Safety Data Sheet

# MDX218

# Glycerol-Free DNA Pol I Klenow Fragment exo- (HC)

# Glycerol-Free DNA Pol I Klenow Fragment exo- (HC)

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
Date of original issue: 18/03/2024 Current revision: 18/03/2024 Version 1.0 Supersedes: None

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

### 1.1 Product identifier

| | |
|---|---|
| Product form: | Mixture |
| Product name: | Glycerol-Free DNA Pol I Klenow Fragment exo- (HC) |
| CAS No.: | N/A |
| EC No.: | N/A |
| REACH No.: | A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline. |

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

| | |
|---|---|
| **Relevant identified uses:** | Product for analytical use |
| **Uses advised against:** | Not described |

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

Bioline Reagents Ltd, part of Meridian Bioscience
Humber Road
London
NW2 6EW
United Kingdom

Phone: +44 (0)20 8830 5300
Fax: +44 (0)20 8452 2822
E-mail: mbi.tech@meridianlifescience.com

### 1.4 Emergency telephone number

| | |
|---|---|
| Emergency number: | +44 (0)1865 407 333 – English speaking (24 hours, 7 days) |
| Contact: | CareChem 24 |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Glycerol-Free DNA Pol I Klenow Fragment exo- (HC) Classification according to Regulation (EC) No 1272/2008**

Not a hazardous substance or mixture

### 2.2 Label elements

**Glycerol-Free DNA Pol I Klenow Fragment exo- (HC) Labelling according Regulation (EC) No 1272/2008**

Not a hazardous substance or mixture

| Hazard Statements (CLP) | Precautionary Statements (CLP) |
|---|---|
| None | None |

### 2.3 Other hazards

**Possible hazards from physicochemical properties:**

Some hazards associated with individual components of this mixture are not relevant because the substances are present in concentrations below the GHS cut-off levels, change of physical state or because the mixture/ solution is buffered to pH 4-9 (see GHS Directive 1272/2008/EC Annex I, chapter 3.2.3.1.2.).

This substance/mixture contains no components considered to have endocrine disrupting effects or be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.1/3.2 Substance or Mixture

**Glycerol-Free DNA Pol I Klenow Fragment exo- (HC)**

| Name, synonyms and formulae | Product Identifier | Composition | Classification according to Regulation (EC) No. 1272/2008 (CLP) |
|---|---|---|---|
| N/A | N/A | N/A | N/A |

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH annex II

### 3.3 Remarks

List of H, EUR and P phrases: see section 16

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

| | |
|---|---|
| First-aid measures general | If necessary consult a physician. Show this safety data sheet to the medical professional in attendance. |
| First-aid measures after inhalation | Remove to fresh air, keep the patient warm and provide resuscitation if necessary. If symptoms develop, obtain medical attention. |
| First-aid measures after skin contact | Remove contaminated clothing. Rinse the affected skin or mucous membrane thoroughly under running water. (If possible) use soap. |
| First-aid measures after eye contact | After contact with the eyes rinse thoroughly with plenty of water for at least 15 minutes with the eyelid wide open. |
| First-aid measures after ingestion | Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth and drink plenty of water. |

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

The most important known symptoms and effects are described in the labelling section 2.2 and/or in section 11

Not expected to present a significant hazard under anticipated conditions of normal use.

May cause slight irritation to eyes.

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

No additional recommendations.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area.

| | |
|---|---|
| Suitable extinguishing media | All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used. |
| Unsuitable extinguishing media | None known. |

### 5.2 Special hazards arising from the substance or mixture

| | |
|---|---|
| Fire Hazard | Not flammable. |
| Hazardous decomposition products in case of fire | Carbon oxides, Nitrogen oxides, Hydrogen chloride gas, Sulphur oxides, Magnesium oxide, Phosphorus oxides, Potassium Oxides, Lithium oxides. |

### 5.3 Advice for firefighters

| | |
|---|---|
| Firefighting instructions | Product package burns like paper or plastic.<br>Spray any vapours released with water.<br>Retain fire water where possible. |
| Protection during firefighting | Protective breathing apparatus, independent of the ambient air (isolated equipment), and sealed protective clothing is necessary in the event of large-scale formation of toxic substances. |

### 5.4 Additional Information

None.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

| | |
|---|---|
| For non-emergency personnel | Evacuate unnecessary personnel.<br>Avoid breathing vapours, mist or gas.<br>Avoid contact with skin, eyes and clothing.<br>Regular staff training is necessary, indicating hazards and precautions on the basis of operating instructions.<br>Restrictions on activity must be observed. |
| For emergency responders | Wear suitable protective equipment as defined in section 8.2<br>Prevent further leakage or spillage if safe to do so.<br>Avoid release of materials into the environment. |

### 6.2 Environmental precautions

Notify authorities if large amounts of the product enters sewers or public waters.

