

SECTION 1: IDENTIFICATION**1.1. Product Identifier****Product Form:** Liquid**Product Name:** 10X HBS-TE**Synonyms:** 10X HEPES buffered saline + 0.5% Tween + 0.03 M EDTA,**1.2. Intended Use of the Product****Use of the Substance/Mixture:** Buffer**1.3. Name, Address, and Telephone of the Responsible Party****Company**

Carterra Inc.

825 N 300 W

Suite C309

Salt Lake City, UT 84103

844.642.7635 x731

1.4. Emergency Contact Information**Emergency Number:** +1-703-527-3887 (CHEMTREC)**1.5. Email of Competent Person:** a.bawden@carterra-bio.com**1.6. Reach Registration Number:** N/A**SECTION 2: HAZARDS IDENTIFICATION****2.1. Classification of the Substance or Mixture****GHS-US Classification**

Skin Irritant 2

Eye Irritant 2

Acute Toxicity – Oral 4

Acute Toxicity – Dermal 4

Acute Toxicity – Inhalation (Dusts/Mists) 4

Serious Eye Damage/Irritation 2

Specific target organ toxicity (single exposure) 3

2.2. Label Elements**GHS-US Labeling****Hazard Pictograms (GHS-US)** :**Signal Word (GHS-US)** : **Warning****Hazard Statements (GHS-US)** : **H315 – Causes skin irritation**
H319 – Causes serious eye irritation
H335 – May cause respiratory irritation
H302 – Harmful if swallowed
H312 – Harmful in contact with skin
H332 – Harmful if inhaled**Precautionary Statements (GHS-US)** : **P-280 – Wear protective gloves/protective clothing/eye protection/face protection**
P302 + P352 – IF ON SKIN: Wash with plenty of soap and water
P304 + P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**2.3. Other Hazards**

May cause drowsiness or dizziness

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
3.1. Substance

Not applicable

3.2. Mixture

Name	CAS No.	%	Classification
1-Piperazineethanesulfonic acid, 4-(2hydroxyethyl)	7365-45-9	1.0 – 3.0	R43
Ethylenediaminetetraacetic acid, disodium dihydrate	6381-92-6	0.5 – 1.5	Acute Tox. 4 (Oral) H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319
Sodium Chloride	7647-14-5	7.5 – 9.5	Xi, R36/37/38
Tween 20	9005-64-5	0.2 – 0.7	None specified
Water	7732-18-5	85.0 – 90.0	None specified
pH Adjusters	Various	0.3 – 0.6	None specified

SECTION 4: FIRST AID MEASURES
4.1. Description of First-aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show label where possible)

First-aid Measures After Inhalation: Move to fresh air. If breathing become difficult, give oxygen. If not breathing, give artificial respiration.

First-aid Measures After Skin Contact: Wash off immediately with soap and plenty of water. Remove all contaminated clothes and shoes.

First-aid Measures After Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes. Consult physician

First-aid Measures After Ingestion: Rinse mouth with water and afterwards drink plenty of water or milk.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Injuries: No information available

Symptoms/Injuries After Inhalation: No information available

Symptoms/Injuries After Skin Contact: No information available

Symptoms/Injuries After Eye Contact: No information available

Symptoms/Injuries After Ingestion: No information available

Chronic Symptoms: No information available

4.3. Indication of Any Immediate Medical and Special Treatment Needed

Note to Physician: Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES
5.1. Extinguishing Media

Suitable Extinguishing Media: Dry chemical, CO₂, water spray, or regular foam

Unsuitable Extinguishing Media: No information available

5.2. Special Hazards Arising from the Substance or Mixture

Fire Hazard: None

Explosion Hazard: None

Reactivity: No information available

5.3. Advice for Firefighters

Precautionary Measures: No information available

Firefighting Instructions: No information available

Protection During Firefighting: MSHA/NIOSH (approved or equivalent) and full protective gear.

Hazardous Combustion Products: Nitrogen oxides, Sulfur oxides, carbon oxides

Other Information: No information available

SECTION 6: ACCIDENTAL RELEASE MEASURES
6.1. Personal Precautions, Protective Equipment, and Emergency Procedures

General Measures: Avoid contact with skin, eyes, and clothing. Remove and wash contaminated clothing before reuse. Do not breath vapors/dust.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Wear protective gloves/clothing

Emergency Procedures: Evacuate non-essential personnel from laboratory

6.1.2. For Emergency Personnel

Protective Equipment: Wear protective gloves/clothing

Emergency Procedures: Evacuate non-essential personnel from laboratory

6.2. Environmental Precautions

No information available

6.3. Methods and Materials for Containment and Cleanup

For Containment: Prevent further leakage or spillage if safe to do so

Methods for Cleanup: Cover with dry lime or soda ash. Pick up and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: None

Precautions for Safe Handling: Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for Safe Storage, Including any Incompatibilities

Technical Measures: None specified

Storage Conditions: Store at room temperature. Keep containers tightly closed in a well-ventilated place.

