



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
US OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canada WHMIS  
which includes the amended Hazardous Products Act (HPA) and the Hazardous Products  
Regulation (HPR)

Revision date 22-Oct-2025

Version 6

## 1. Identification

### Product identifier

**Product name** 10X T7 Reaction Buffer

### Other means of identification

**Product No** B2041

**Synonyms** None

### Recommended use of the chemical and restrictions on use

**Recommended use** This product is for research and development only

**Restrictions on use** No information available

### Details of the supplier of the safety data sheet

#### **Supplier Address**

New England BioLabs  
240 County Road  
Ipswich, MA 01938  
USA

### Emergency telephone number

**Company Phone Number** 978-927-5054, 800-632-5227 (toll free)

**Telefax** 978-921-1350

**E-mail address** info@neb.com

**24 Hour Emergency Phone Number** Chemtrec +1 703-741-5970

## 2. Hazard(s) identification

### Classification of the substance or mixture

This product is not considered hazardous by either the US OSHA Hazard Communication Standard 2024, or Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended.

### Label elements

#### Hazard statements

#### Hazards classified under paragraph (d)(1)(ii) of 1910.1200

No information available.

### Other information

No information available.

## 3. Composition/information on ingredients

### Substance

Not applicable.

### Mixture

The product contains no substances which at their given concentration, are considered to be hazardous to health.

## 4. First-aid measures

### Description of first aid measures

|              |                                                                                                                         |
|--------------|-------------------------------------------------------------------------------------------------------------------------|
| Inhalation   | Remove to fresh air.                                                                                                    |
| Eye contact  | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.<br>Consult a physician. |
| Skin contact | Wash skin with soap and water.                                                                                          |
| Ingestion    | Rinse mouth.                                                                                                            |

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

|                     |                           |
|---------------------|---------------------------|
| Symptoms            | No information available. |
| Effects of Exposure | No information available. |

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

|                    |                        |
|--------------------|------------------------|
| Note to physicians | Treat symptomatically. |
|--------------------|------------------------|

## 5. Fire-fighting measures

|                                                                       |                                                                                                                                       |
|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suitable Extinguishing Media</b>                                   | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.                               |
| <b>Large Fire</b>                                                     | CAUTION: Use of water spray when fighting fire may be inefficient.                                                                    |
| <b>Unsuitable extinguishing media</b>                                 | Do not scatter spilled material with high pressure water streams.                                                                     |
| <b>Specific hazards arising from the chemical</b>                     | No information available.                                                                                                             |
| <b>Explosion data</b>                                                 |                                                                                                                                       |
| <b>Sensitivity to mechanical impact</b>                               | None.                                                                                                                                 |
| <b>Sensitivity to static discharge</b>                                | None.                                                                                                                                 |
| <b>Special protective equipment and precautions for fire-fighters</b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.<br>Use personal protection equipment. |

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Ensure adequate ventilation.

### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Pick up and transfer to properly labeled containers.

## 7. Handling and storage

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. Exposure controls/personal protection

### Control Parameters

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

### Appropriate engineering controls

Engineering controls                      Showers  
                                                  Eyewash stations  
                                                  Ventilation systems.

**Individual protection measures, such as personal protective equipment**

Eye/face protection                      No special protective equipment required.

Hand protection                          No special protective equipment required.

Skin and body protection                No special protective equipment required.