### 6.3 Methods and material for containment and cleaning up

| | |
|---|---|
| Small Scale release | Make use of general chemical spill kit or other absorbent material.<br>Clean any contaminated equipment and floors with plenty of water.<br>Collect small amounts of leaked liquid and flush with copious amounts of water into drains. |
| Large Scale release | Bind any escaping liquid with inert absorbent material (sand, vermiculite or similar).<br>Block/ prevent liquid entering any open drain.<br>Collect contaminated materials and dispose in accordance to local regulations for the disposal of hazardous chemicals. |

### 6.4 Reference to other sections

SECTION 5.4: Additional fire precautions.

SECTION 8: Exposure controls/personal protection.

SECTION 13: Disposal considerations.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

| | |
|---|---|
| Precautions for safe handling | Handling in accordance with the instructions supplied with the product.<br>Provide adequate ventilation.<br>Avoid breathing vapours, mist or gas.<br>Avoid contact with skin, eyes and clothing. |
| Hygiene measures | Handle in accordance with good industrial hygiene and safety practice.<br>Take off contaminated clothing and wash before reuse.<br>Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. |

### 7.2 Conditions for safe storage, including any incompatibilities

| | |
|---|---|
| Storage conditions | Keep only in the original container.<br>Store in a cool well ventilated place out of direct sunlight.<br>Keep container closed when not in use. |
| Incompatible materials | Store separately from: bases, oxidizing/reducing agents, acids, aluminium, zinc. |

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

| Glycerol-Free DNA Pol I Klenow Fragment exo- (HC) | | |
|---|---|---|
| United Kingdom | WEL TWA (mg/m³) | N/A |
| United Kingdom | WEL TWA (ppm) | N/A |
| United Kingdom | WEL STEL (mg/m³) | N/A |
| United Kingdom | WEL STEL (ppm) | N/A |
| United Kingdom | Remark (WEL) | Contains no substances with occupational exposure limit values. |

### 8.2 Exposure controls

| | |
|---|---|
| Appropriate engineering controls: | Good ventilation or extraction system in the room, floor resistant to chemicals and washing facilities available. |
| General controls | Avoid all unnecessary exposure.<br>Handle in accordance with good industrial hygiene and safety practice. |
| Respiratory protection | Respiratory protection not required.<br>For nuisance exposures or if risk assessment requires, use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). |
| Eye protection | Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166 (EU) with integrated side shields or wrap-around protection. |
| Hand protection | Handle with gloves.<br>Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product.<br>Wear protective gloves that satisfy the specifications of EU Directive 89/686/EEC and the standard EN374 derived from it.<br>Exact breakthrough times to be found through the manufacturer of the protective gloves and must be observed.<br>Gloves should be removed and replaced if there are any signs of degradation or breakthrough.<br><br>Splash contact – Material suggested Nitrile Rubber.<br><br>Full contact – Material suggested Nitrile Rubber.<br><br>If used in solution, or mixed with other substances, and under conditions which differ from EN374, contact the supplier of the CE approved gloves. |
| Skin and body protection | Long sleeved protective clothing. |
| Thermal protection | Not required for normal conditions of use. |

| | |
|---|---|
| Other information | Eating, drinking, smoking, taking snuff and storage of food in work areas and at outdoor workplaces is prohibited. Avoid contact with the skin, eyes and clothing. Rinse any clothing on which the substance has been spilled, and soak it in water. Wash hands thoroughly with soap and water when stopping work and before eating. |

