# SAFETY DATA SHEET

**Revision date** 19-Dec-2023 **Version** 5

## 1. Identification

**Product identifier**

**Product name** NEBNext Second Strand Synthesis Reaction Buffer (10X) with dUTP Mix

**Other means of identification**

**Product No** E7426

**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**

**Label elements**

**Hazard statements**

1.6 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
1.6 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
3.2 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
3.2 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).
3.2 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

**Other information**
No information available.

## 3. Composition/information on ingredients

**Substance**

Not applicable.

**Mixture**

| Chemical name | CAS No. | Weight-% | Hazardous Material Information Review Act registry number (HMIRA registry #) | Date HMIRA filed and date exemption granted (if applicable) |
|---|---|---|---|---|
| Ammonium Sulfate | 7783-20-2 | 1 - 5 | - | - |

## 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 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

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

**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.

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

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

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

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

**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.

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

## 9. Physical and chemical properties

**Information on basic physical and chemical properties**

| | |
|---|---|
| **Physical state** | Liquid |
| **Appearance** | Clear |
| **Color** | No information available |
| **Odor** | None |
| **Odor threshold** | No information available |

| **Property** | **Values** | **Remarks • Method** |
|---|---|---|
| **pH** | 8.5 | |
| **Melting point / freezing point** | No data available | None known |
| **Initial boiling point and boiling range** | No data available | None known |
| **Flash point** | No data available | None known |
| **Evaporation rate** | 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 | |
| **Vapor pressure** | No data available | None known |
| **Vapor density** | No data available | None known |
| **Relative density** | 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 |
| **Autoignition temperature** | No data available | None known |
| **Decomposition temperature** | No data available | None known |
| **Kinematic viscosity** | No data available | None known |
| **Dynamic viscosity** | No data available | None known |

**Other information**

**Explosive properties** No information available

| | |
|---|---|
| **Oxidizing properties** | No information available |
| **Softening point** | No information available |
| **Molecular weight** | No information available |
| **VOC content** | No information available |
| **Liquid Density** | No information available |
| **Bulk density** | No information available |

## 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**

**The following values are calculated based on chapter 3.1 of the GHS document**

| | |
|---|---|
| **ATEmix (oral)** | 177,500.00 mg/kg |
| **ATEmix (dermal)** | 125,000.00 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 |

1.6 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
1.6 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
3.2 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
3.2 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
3.2 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

**Component Information**

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|---|---|---|
| Ammonium Sulfate<br>7783-20-2 | = 2840 mg/kg ( Rat ) | > 2000 mg/kg ( Rat ) | - |

**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**

| Chemical name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---|---|---|---|---|
| Ammonium Sulfate 7783-20-2 | - | LC50: =250mg/L (96h, Brachydanio rerio) LC50: =480mg/L (96h, Brachydanio rerio) LC50: =420mg/L (96h, Brachydanio rerio) LC50: =18mg/L (96h, Cyprinus carpio) LC50: 32.2 - 41.9mg/L (96h, Oncorhynchus mykiss) LC50: 5.2 - 8.2mg/L (96h, Oncorhynchus mykiss) LC50: >100mg/L (96h, Pimephales promelas) LC50: 123 - 128mg/L (96h, Poecilia reticulata) LC50: =126mg/L (96h, Poecilia reticulata) | - | LC50: =14mg/L (48h, Daphnia magna) |

**Persistence and degradability** No information available.

**Bioaccumulation**

**Component Information**

| Chemical name | Partition coefficient |
|---|---|
| Ammonium Sulfate<br>7783-20-2 | -5.1 |

**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

**DOT** Not regulated

**TDG** Not regulated

**MEX** Not regulated

**ICAO (air)** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**RID** Not regulated

**ADR** Not regulated

**ADN** 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**

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

| | |
|---|---|
| **DSL/NDSL** | Contact supplier for inventory compliance status. |
| **EINECS/ELINCS** | Contact supplier for inventory compliance status. |
| **ENCS** | Contact supplier for inventory compliance status. |
| **IECSC** | Contact supplier for inventory compliance status. |
| **KECL** | Contact supplier for inventory compliance status. |
| **PICCS** | Contact supplier for inventory compliance status. |
| **AIIC** | Contact supplier for inventory compliance status. |
| **NZIoC** | 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 and Evaluated Chemical Substances
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances
**AICS** - Australian Inventory of Chemical Substances
**NZIoC** - New Zealand Inventory of Chemicals

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

| Chemical name | SARA 313 - Threshold Values % |
|---|---|
| Ammonium Sulfate - 7783-20-2 | 1.0 |

**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).

**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**

| Chemical name | New Jersey | Massachusetts | Pennsylvania |
|---|---|---|---|
| Ammonium Sulfate<br>7783-20-2 | - | X | X |
| Sodium Orthovanadate<br>13721-39-6 | X | - | - |

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

## 16. Other information

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **NFPA** | **Health hazards** 0 | **Flammability** 0 | **Instability** 0 | **Special hazards** - |
| **HMIS** | **Health hazards** 0 | **Flammability** 0 | **Physical hazards** 0 | **Personal protection** X |

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

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| | | | |
|---|---|---|---|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |

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

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (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)
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)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

**Prepared by** Environmental, Health and Safety, 978-927-5054

**Revision date** 19-Dec-2023

**Revision note** No information available.

**Disclaimer**

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**End of Safety Data Sheet**