

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

Thermo Fisher Scientific Baltics UAB
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Lithuania
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Life Technologies
5250 Mainway Drive
Burlington, ONT
CANADA L7L 6A4
800/263-6236

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

Country Specific Emergency Number (if available):

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SECTION 2: Hazards identification

GHS Classification

Signal Word
DANGER

Hazard pictograms**Health hazards**

Reproductive Toxicity

Category 1B

Physical hazards

Not classified

Environmental hazards

Not classified

Hazard Statements

H360 - May damage fertility or the unborn child if inhaled

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	EC 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

Skin contact	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.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
Ingestion	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.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. If symptoms persist, call a physician.
Notes to Physician	Treat symptomatically.

Most important symptoms and effects, both acute and delayed

H360 - May damage fertility or the unborn child if inhaled

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	Water spray. Carbon dioxide (CO ₂). Foam. Dry chemical.
Unsuitable extinguishing media	No information available.

Special hazards arising from the substance or mixture

No data

Hazardous Combustion Products	No known hazardous decomposition products.
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Advice for firefighters	Wear self-contained breathing apparatus and protective suit.
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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.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

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

Exposure Limits

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

Chemical Name	Brazil - OEL - TWAs (LTs)	Brazil - OEL - Ceilings	Brazil - OEL - Skin Designations
boric acid	2 mg/m ³ Borate compounds, inorganic 2 mg/m ³	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

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

Reactivity	None known.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Hazardous reaction has not been reported.
Conditions to avoid	None known.
Incompatible materials	No dangerous reaction known under conditions of normal use.
Hazardous decomposition products	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)	>2.12mg/L(Rat)

Principal Routes of Exposure

Acute toxicity	Data are conclusive but insufficient for classification.
Skin corrosion/irritation	Data are conclusive but insufficient for classification
Serious eye damage/irritation	Data are conclusive but insufficient for classification
Respiratory or skin sensitization	Data are conclusive but insufficient for classification
Specific target organ toxicity (STOT) – single exposure	Data are conclusive but insufficient for classification
Specific target organ toxicity (STOT) – repeated exposure	Data are conclusive but insufficient for classification
Carcinogenicity	Data are conclusive but insufficient for classification
Germ cell mutagenicity	Data are conclusive but insufficient for classification
Reproductive toxicity	Product is or contains a chemical which is a known or suspected reproductive hazard
Aspiration hazard	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-1.09

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 according to 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

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

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

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 11

Revision date 08-May-2023

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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
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.
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End of Safety Data Sheet