

Safety Data Sheet

TBE Buffer, 1X

CAROLINA[®]
www.carolina.com

Section 1

Product Description

Product Name: TBE Buffer, 1X
Recommended Use: Science education applications
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2

Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

DANGER



May damage fertility or the unborn child.

GHS Classification:
Reproductive Toxicity Category 1B

Other Safety Precautions: IF exposed or concerned: Get medical advice/attention.

Section 3

Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Water	7732-18-5	99.14
Tris(Hydroxymethyl) Aminomethane	77-86-1	0.54
Boric Acid	10043-35-3	0.28
Ethylenediaminetetraacetic Acid, Disodium Salt, Dihydrate (EDTA Sodium)	6381-92-6	0.04
Sodium Hydroxide	1310-73-2	0.01

Section 4

First Aid Measures

Emergency and First Aid Procedures

Inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact: After contact with skin, wash immediately with plenty of water.
Ingestion: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Section 5

Firefighting Procedures

Extinguishing Media: Use media suitable to extinguish surrounding fire.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: Fire or excessive heat may produce hazardous decomposition products.
Hazardous Combustion Products: Carbon dioxide, Carbon monoxide, Sodium Oxides, Nitrogen oxides, Boric Oxide

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Section 6

Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled:

No adverse health affects expected from the clean-up of spilled material. Follow personal protective equipment recommendations found in Section 8 of this (M)SDS. Avoid creating and inhaling dust. Avoid creating and inhaling spray or mist. Avoid contact with skin and eyes.

Environmental Precautions: Methods for Clean-up

Avoid breathing material. Avoid contact with skin and eyes.
Absorb the liquid and scrub the area with detergent and water. Do not allow the spilled product to enter public drainage system or open waterways.

Section 7

Handling and Storage

Handling:

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.

Storage:

Store locked up. Suitable for any general chemical storage.

Storage Code:

Green - general chemical storage

Section 8

Protection Information

<u>Chemical Name</u>	<u>ACGIH</u>		<u>OSHA PEL</u>	
	<u>(TWA)</u>	<u>(STEL)</u>	<u>(TWA)</u>	<u>(STEL)</u>
Boric Acid	2 mg/m ³ TWA (inhalable fraction, listed under Borate compounds, inorganic)	6 mg/m ³ STEL (inhalable fraction, listed under Borate compounds, inorganic)	N/A	N/A
EDTA, Disodium Salt, Dihydrate	N/A	N/A	N/A	N/A
Sodium Hydroxide	N/A	N/A	2 mg/m ³ TWA	N/A

Control Parameters

Engineering Measures:

Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure. Good general room ventilation should be sufficient to control airborne contaminants to safe levels.

Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

Respiratory Protection:

No respiratory protection required under normal conditions of use.

Eye Protection:

Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves:

Nitrile

Section 9

Physical Data

Formula: This product is a mixture.

Molecular Weight:

Appearance: Colorless Liquid

Odor: None

Odor Threshold: No data available

pH: No data available

Melting Point: = 0 C

Boiling Point: 100 C

Flash Point: No data available

Flammable Limits in Air: No data available

Vapor Pressure: No data available

Evaporation Rate (BuAc=1): No data available

Vapor Density (Air=1): No data available

Specific Gravity: No data available

Solubility in Water: Soluble

Log Pow (calculated): No data available

Autoignition Temperature: No data available

Decomposition Temperature: No data available

Viscosity: No data available

Percent Volatile by Volume: No data available

Section 10

Reactivity Data

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Reactivity:	No data available
Chemical Stability:	Stable under normal conditions.
Conditions to Avoid:	None known.
Incompatible Materials:	Water-reactive materials, Acetic anhydride, Alkali Carbonates, Hydroxides, Alkali and Alkaline Metals, Strong oxidizing agents
Hazardous Decomposition Products:	Carbon dioxide, Carbon monoxide, Sodium Oxides, Nitrogen oxides, Boric Oxide
Hazardous Polymerization:	Will not occur

Section 11 Toxicity Data

Symptoms (Acute):	No data available
Delayed Effects:	No data available

Acute Toxicity:	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Chemical Name				
Water	7732-18-5	Oral LD50 Rat 90000 mg/kg		
Boric Acid	10043-35-3	Oral LD50 Rat 2660 mg/kg		
EDTA, Disodium Salt, Dihydrate	6381-92-6	Oral LD50 Rat 2000 mg/kg		

Carcinogenicity:	CAS Number	IARC	NTP	OSHA
Chemical Name				
Boric Acid	10043-35-3	Listed	Not listed	Not listed
EDTA, Disodium Salt, Dihydrate	6381-92-6	Not listed	Not listed	Not listed
Sodium Hydroxide	1310-73-2	Not listed	Not listed	Not listed

Chronic Effects:	
Mutagenicity:	No evidence of a mutagenic effect.
Teratogenicity:	Evidence of a teratogenic effect (birth defect).
Sensitization:	No evidence of a sensitization effect.
Reproductive:	Evidence of negative reproductive effects.
Target Organ Effects:	
Acute:	See Section 2, Toxic effects are amplified in infants.
Chronic:	Not listed as a carcinogen by IARC, NTP or OSHA., Reproductive systems

Section 12 Ecological Data

Overview:	This material is not expected to be harmful to the ecology. Keep out of waterways.
Mobility:	No data
Persistence:	Dissolved into water, Photodegradation
Bioaccumulation:	No data
Degradability:	No data
Other Adverse Effects:	No data

Chemical Name	CAS Number	Eco Toxicity
Water	7732-18-5	No data available
Boric Acid	10043-35-3	72 HR LC50 CARASSIUS AURATUS 1020 MG/L [FLOW-THROUGH] 48 HR EC50 DAPHNIA MAGNA 115 - 153 MG/L
EDTA, Disodium Salt, Dihydrate	6381-92-6	
Sodium Hydroxide	1310-73-2	Aquatic LC50 (96h) Rainbow Trout 45.4 MG/L

Section 13 Disposal Information

Disposal Methods:	Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s):	Not Determined

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Section 14

Transport Information

Ground - DOT Proper Shipping Name:

Not regulated for transport by US DOT.

Air - IATA Proper Shipping Name:

Not regulated for air transport by IATA.

Section 15

Regulatory Information

TSCA Status:

All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Boric Acid	10043-35-3	No	No	No	No	No
EDTA, Disodium Salt, Dihydrate	6381-92-6	No	No	No	No	No
Sodium Hydroxide	1310-73-2	No	No	No	No	No

California Prop 65:

No California Proposition 65 ingredients

Section 16

Additional Information

Revised: 04/02/2025**Replaces: 04/02/2025****Printed: 04-02-2025**

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health