# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Preparation of safety data sheets for hazardous chemicals Code of Practice June 2023

**Revision date** 14-Oct-2026 **Revision Number** 6

## Section 1: Identification

**Product identifier**

**Product Name** NEBNext® First Strand Synthesis Reaction Buffer (5X)

**Product Code(s)** E7421

**Other means of identification**

**Synonyms** None

**Substance/mixture** Mixture

**Other information** This document is not required as per the local legislation, but is instead provided for information purposes

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

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

**Uses advised against** No information available

**Details of manufacturer or importer**

**Manufacturer**
**New England Biolabs, Inc.**
240 County Road
Ipswich, MA 01938
USA
Telephone: 978-928-5054
(toll-free) 1-800-632-5227
Fax: 978-921-1350

**Supplier**
**New England Biolabs (Australia) Pty Ltd.**
22/270 Ferntree Gully Road
Notting Hill, Victoria 3168
Australia : 1800 934 218

For further information, please contact

**Contact Point** Product Safety Department

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

**Emergency telephone number**

**24 Hour Emergency Phone Number** Chemtrec +61 2 9037 2991

## Section 2: Hazard(s) identification

**Classification of the substance or mixture**

Not classified

**Label elements**

**Hazard statements**
No hazard statements required.

**Other hazards which do not result in classification**
No information available.

## Section 3: Composition and information on ingredients

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

| Chemical name | CAS No. | Weight-% |
|---|---|---|
| Non-hazardous ingredients | Proprietary | Balance |

## Section 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. Consult a doctor.

**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 doctors** Treat symptomatically.

## Section 5: Firefighting measures

**Suitable Extinguishing Media**

**Suitable extinguishing equipment** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

**Specific hazards arising from the chemical**

**Specific hazards arising from the chemical** No information available.

**Special protective actions for firefighters**

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protective equipment.

## Section 6: Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation.

**For emergency responders** Use personal protection recommended in Section 8.

**Environmental precautions**

**Environmental precautions** See Section 12 for additional Ecological Information.

**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** Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers. Clean contaminated surface thoroughly.

**Precautions to prevent secondary hazards**

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## Section 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** Do not eat, drink or smoke when using this product. Wash hands before breaks and after work.

**Conditions for safe storage, including any incompatibilities**

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

**Incompatible materials** None known based on information supplied.

## Section 8: Exposure controls and 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.

| | |
|---|---|
| **Biological occupational exposure limits** | This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies |

**Appropriate engineering controls**

| | |
|---|---|
| **Engineering controls** | Showers<br>Eyewash stations<br>Ventilation systems. |

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

| | |
|---|---|
| **Eye/face protection** | No special protective equipment required. |
| **Skin and body protection** | No special protective equipment required. |
| **Hand 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. |
| **Environmental exposure controls** | No information available. |
| **Thermal hazards** | No information available. |

## Section 9: Physical and chemical properties

**Information on basic physical and chemical properties**

| | |
|---|---|
| **Appearance** | Colourless |
| **Physical state** | Liquid |
| **Colour** | No information available |
| **Odour** | Mild |

| **Property** | **Values** | **Remarks • Method** |
|---|---|---|
| **Melting point / freezing point** | No data available | None known |
| **Initial boiling point and boiling range** | No data available | None known |
| **Flammability** | 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 |
| **Auto-ignition temperature** | No data available | None known |
| **Decomposition temperature** | | 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 |
| **Water solubility** | No data available | None known |
| **Solubility(ies)** | No data available | None known |
| **Partition coefficient** | No data available | None known |
| **Vapour pressure** | No data available | None known |
| **Relative density** | No data available | None known |
| **Bulk density** | No data available | |
| **Liquid Density** | No data available | |
| **Relative vapour density** | No data available | None known |
| **Particle characteristics** | | |
| **Particle Size** | No information available | |

**Particle Size Distribution** No information available

**Other information**
**VOC content** No information available

## Section 10: Stability and reactivity

**Reactivity**

**Reactivity** No information available.

**Chemical stability**

**Stability** Stable under normal conditions.

**Explosion data**
**Sensitivity to mechanical impact** None.
**Sensitivity to static discharge** None.

**Possibility of hazardous reactions**

**Possibility of hazardous reactions** None under normal processing.

**Conditions to avoid**

**Conditions to avoid** None known based on information supplied.

**Incompatible materials**

**Incompatible materials** None known based on information supplied.

**Hazardous decomposition products**

**Hazardous decomposition products** None known based on information supplied.

## Section 11: Toxicological information

**Information on likely routes of exposure**

**Product Information**

**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** No information available.

**Numerical measures of toxicity** No information available.

**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 sensitisation** | 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. |

## Section 12: Ecological information

| | |
|---|---|
| **Ecotoxicity** | Based on available data, the classification criteria are not met. |
| **Aquatic ecotoxicity** | No information available. |
| **Terrestrial ecotoxicity** | No information available. |
| **Persistence and degradability** | No information available. |
| **Bioaccumulative potential** | No information available. |
| **Mobility in soil** | No information available. |
| **Other adverse effects** | No information available. |

## Section 13: Disposal considerations

**Disposal 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 re-use empty containers.

***See section 8 for more information***

## Section 14: Transport information

**ADG** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
No information available

## Section 15: Regulatory information

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

**National regulations**

**Australia**

See section 8 for national exposure control parameters

**Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)**
No poisons schedule number allocated

**Australian Industrial Chemicals Introduction Scheme (AICIS)**
Contact supplier for inventory compliance status

**Illicit Drug Precursors/Reagents**
This product does not contain any substance(s) on the Illicit Drug Precursors/Reagents list.

**International Inventories**
Contact supplier for inventory compliance status

**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

## Section 16: Other information

**Revision date** 14-Oct-2026

**Revision Note** Updated format.

**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 |
| 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 Organisation |
| IECSC | Inventory of Existing Chemical Substances in China |
| IMDG | International Maritime Dangerous Goods |
| IMO | International Maritime Organization |
| ISO | International Organisation for Standardisation |
| 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) |
| MAK | Maximum Concentration at the Workplace |
| MARPOL | International Convention for the Prevention of Pollution from Ships |
| n.o.s. | Not Otherwise Specified |
| NOAEC | No Observed Adverse Effect Concentration |
| NOAEL | No Observed Adverse Effect Level |
| NOELR | No Observable Effect Loading Rate |
| NZIoC | New Zealand Inventory of Chemicals |
| OECD | Organisation for Economic Cooperation and Development |
| OEL | Occupational exposure limits |
| 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 |
| 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 Sensitiser |
| Ot | Ototoxicant |
| pOt | Ototoxicant - potential to cause hearing disorders |
| PS | Photosensitiser |
| RS | Respiratory Sensitiser |
| S | Sensitiser |
| poS | Sensitiser - 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
U.S. EPA 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
U.S. Hazardous Substance Data Bank (HSDB)
International Uniform Chemical Information Database (IUCLID)
Japan National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
Australian Industrial Chemicals Introduction Scheme (AICIS)
U.S. National Institute for Occupational Safety and Health (NIOSH)
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)

**Disclaimer**
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**End of Safety Data Sheet**