Incompatible Products: Strong oxidizers

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

Component	CAS-No.	Value	Control Parameters
1-Piperazineethanesulfonic acid, 4-(2hydroxyethyl)	7365-45-9	N/A	None specified
Ethylenediaminetetraacetic acid, disodium dihydrate	6381-92-6	N/A	None specified
Sodium Chloride	7647-14-5	N/A	None specified
Tween 20	9005-64-5	N/A	None specified
Water	7732-18-5	N/A	None specified

8.2. Exposure Controls and Risk Management Measures

- Appropriate Engineering Controls** : Showers, Eyewash stations, Ventilation systems
- Materials for Protective Clothing** : None specified
- Hand Protection** : Wear protective gloves when handling
- Eye Protection** : Avoid contact with eyes. Wear safety glasses with side-shields
- Skin and Body Protection** : Wear protective clothing when handling
- Respiratory Protection** : If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
- Environmental Exposure Controls** : None specified
- Other Information** : None specified

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

- Physical State** : Liquid
- Appearance** : Clear

Odor	: No data available
Odor Threshold	: No data available
pH	: 7.38 – 7.42
Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: No data available
Auto Ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor Pressure	: No data available
Relative Vapor Density at 20° C	: No data available
Relative Density	: No data available
Specific Gravity	: No data available
Solubility	: Miscible with water
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: No data available

9.2. Other Information
SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity:** No data available
- 10.2. Chemical Stability:** Stable under recommended storage conditions
- 10.3. Possibility of Hazardous Reactions:** None under normal processing
- 10.4. Conditions to Avoid:** Extremes of temperature and direct sunlight
- 10.5. Incompatible Materials:** Strong oxidizers
- 10.6. Hazardous Decomposition Products:** Carbon oxides. Nitrogen oxides. Sulfur oxides.

SECTION 11: TOXICOLOGICAL INFORMATION
11.1. Information on Toxicological Effects
Acute Toxicity:

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium Chloride	None Specified	10 g/kg (Rabbit)	42 g/m ³ (Rat) 1h
Tween 20	36700 µL/kg (Rat)	None Specified	None Specified

Skin Corrosion/Irritation: May cause eye irritation

pH: None Specified

Serious Eye Damage/Irritation: May cause eye irritation

pH: None Specified

Respiratory or Skin Sensitization: May cause skin/respiratory tract irritation.

Germ Cell Mutagenicity: None Specified

Carcinogenicity: None Specified

IARC: None Specified

NTP: None Specified

OSHA: None Specified

Reproductive Toxicity: None Specified

Specific Target Organ Toxicity (Single Exposure): Eyes, Skin, Respiratory system.

Specific Target Organ Toxicity (Repeated Exposure): None Specified

Aspiration Hazard: None Specified

Symptoms/Injuries After Inhalation: Harmful by inhalation. May cause drowsiness and dizziness based on components. May cause irritation of respiratory tract.

Symptoms/Injuries After Skin Contact: Irritating to skin. Harmful in contact with skin

Symptoms/Injuries After Eye Contact: Irritating to eyes

Symptoms/Injuries After Ingestion: Harmful if swallowed

Chronic Symptoms: None Specified

SECTION 12: ECOLOGICAL INFORMATION**Toxicity**

Aquatic toxicity: No further relevant information available.

Persistence and degradability No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available. ·

Additional ecological information: ·

Results of PBT and vPvB assessment · PBT: Not applicable. · vPvB: Not applicable.

Other adverse effects: No further relevant information available

SECTION 13: DISPOSAL CONSIDERATIONS**Waste treatment methods:**

Recommendation: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should always comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.

Uncleaned packaging:

Recommendation: The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible

SECTION 14: TRANSPORT INFORMATION

UN proper shipping name: 10X HBS-T

Environmental hazards: · Marine pollutant: No

Special precautions for user

Warning: Corrosive substances

Danger code: (Kemler): N/A

SECTION 15: REGULATORY INFORMATION

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

Section 355 (extremely hazardous substances): None of the ingredients is listed.

Section 313 (Specific toxic chemical listings): None of the ingredients is listed.

TSCA (Toxic Substances Control Act): All ingredients are listed.

Proposition 65 · Chemicals known to cause cancer: None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males: None of the ingredients is listed.

Chemicals known to cause developmental toxicity: None of the ingredients is listed.

Carcinogenic categories ·

EPA (Environmental Protection Agency) None of the ingredients is listed.

TLV (Threshold Limit Value established by ACGIH) None of the ingredients is listed.

NIOSH-Ca (National Institute for Occupational Safety and Health) None of the ingredients is listed. ·

GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS). ·



Signal word Danger

Hazard-determining components of labeling: 10X HBS-TE

Hazard statements Harmful if swallowed. Causes severe skin burns and eye damage.

Precautionary statements Do not breathe dusts or mists. Wash thoroughly after handling. Do not eat, drink, or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER/doctor.

Specific treatment (see on this label). Wash contaminated clothing before reuse.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out

SECTION 16: OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS: Quality Assurance.

Creation date for SDS 06/19/2019.

review SDS for accuracy. 11/02/2021

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative

Toxic vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit Acute Tox. 4

Acute toxicity – Category 4 Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Eye Dam. 1: Serious eye damage/eye irritation – Category 1