction has not been reported.
<b>Conditions to avoid</b>	None known.
<b>Incompatible materials</b>	No dangerous reaction known under conditions of normal use.
<b>Hazardous decomposition products</b>	No known hazardous decomposition products.

## SECTION 11: Toxicological information

### Information on toxicological effects

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
boric acid	= 2660 mg/kg (Rat)	> 2000 mg/kg(Rabbit)	>0.16mg/L(Rat)

### Principal Routes of Exposure

<b>Acute toxicity</b>	Data are conclusive but insufficient for classification.
<b>Skin corrosion/irritation</b>	Data are conclusive but insufficient for classification
<b>Serious eye damage/irritation</b>	Data are conclusive but insufficient for classification
<b>Respiratory or skin sensitization</b>	Data are conclusive but insufficient for classification
<b>Specific target organ toxicity (STOT) – single exposure</b>	Data are conclusive but insufficient for classification
<b>Specific target organ toxicity (STOT) – repeated exposure</b>	Data are conclusive but insufficient for classification
<b>Carcinogenicity</b>	Data are conclusive but insufficient for classification
<b>Germ cell mutagenicity</b>	Data are conclusive but insufficient for classification
<b>Reproductive toxicity</b>	Product is or contains a chemical which is a known or suspected reproductive hazard
<b>Aspiration hazard</b>	Data are conclusive but insufficient for classification

## SECTION 12: Ecological information

### Toxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Microtox Data	log Pow
boric acid	No data available	Daphnia magna EC50115 - 153 mg/L (48 h)	No data available	No data available	logPow-0.757

**Mobility in soil** No information available.

**Persistence and degradability** No information available.

**Bioaccumulative potential** No information available.

### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other adverse effects** No information available.

## SECTION 13: Disposal considerations

### Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in accordance with approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

## SECTION 14: Transport information

### IATA / ADR / DOT-US / IMDG

Not regulated in the meaning of transport regulations

<b>UN number or ID number</b>	Not Applicable
<b>UN proper shipping name</b>	Not Applicable
<b>Transport hazard class(es)</b>	Not Applicable
<b>Packing group</b>	Not Applicable

### Marine pollutant

No

### Environmental hazards

Not Applicable

### Special precautions for user

Not Applicable

### Maritime transport in bulk according to IMO instruments

Not Applicable.

## SECTION 15: Regulatory information

Component	US TSCA
boric acid 10043-35-3 ( 3-7 )	Listed

### US Federal Regulations

#### SARA 313

This product is not regulated by SARA.

#### Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain HAPs

### US State Regulations

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Chemical Name	Massachusetts - RTK (Right-to-Know)	New Jersey - RTK (Right-to-Know)	Pennsylvania - RTK (Right-to-Know)
boric acid		Listed	

### California Proposition 65

This product does not contain any Proposition 65 chemicals.

### WHMIS Hazard Class

D2A - Very toxic materials

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

### National Regulations - Brazil

Chemical Name	CAS No.	Brazil - National Agency for Sanitary Surveillance (ANVISA)	Brazil - National List of Carcinogen Agents to Humans (LINACH)
boric acid	10043-35-3	Not Listed	Group 2A

### SECTION 16: Other information

Reason for revision            SDS sections updated.  
Revision number                9  
Revision date                    12-Apr-2021

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### References

- ECHA: <http://echa.europa.eu/>
- TOXNET: <http://toxnet.nlm.nih.gov/>
- eChemPortal: <http://www.echemportal.org/>
- LOLI database: <https://www.chemadvisor.com/loli-database>

### Abbreviations and acronyms

**TWA** - Time-Weighted Average  
**OELs** - Occupational Exposure Limits  
**STEL** - Short Term Exposure Limit  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances  
**NZIoC** - New Zealand Inventory of Chemicals  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**CEPA** - Canadian Environmental Protection Act  
**EPA** - Environmental Protection Agency  
**OSHA** - Occupational Safety and Health Administration of the US Department of Labor  
**IATA** - International Air Transport Association  
**DOT** - Department of Transportation  
**IMDG** - International Maritime Dangerous Goods  
**ACGIH** - American Conference of Governmental Industrial Hygienists

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**NIOSH** - National Institute for Occupational Safety and Health  
**AIHA** - American Industrial Hygiene Association  
**HMIS** - Department of Defense Hazardous Materials Information System  
**NTP** - National Toxicology Program  
**IARC** - International Agency for Research on Cancer

"The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS SDS DOES NOT CONSTITUTE A WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE"

**End of Safety Data Sheet**