SAFETY DATA SHEET

Creation date: 19-10-2021 **Revision date:** 00-00-0000 **Revision No.** 00

TBE Buffer,10X

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name TBE Buffer, 10X (Tris-Borate-EDTA)
Product No BT01AD

Recommended use of the chemical and restrictions on use

Recommended use For Research Use Only. Not for use in diagnostic procedures.

Details of the supplier of the safety data sheet

Company: **Blutruve**
Address: 9 Kamel Al-Mahrouqi Street
Al-Haram, Egypt
Telephone: +02 237550489
E-mail address: info@blutruve.com

SECTION 2 HAZARD(S) IDENTIFICATION

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Reproductive Toxicity	Category 1B	H360FD

Target Organs - No data available

Label Elements

Signal Word Danger

Hazard Statements

May damage fertility. May damage the unborn child	H360FD

Precautionary Statements

Obtain special instructions before use	P201
Wear protective gloves/ protective clothing/ eye protection/ face protection	P280
Do not handle until all safety precautions have been read and understood	P202

IF exposed or concerned: Get medical advice/ attention	P308 + P313
Dispose of contents/container to an approved waste disposal plant	P501

Hazards not otherwise classified (HNOC) No data available

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Synonyms	TBE buffer
Formula	$C_{14}H_{30}BN_3O_{14}$
Molecular weight	475.21
EC-No.	233-139-2

Component	CAS-No	Weight %
Boric acid	10043-35-3	5-10 %

SECTION 4. FIRST-AID MEASURES

General advice Consult a physician. Show this safety data sheet to the doctor in attendance, Move out of dangerous area.

If inhaled	Transfer to fresh air. If not breathing, give artificial respiration. If symptoms persist, call a physician.
In case of skin contact	Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside. Immediate medical attention is required.
In case of eye contact	Remove contact lenses. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call in ophthalmologist immediately.
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.
If digested	Immediately make victim drink water (two glasses at most). Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Consult a physician.
Most important symptoms and effects	Drop in temperature, agitation, spasms, diarrhea, nausea, vomiting, tiredness, ataxia (impaired locomotor coordination). May damage fertility. May damage the unborn child.
Indication of any immediate medical attention and special treatment needed	No data available

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Water spray. Carbon dioxide (CO2). Foam. Dry chemical.
Special hazards arising from the substance or mixture	Ambient fire may liberate hazardous vapours. Fire may cause evolution of nitrogen oxides and carbon oxides.
Advice for firefighters	Stay in danger area only with self-contained breathing apparatus and protective suit.
Further information	Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures	Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
Environmental precautions	Avoid discharge into drains and waterways whenever possible.
Methods and materials for containment and cleaning up	Cover drains. Collect, bind, and pump off spills 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 immediately after handling the product. Do not get in eyes, on skin, or on clothing. Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols. See Section 8 for more detail.
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.
Specific end use(s)	Apart from the uses mentioned in section (1) no other specific uses are stipulated.

SECTION 8. Exposure controls / personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Boric Acid 10043-35-3	STEL: 6 mg/m^3 inhalable fraction TWA: 2 mg/m^3 inhalable fraction	None	None

Legend
ACGIH - American Conference of Governmental Industrial Hygienists.
OSHA - Occupational Safety and Health Administration.
NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

Engineering Measures
Adequate ventilation, showers, and eyewash stations.

Personal Protective Equipment

Eye protection	Wear safety glasses with side shields (or Tight sealing safety goggles).
Skin/body protection	Wear laboratory coat. Wear protective clothing.
Hand Protection	Handle with Nitrile gloves with minimum thickness 0.11 mm. Use proper glove removal technique. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.
Respiratory protection	If vapours/aerosols are generated, wear respirators and components that are tested and approved (according to NIOSH/MSHA)
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice.
Control of environmental exposure	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Liquid
Colour	Colourless
Odour	No strong odour known
Odour Threshold	No data available

pH	~8.3
Melting point	No data available
Freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	Not applicable
Evaporation rate	No data available
Flammability (solid, gas)	Not applicable
Upper flammability limit	No data available
Lower flammability limit	No data available
Upper explosive limit	No data available
Lower explosive limit	No data available
Water solubility	No data available
Partition coefficient: noctanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	Not classified as explosive
Oxidizing properties	No data available

SECTION 10. Stability and reactivity

Reactivity	Not applicable
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature).
Possibility of hazardous reactions	Hazardous reaction has not been reported under normal processing.
Conditions to avoid	No data available
Incompatible materials	Strong oxidizing agents, Potassium, Acid anhydrides.

Hazardous decomposition products	Carbon oxides. Nitrogen oxides (NOx). In the event of fire: see section 5

SECTION 11. Toxicological information

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Boric acid	3.450 - 4.080 mg/kg	> 2.000 mg/kg	> 0.16mg/L(Rat) ≥ 2120mg/m^3(Rat)

Acute Toxicity	No data available
Irritation	No data available
Sensitization	No data available
Germ cell mutagenicity	No data available
Carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC
Reproductive toxicity	May impair fertility
Developmental Effects	No data available
Teratogenicity	May harm the unborn child
STOT - single exposure	No data available
STOT - repeated exposure	No data available
Aspiration hazard	No data available
Symptoms / effects, both acute and delayed	No data available
Endocrine Disruptor Information	No data available
Other Adverse Effects	No data available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12. Ecological information

Chemical Name	Algae	Fish	Aquatic invertebrates
Boric acid	Static test EC50 *Pseudokirchneriella subcapitata* (green algae) 52.4 mg/l (74.5 h)	Flow-through test LC50 *Oncorhynchus mykiss* (rainbow trout) 79 mg/l (96 h)	Static test EC50 *Daphnia magna* (Water flea) 133 mg/l (48 h)

Toxicity No data available

Persistence and degradability No data available

Bioaccumulative potential No data available

Mobility in soil No data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects No data available

SECTION 13. Disposal considerations

Waste Disposal Methods

Product Offer surplus and non-recyclable solutions to a licensed disposal company

Contaminated packaging Dispose of as unused product

SECTION 14. Transport information

IATA / ADR / DOT-US / IMDG

Not classified as dangerous in the meaning of transport regulations

UN 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
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not Applicable

SECTION 15. Regulatory information

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 contains HAPs

US State Regulations

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.

SECTION 16. Other information

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Revision Date	-
Revision Number	-

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.

For Research Use Only. Not for use in diagnostic procedures.

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