



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
REACH Regulation (EC) No 1907/2006, as retained in UK law by (SI 2019/758 as amended)

Revision date 25-Nov-2024

Version 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name Luna® Probe One-Step Reaction Mix (No ROX)

Product No M3007

Pure substance/mixture Mixture

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

New England BioLabs
240 County Road
Ipswich, MA 01938
USA

For further information, please contact

Contact Point 978-927-5054, 800-632-5227 (toll free)

E-mail address info@neb.com

1.4. Emergency telephone number

Emergency Telephone Chemtrec +44 20 3885 0382

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP (SI 2020/1567 as amended)

Not classified

2.2. Label elements

Not classified

Hazard statements

Not classified.

EUH210 - Safety data sheet available on request.

2.3. Other hazards

Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

| Chemical name | Weight-% | EC No (EU Index No) | UK REACH registration number | Classification according to GB CLP (SI 2020/1567 as amended) | Specific concentration limit (SCL) | M-Factor | M-Factor (long-term) | Notes |
|---------------|----------|---------------------|------------------------------|--|------------------------------------|----------|----------------------|-------|
| Trade Secret | 0 - 10% | .? | - | - | - | - | - | - |

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

Acute Toxicity Estimate

In the absence of LD50/LC50 data, the conversion value (converted acute toxicity point estimate) may be indicated here; please note that these values do not represent test results

| Chemical name | Oral LD50 mg/kg | Dermal LD50 mg/kg | Inhalation LC50 - 4 hour - dust/mist - mg/L | Inhalation LC50 - 4 hour - vapor - mg/L | Inhalation LC50 - 4 hour - gas - ppm |
|---------------|-----------------|-------------------|---|---|--------------------------------------|
| Trade Secret | 20000 | 20800 | No data available | No data available | No data available |

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (UK REACH Article 59)

SECTION 4: First aid measures

4.1. 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. In the case of skin irritation or allergic reactions see a physician.

Ingestion

Rinse mouth.

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

Symptoms

No information available.

Effects of Exposure No information available.

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

Note to physicians Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical No information available.

5.3. Advice for firefighters

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

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 Take up mechanically, placing in appropriate containers for disposal.

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

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling**Advice on safe handling** Ensure adequate ventilation.**General hygiene considerations** Wash hands before breaks and immediately after handling the product.**7.2. Conditions for safe storage, including any incompatibilities****Storage Conditions** Keep container tightly closed in a dry and well-ventilated place.**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****8.1. Control parameters****Exposure Limits**

| Chemical name | United Kingdom |
|---------------|--|
| Trade Secret | TWA: 150 ppm TWA: 474 mg/m ³ TWA: 10 mg/m ³ STEL: 450 ppm STEL: 1422 mg/m ³ STEL: 30 mg/m ³ |

Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.**Derived No Effect Level (DNEL) - Workers**

| Chemical name | Oral | Dermal | Inhalation |
|---------------------------------|------|--|--|
| Glycerol 56-81-5 | | | 56 mg/m ³ [5] [6] |
| Potassium Chloride 7447-40-7 | | 303 mg/kg bw/day [4] [6] 910 mg/kg bw/day [4] [7] | 1064 mg/m ³ [4] [6] 5320 mg/m ³ [4] [7] |
| Trade Secret | | | 168 mg/m ³ [4] [6] 10 mg/m ³ [5] [6] |
| Tris (Tris Base) 77-86-1 | | 166.7 mg/kg bw/day [4] [6] | 117.5 mg/m ³ [4] [6] |

Notes

- [4] Systemic health effects.
[5] Local health effects.
[6] Long term.
[7] Short term.