Respiratory protection                  No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

## 9. Physical and chemical properties

**Information on basic physical and chemical properties**

Appearance                                Colorless  
 Physical state                              Liquid  
 Color                                        No information available  
 Odor (includes odor threshold)        Mild

| <u>Property</u>                                           | <u>Values</u>     | <u>Remarks • Method</u> |
|-----------------------------------------------------------|-------------------|-------------------------|
| Melting point / freezing point                            | No data available | None known              |
| Boiling point (or initial boiling point or boiling range) | No data available | None known              |
| Flammability (solid, gas)                                 | No data available | None known              |
| Flammability Limit in Air                                 |                   | None known              |
| Upper flammability or explosive limits                    | No data available |                         |
| Lower flammability or explosive limits                    | No data available |                         |
| Flash point                                               | No data available | None known              |
| Autoignition temperature                                  | No data available | None known              |
| Decomposition temperature                                 | No data available | None known              |
| SADT (°C)                                                 | No data available | None known              |
| pH                                                        | No data available | None known              |
| pH (as aqueous solution)                                  | No data available | None known              |
| Kinematic viscosity                                       | No data available | None known              |
| Dynamic viscosity                                         | No data available | None known              |
| Solubility                                                | No data available | None known              |
| Water solubility                                          | No data available | None known              |
| Partition coefficient n-octanol/water (log value)         | No data available | None known              |
| Vapor pressure (includes evaporation rate)                | No data available | None known              |
| Evaporation rate                                          | No data available | None known              |
| Density and/or relative density                           | No data available | None known              |
| Bulk density                                              | No data available |                         |
| Liquid Density                                            | No data available |                         |
| Vapor density                                             | No data available | None known              |
| Particle characteristics                                  |                   | None known              |
| Particle Size                                             | No data available |                         |
| Particle Size Distribution                                | No data available |                         |

**Other information**

## 10. Stability and reactivity

|                                    |                                           |
|------------------------------------|-------------------------------------------|
| Reactivity                         | No information available.                 |
| Chemical stability                 | Stable under normal conditions.           |
| Possibility of hazardous reactions | None under normal processing.             |
| Conditions to avoid                | None known based on information supplied. |
| Incompatible materials             | None known based on information supplied. |
| Hazardous decomposition products   | None known based on information supplied. |

## 11. Toxicological information

### Information on likely routes of exposure

|              |                                                                   |
|--------------|-------------------------------------------------------------------|
| Inhalation   | Specific test data for the substance or mixture is not available. |
| Eye contact  | Specific test data for the substance or mixture is not available. |
| Skin contact | Specific test data for the substance or mixture is not available. |
| Ingestion    | Specific test data for the substance or mixture is not available. |

### Symptoms related to the physical, chemical and toxicological characteristics

|          |                           |
|----------|---------------------------|
| Symptoms | No information available. |
|----------|---------------------------|

### Acute toxicity

.

Numerical measures of toxicity No information available

### The following ATE values have been calculated for the mixture

|                               |           |       |
|-------------------------------|-----------|-------|
| ATEmix (oral)                 | 73,684.20 | mg/kg |
| ATEmix (dermal)               | 52,631.60 | mg/kg |
| ATEmix (inhalation-gas)       | 99,999.00 | ppm   |
| ATEmix (inhalation-vapor)     | 99,999.00 | mg/L  |
| ATEmix (inhalation-dust/mist) | 99,999.00 | mg/L  |

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

|                                   |                           |
|-----------------------------------|---------------------------|
| Skin corrosion/irritation         | No information available. |
| Serious eye damage/eye irritation | No information available. |
| Respiratory or skin sensitization | No information available. |
| Germ cell mutagenicity            | No information available. |
| Carcinogenicity                   | No information available. |

|                          |                           |
|--------------------------|---------------------------|
| Reproductive toxicity    | No information available. |
| STOT - single exposure   | No information available. |
| STOT - repeated exposure | No information available. |
| Aspiration hazard        | No information available. |

## 12. Ecological information

### Ecotoxicity

Persistence and degradability No information available.

Bioaccumulative potential No information available.

Mobility in soil No information available.

Other adverse effects No information available.

