

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name T4 DNA Ligase Reaction Buffer
Product No B0202

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use This product is for research and development only
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Supplier Address New England BioLabs
240 County Road
Ipswich, MA 01938
USA

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

Telefax 978-921-1350

For further information, please contact

E-mail address info@neb.com

1.4. Emergency telephone number

Emergency telephone 978-927-5054
800-632-5227 (toll free)
9:00am - 5:00pm Monday-Friday EST

Emergency telephone - §45 - (EC)1272/2008
Europe 112

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

2.2. Label elements

Product identifier

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

Signal word

None

2.3. Other hazards

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice

Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove from exposure, lie down. Do not breathe dust/fume/gas/mist/vapors/spray.

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.

Inhalation

Remove to fresh air.

Ingestion

Clean mouth with water and drink afterwards plenty of water.

4.2. Most important symptoms and effects, both acute and delayed

No information available

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians

Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

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

Unsuitable extinguishing media

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

5.2. Special hazards arising from the substance or mixture

No information available

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

Ensure adequate ventilation, especially in confined areas.

For emergency responders

Use personal protection recommended in Section 8.

6.2. Environmental precautions

See Section 12 for additional Ecological Information.

6.3. 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

Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. This material and its container must be disposed of as hazardous waste.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage temperature

Refer to www.neb.com for specific information.

Storage Conditions

Keep/store only in original container.

Incompatible materials

None known based on information supplied.

7.3. Specific end use(s)

Risk management methods [RMM]

The information required is contained in this Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Product name T4 DNA Ligase
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Product No B0202

Specification No No information available

8.1. 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
Derived No Effect Level (DNEL)	No information available
Predicted No Effect Concentration (PNEC)	No information available

8.2. Exposure controls

Engineering controls
Showers. Eyewash stations.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin and body protection

Wear suitable protective clothing and gloves.

Respiratory protection

Use in well ventilated areas.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls

See Section 12: ECOLOGICAL INFORMATION.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Colorless
Odor	Mild
Odor threshold	No information available

Property

pH

Melting point / freezing point

Boiling point / boiling range

Flash point

Evaporation rate

Flammability (solid, gas)

Flammability Limit in Air

Upper flammability limit

Lower flammability limit

Vapor pressure

Vapor density

Relative density

Specific gravity

Water solubility

Solubility in other solvents

Partition coefficient

Autoignition temperature

Decomposition temperature

Remarks • Method

Refer to www.neb.com for specific information

No information available

No information available

No information available

No information available

No information available

No information available

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No information available

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Specification No No information available

Kinematic viscosity
Dynamic viscosity
Explosive properties
Oxidizing properties

No information available
No information available
No information available
No information available

Other information

Softening point
Molecular weight
VOC content (%)
Density
Bulk density

No information available
No information available
No information available
No information available
No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Can react briskly with oxidizers - danger of explosion.

10.4. Conditions to avoid

Incompatible materials. Ignition sources. Heat.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon monoxide. Carbon dioxide (CO₂).

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Product information

Product does not present an acute toxicity hazard based on known or supplied information.

Inhalation

Avoid breathing vapors or mists
May cause irritation of respiratory tract

Eye contact

Redness
May cause slight irritation

Skin contact

Prolonged contact may cause redness and irritation
Repeated exposure may cause skin dryness or cracking

Ingestion

May cause drowsiness or dizziness
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea
Symptoms include burning sensation, coughing, wheezing, shortness of breath, headache, nausea, and vomiting

Unknown acute toxicity

10.16 % of the mixture consists of ingredient(s) of unknown toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg (Rat)	-	-
Magnesium Chloride	= 2800 mg/kg (Rat)	-	-

Skin corrosion/irritation	Mild
Serious eye damage/eye irritation	Mild
Sensitization	Not applicable
Germ cell mutagenicity	Not applicable
Carcinogenicity	No information available
Reproductive toxicity	No information available
Developmental toxicity	No information available
Teratogenicity	No information available
STOT - single exposure	No information available
STOT - repeated exposure	No information available
Neurological effects	No information available
Target organ effects	Kidneys, Respiratory system, Eyes, Skin.
Other adverse effects	No information available
Symptoms	No information available
Aspiration hazard	No information available

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

8.16 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

No information available

12.4. Mobility in soil

No information available

12.5. Results of PBT and vPvB assessment

No information available

12.6. Other adverse effects

Other adverse effects
No information available

Endocrine disruptor information
No information available

Ozone
No information available

Section 13: DISPOSAL CONSIDERATIONS

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Specification No No information available

13.1. Waste treatment methods

Relevant Information

Keep out of drains, sewers, ditches and waterways.

Waste from Residues/Unused Products

Disposal should be in accordance with applicable regional, national and local laws and regulations. Send to a licensed recycler, reclaimer or incinerator.

Contaminated packaging

Empty containers must be tripled rinsed prior to disposal.

Section 14: TRANSPORT INFORMATION

IMDG

14.1 UN/ID No	Not regulated
14.2 Proper shipping name	Not regulated
14.3 Hazard class	Not regulated
14.4 Packing group	Not regulated
14.5 Marine pollutant	Not applicable
14.6 Special Provisions	None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

RID

14.1 UN/ID No	Not regulated
14.2 Proper shipping name	Not regulated
14.3 Hazard class	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	None

ADR

14.1 UN/ID No	Not regulated
14.2 Proper shipping name	Not regulated
14.3 Hazard class	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	None

ICAO (air)

14.1 UN/ID No	Not regulated
14.2 Proper shipping name	Not regulated
14.3 Hazard class	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	None

IATA

14.1 UN/ID No	Not regulated
14.2 Proper shipping name	Not regulated
14.3 Hazard class	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	None

Section 15: REGULATORY INFORMATION

Product name T4 DNA Ligase
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Product No B0202

Specification No No information available

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

National Regulations

Occupational Illnesses (R-463-3, France)

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

International Inventories

All of the components in the product are on the following Inventory lists TSCA (United States);, Canada (DSL/NDSL), Europe (EINECS/ELINCS), Australia (AICS).

TSCA	Complies
EINECS	Complies
ELINCS	-
DSL	Complies
NDSL	Complies
PICCS	-
ENCS	-
IECSC	-
AICS	Complies
KECL	-

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
PICCS - Philippines Inventory of Chemicals and Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
AICS - Australian Inventory of Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances

15.2. Chemical safety assessment

No information available

Section 16: OTHER INFORMATION

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

Prepared by	EH&S Manager 978-927-5054
Prepared by	New England BioLabs
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This safety data sheet complies with the requirements of: Regulation (EC) No. 1907/2006

Disclaimer

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End of Safety Data Sheet