Derived No Effect Level (DNEL) - General Public

| Chemical name | Oral | Dermal | Inhalation |
|---------------|--------------------------|--------|------------------------------|
| Glycerol | 229 mg/kg bw/day [4] [6] | | 33 mg/m ³ [5] [6] |

| Chemical name | Oral | Dermal | Inhalation |
|---------------------------------|---|--|---|
| 56-81-5 | | | |
| Potassium Chloride 7447-40-7 | 91 mg/kg bw/day [4] [6] 455 mg/kg bw/day [4] [7] | 910 mg/kg bw/day [4] [6] 910 mg/kg bw/day [4] [7] | 273 mg/m ³ [4] [6] 1365 mg/m ³ [4] [7] |
| Trade Secret | | | 50 mg/m ³ [4] [6] 10 mg/m ³ [5] [6] |
| Magnesium Chloride 7786-30-3 | 7 mg/kg bw/day [4] [6] | | |
| Tris (Tris Base) 77-86-1 | 8.3 mg/kg bw/day [4] [6] | | 29 mg/m ³ [4] [6] |

Notes

- [4] Systemic health effects.
- [5] Local health effects.
- [6] Long term.
- [7] Short term.

Predicted No Effect Concentration (PNEC)

| Chemical name | Freshwater | Freshwater (intermittent release) | Marine water | Marine water (intermittent release) | Air |
|---------------------------------|------------|--------------------------------------|--------------|--|-----|
| Glycerol 56-81-5 | 0.885 mg/L | 8.85 mg/L | 0.0885 mg/L | | |
| Potassium Chloride 7447-40-7 | 0.1 mg/L | 1 mg/L | 0.1 mg/L | | |
| Trade Secret | 260 mg/L | 183 mg/L | 26 mg/L | | |
| Magnesium Chloride 7786-30-3 | 3.21 mg/L | 5.48 mg/L | 0.32 mg/L | | |
| Tween-20 9005-64-5 | 0.2 mg/L | 0.239 mg/L | 0.02 mg/L | | |

| Chemical name | Freshwater sediment | Marine sediment | Sewage treatment | Soil | Food chain |
|---------------------------------|----------------------------|----------------------------|------------------|-------------------------|------------|
| Glycerol 56-81-5 | 3.3 mg/kg sediment dw | 0.33 mg/kg sediment dw | 1000 mg/L | 0.141 mg/kg soil dw | |
| Potassium Chloride 7447-40-7 | | | 10 mg/L | | |
| Trade Secret | 572 mg/kg sediment dw | 57.2 mg/kg sediment dw | 20000 mg/L | 50 mg/kg soil dw | |
| Magnesium Chloride 7786-30-3 | 288.9 mg/kg sediment dw | 28.89 mg/kg sediment dw | 90 mg/L | 662.77 mg/kg soil dw | |
| Tween-20 9005-64-5 | 1.141 mg/kg sediment dw | 1000 mg/kg sediment dw | | | |
| Tris (Tris Base) 77-86-1 | | | 300 mg/L | | |

8.2. Exposure controls

Engineering controls No information available.

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. |
| 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. |

SECTION 9: Physical and chemical properties9.1. Information on basic physical and chemical properties

| | |
|----------------|--------------------------|
| Physical state | Liquid |
| Appearance | Blue |
| Color | No information available |
| Odor | Odorless. |
| Odor threshold | No information available |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|---|--------------------------|-------------------------|
| Melting point / freezing point | No data available | None known |
| Initial boiling point and 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 | 371 °C | |
| Decomposition temperature | | None known |
| pH | No data available | |
| 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 |
| Vapor pressure | No data available | None known |
| 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 | | |
| Particle Size | No information available | |
| Particle Size Distribution | No information available | |
| Explosive properties | No information available | |
| Oxidizing properties | No information available | |

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

11.1. 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

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

ATEmix (oral) 55,594.00 mg/kg

ATEmix (dermal) 47,706.40 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

Component Information

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---------------|-------------------|--------------------------|-----------------|
| Trade Secret | = 20 g/kg (Rat) | = 20800 mg/kg (Rabbit) | - |

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.