## 13. Disposal considerations

### Waste treatment methods

|                                     |                                                                                                                 |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Waste from residues/unused products | Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. |
| Contaminated packaging              | Do not reuse empty containers.                                                                                  |

## 14. Transport information

|                   |               |
|-------------------|---------------|
| <u>DOT</u>        | Not regulated |
| <u>TDG</u>        | Not regulated |
| <u>MEX</u>        | Not regulated |
| <u>ICAO (air)</u> | Not regulated |
| <u>IATA</u>       | Not regulated |
| <u>IMDG</u>       | Not regulated |

## 15. Regulatory information

**Regulatory information****International Regulations**

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

**International Inventories**

|                      |                                                   |
|----------------------|---------------------------------------------------|
| <b>DSL/NDSL</b>      | Contact supplier for inventory compliance status. |
| <b>EINECS/ELINCS</b> | Contact supplier for inventory compliance status. |
| <b>ENCS</b>          | Contact supplier for inventory compliance status. |
| <b>IECSC</b>         | Contact supplier for inventory compliance status. |
| <b>KECL</b>          | Contact supplier for inventory compliance status. |
| <b>PICCS</b>         | Contact supplier for inventory compliance status. |
| <b>AIIC</b>          | Contact supplier for inventory compliance status. |
| <b>NZIoC</b>         | Contact supplier for inventory compliance status. |
| <b>TCSI</b>          | Contact supplier for inventory compliance status. |

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing Chemicals Inventory

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**TCSI** - Taiwan Chemical Substance Inventory

**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CAA (Clean Air Act)**

This product does not contain any substances regulated as pollutants pursuant to Clean Air Act (CAA).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated under applicable state right-to-know regulations

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

**16. Other information**

|             |                         |                       |                           |                              |
|-------------|-------------------------|-----------------------|---------------------------|------------------------------|
| <b>NFPA</b> | <b>Health hazards</b> 0 | <b>Flammability</b> 0 | <b>Instability</b> 0      | <b>Special hazards</b> -     |
| <b>HMIS</b> | <b>Health hazards</b> 0 | <b>Flammability</b> 0 | <b>Physical hazards</b> 0 | <b>Personal protection</b> X |

**Key or legend to abbreviations and acronyms used in the safety data sheet**

List may include phrases which are not applicable to this product

|         |                                                                                                     |
|---------|-----------------------------------------------------------------------------------------------------|
| ACGIH   | American Conference of Governmental Industrial Hygienists                                           |
| ADN     | Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe)     |
| ADR     | Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)                 |
| AIIC    | Australian Inventory of Industrial Chemicals                                                        |
| ATE     | Acute Toxicity Estimate                                                                             |
| ASTM    | American Society for the Testing of Materials                                                       |
| bar     | Biological Reference Values for Chemical Compounds in the Work Area                                 |
| BAT     | Biological tolerance values for occupational exposure                                               |
| BEL     | Biological exposure limits                                                                          |
| bw      | Body weight                                                                                         |
| Ceiling | Maximum limit value                                                                                 |
| CMR     | Carcinogen, Mutagen or Reproductive Toxicant                                                        |
| DOT     | Department of Transportation (United States)                                                        |
| DSL     | Domestic Substances List (Canada)                                                                   |
| EmS     | Emergency Schedule                                                                                  |
| ENCS    | Existing and New Chemical Substances (Japan)                                                        |
| EPA     | U.S. Environmental Protection Agency                                                                |
| GHS     | Globally Harmonized System                                                                          |
| HMIS    | Hazardous Materials Identification System                                                           |
| IARC    | International Agency for Research on Cancer                                                         |
| IATA    | International Air Transport Association                                                             |
| IBC     | International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk |
| ICAO    | International Civil Aviation Organization                                                           |
| IECSC   | Inventory of Existing Chemical Substances in China                                                  |
| IMDG    | International Maritime Dangerous Goods                                                              |
| IMO     | International Maritime Organization                                                                 |
| ISO     | International Organization for Standardization                                                      |
| KECI    | Korean Existing Chemicals Inventory                                                                 |
| LC50    | Lethal Concentration to 50% of a test population                                                    |
| LD50    | Lethal Dose to 50% of a test population (Median Lethal Dose)                                        |
| MARPOL  | International Convention for the Prevention of Pollution from Ships                                 |
| NFPA    | National Fire Protection Association                                                                |
| NIOSH   | National Institute for Occupational Safety and Health                                               |
| n.o.s.  | Not Otherwise Specified                                                                             |
| NOAEC   | No Observed Adverse Effect Concentration                                                            |
| NOAEL   | No Observed Adverse Effect Level                                                                    |
| NOELR   | No Observable Effect Loading Rate                                                                   |
| NTP     | National Toxicology Program (United States)                                                         |
| NZIoC   | New Zealand Inventory of Chemicals                                                                  |
| OECD    | Organization for Economic Cooperation and Development                                               |
| OEL     | Occupational exposure limits                                                                        |