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity The environmental impact of this product has not been fully investigated.

| Chemical name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---------------|---|---|----------------------------|--------------------------------------|
| Trade Secret | EC50: =19000mg/L (96h, Pseudokirchneriella subcapitata) | LC50: =51600mg/L (96h, Oncorhynchus mykiss) LC50: 41 - 47mL/L (96h, Oncorhynchus mykiss) LC50: =51400mg/L (96h, Pimephales promelas) LC50: =710mg/L (96h, Pimephales promelas) | - | EC50: >1000mg/L (48h, Daphnia magna) |

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation

Component Information

| Chemical name | Partition coefficient |
|---------------|-----------------------|
| Trade Secret | -1.07 |

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB above the threshold of declaration.

| Chemical name | PBT and vPvB assessment |
|---------------|---------------------------------|
| Trade Secret | The substance is not PBT / vPvB |

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1. 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.

SECTION 14: Transport information**IATA**

| | |
|-----------------------------------|----------------|
| 14.1 UN number or ID number | Not regulated |
| 14.2 | |
| 14.3 Transport hazard class(es) | Not regulated |
| 14.4 Packing group | Not regulated |
| 14.5 Environmental hazard | Not applicable |
| 14.6 Special precautions for user | |
| Special Provisions | None |

IMDG

| | |
|--|--------------------------|
| 14.1 UN number or ID number | Not regulated |
| 14.2 | |
| 14.3 Transport hazard class(es) | Not regulated |
| 14.4 Packing group | Not regulated |
| 14.5 Environmental hazard | Not applicable |
| 14.6 Special precautions for user | |
| Special Provisions | None |
| 14.7 Maritime transport in bulk according to IMO instruments | No information available |

RID

| | |
|-----------------------------------|----------------|
| 14.1 UN number or ID number | Not regulated |
| 14.2 | |
| 14.3 Transport hazard class(es) | Not regulated |
| 14.4 Packing group | Not regulated |
| 14.5 Environmental hazard | Not applicable |
| 14.6 Special precautions for user | |
| Special Provisions | None |

ADR

| | |
|--|----------------|
| 14.1 UN number or ID number | Not regulated |
| 14.2 | |
| 14.3 Transport hazard class(es) | Not regulated |
| 14.4 Packing group | Not regulated |
| 14.5 Environmental hazard | Not applicable |
| 14.6 Special precautions for user | |
| Special Provisions | None |

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****Authorizations and/or restrictions on use:**

This product does not contain substances subject to authorization (UK REACH - Annex XIV). This product does not contain substances subject to restriction (UK REACH - Annex XVII).

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Named dangerous substances per COMAH (SI 2015/483 as amended)

Not applicable

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

Not applicable

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Not applicable

Poisons and Explosive Precursors

Not applicable

International Inventories

| | |
|----------------------|--|
| TSCA | Contact supplier for inventory compliance status |
| 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 |
| TCSI | 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

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information

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

Legend

SVHC: Substances of Very High Concern for Authorization:
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances
vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances
STOT: Specific Target Organ Toxicity
ATE: Acute Toxicity Estimate
LC50: 50% Lethal Concentration
LD50: 50% Lethal Dose

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Classification procedure

| Classification according to GB CLP (SI 2020/1567 as amended) | Method Used |
|--|--------------------|
| Acute oral toxicity | Calculation method |
| Acute dermal toxicity | Calculation method |
| Acute inhalation toxicity - gas | Calculation method |
| Acute inhalation toxicity - vapor | Calculation method |
| Acute inhalation toxicity - dust/mist | Calculation method |
| Skin corrosion/irritation | Calculation method |
| Serious eye damage/eye irritation | Calculation method |
| Respiratory sensitization | Calculation method |
| Skin sensitization | Calculation method |
| Mutagenicity | Calculation method |
| Carcinogenicity | Calculation method |
| Reproductive toxicity | Calculation method |
| STOT - single exposure | Calculation method |
| STOT - repeated exposure | Calculation method |
| Acute aquatic toxicity | Calculation method |
| Chronic aquatic toxicity | Calculation method |
| Aspiration hazard | Calculation method |
| Ozone | Calculation method |

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)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
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)
U.S. 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

Revision date 25-Nov-2024

Further information SDS is valid 3 years from revision date. Contact info@neb.com for latest revision

This SDS complies with the requirements of UK REACH Regulations SI 2019/758 (as amended)

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

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