|         |                                                                                     |
|---------|-------------------------------------------------------------------------------------|
| OSHA    | Occupational Safety and Health Administration of the US Department of Labor         |
| PBT     | Persistent, Bioaccumulative and Toxic substance                                     |
| PICCS   | Philippines Inventory of Chemicals and Chemical Substances                          |
| PMT     | Persistent, Mobile and Toxic                                                        |
| PPE     | Personal protective equipment                                                       |
| QSAR    | Quantitative Structure Activity Relationship                                        |
| RID     | Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe) |
| SADT    | Self-Accelerating Decomposition Temperature                                         |
| SAR     | Structure-activity relationship                                                     |
| SARA    | Superfund Amendments and Reauthorization Act                                        |
| SDS     | Safety Data Sheet                                                                   |
| SL      | Surface Limit                                                                       |
| STEL    | Short Term Exposure Limit                                                           |
| STOT RE | Specific target organ toxicity - Repeated exposure                                  |
| STOT SE | Specific target organ toxicity - Single exposure                                    |
| TCSI    | Taiwan Chemical Substance Inventory                                                 |
| TDG     | Transport of Dangerous Goods (Canada)                                               |
| TSCA    | Toxic Substances Control Act (United States)                                        |
| TWA     | Time-Weighted Average                                                               |
| UN      | United Nations                                                                      |
| VOC     | Volatile organic compounds                                                          |
| vPvB    | Very Persistent and Very Bioaccumulative                                            |
| vPvM    | Very Persistent and Very Mobile                                                     |
| As      | Allergenic substance                                                                |
| DS      | Dermal Sensitizer                                                                   |
| Ot      | Ototoxicant                                                                         |
| pOt     | Ototoxicant - potential to cause hearing disorders                                  |
| PS      | Photosensitizer                                                                     |
| RS      | Respiratory Sensitizer                                                              |
| S       | Sensitizer                                                                          |
| poS     | Sensitizer - capable of causing occupational asthma                                 |
| Sa      | Simple asphyxiant                                                                   |
| Sd      | Skin designation                                                                    |
| pSd     | Skin designation - potential for cutaneous absorption                               |
| Sdv     | Skin designation - vacated                                                          |
| Sk      | Skin notation                                                                       |
| dSk     | Skin notation - danger of cutaneous absorption                                      |
| pSk     | Skin notation - potential for cutaneous absorption                                  |

#### Key literature references and sources for data used to compile the SDS

U.S. Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 U.S. Environmental Protection Agency  
 Acute Exposure Guideline Level(s) (AEGL(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 Japan National Institute of Technology and Evaluation (NITE)  
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 U.S. National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications  
 International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program

International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set  
United Nations World Health Organization (WHO)

**Revision date** 22-Oct-2025

**Revision Note** No information available.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge and belief at the date of publication. This information is intended only as a guide for safe handling, use, processing, storage, transportation, disposal and release and should not be taken as a warranty or quality specification. The information relates only to the specific material and may not be valid for such material used in combination with any other materials or in any process unless expressly specified in the text. New England Biolabs will not be liable for any damages resulting from handling or contact with the product.

**End of Safety Data Sheet**