These recommendations are advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| Glycerol-Free DNA Pol I Klenow Fragment exo- (HC) | |
|---|---|
| Physical state: | Liquid |
| Colour: | Colourless |
| Molecular Mass: | No data available |
| Odour: | Odourless |
| Odour threshold: | No data available |
| pH: | Not applicable |
| Relative evaporation rate (butylacetate=1): | No data available |
| Melting point: | No data available |
| Freezing point: | No data available |
| Boiling point or initial boiling point and boiling range: | No data available |
| Flash point: | No data available |
| Auto-ignition temperature: | No data available |
| Decomposition temperature: | No data available |
| Flammability (solid, liquid, gas): | Not applicable |
| Vapour pressure: | No data available |
| Relative vapour density at 20 °C: | No data available |
| Density and/or Relative density: | No data available |
| Solubility: | No data available |
| Log Pow: | No data available |
| Viscosity, kinematic: | No data available |
| Viscosity, dynamic: | No data available |
| Oxidising properties: | No data available |
| Explosive properties: | No data available |
| Explosive limits: | No data available |

### 9.2 Other information

Data for the other parameters of the mixtures are not available, because no registration and no chemical safety report is required.

**Relevant Properties of Substance Group**: None

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Stable under normal conditions.

### 10.2 Chemical stability

Stable under recommended conditions.

### 10.3 Possibility of hazardous reactions

None known.

### 10.4 Conditions to avoid

Extremely high or low temperatures.

### 10.5 Incompatible materials

Bases, Oxidizing agents.

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions - Carbon oxides, Nitrogen oxides, Hydrogen chloride gas, Sulphur oxides, Phosphorus oxides, Potassium oxides, Lithium oxides, Magnesium oxide.

In the event of fire: see section 5

## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Quantitative data on the toxicity of this product is not available.

| **Glycerol-Free DNA Pol I Klenow Fragment exo- (HC)** | |
|---|---|
| Acute toxicity | Not classified. |
| Additional information | Based on available data, the classification criteria are not met. |
| Skin corrosion/irritation | Not classified. |
| Additional information | Based on available data, the classification criteria are not met. |
| Serious eye damage/irritation | Not classified. |
| Additional information | Based on available data, the classification criteria are not met. |
| Respiratory or skin sensitisation | Not classified. |
| Additional information | Based on available data, the classification criteria are not met. |
| Germ cell mutagenicity | Not classified. |
| Additional information | Based on available data, the classification criteria are not met. |
| Carcinogenicity | Not classified. |
| Additional information | Based on available data, the classification criteria are not met. |
| Reproductive toxicity | Not classified. |
| Additional information | Based on available data, the classification criteria are not met. |
| Specific target organ toxicity (single exposure) | Not classified. |
| Additional information | Based on available data, the classification criteria are not met. |
| Aspiration hazard | Not classified. |
| Additional information | Based on available data, the classification criteria are not met. |
| Potential adverse human health effects and symptoms: | Not expected to present a significant hazard under anticipated conditions of normal use. |

### 11.2 Information on other hazards

This product does not contain any known or suspected endocrine disrupting properties for human health.
To the best of our knowledge, data on the chemical, physical, and toxicological properties are not available.
Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

## SECTION 12: Ecological information

### 12.1 Toxicity

| Glycerol-Free DNA Pol I Klenow Fragment exo- (HC) | |
|---|---|
| Ecology - Water | Not Classified |

Environmental hazards must not be labelled with P phrases until 125 mL or 125 g (EU 1272/2008 Annex I - 1.5.2).

### 12.2 Persistence and degradability

| Glycerol-Free DNA Pol I Klenow Fragment exo- (HC) | |
|---|---|
| Biodegradation | No data available |

### 12.3 Bioaccumulative potential

| Glycerol-Free DNA Pol I Klenow Fragment exo- (HC) | |
|---|---|
| Bioconcentration factor (BCF REACH) | No additional information available |
| Log Pow | Not applicable |

### 12.4 Mobility in soil

| Glycerol-Free DNA Pol I Klenow Fragment exo- (HC) | |
|---|---|
| Ecology - Soil | No data available. |

### 12.5 Results of PBT and vPvB assessment

| Glycerol-Free DNA Pol I Klenow Fragment exo- (HC) |
|---|
| This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII |
| This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |

### 12.6 Endocrine disrupting properties

Assess endocrine disrupting properties for the environment:

Substance identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605: NONE

### 12.7 Other adverse effects

| Glycerol-Free DNA Pol I Klenow Fragment exo- (HC) |
|---|
| No additional information available. |

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

| | |
|---|---|
| Waste disposal recommendations: | **Product**<br>Offer surplus and non-recyclable solutions to a licensed disposal company.<br><br>**Contaminated packaging**<br>Dispose of as unused product. |

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1 UN number

| | |
|---|---|
| UN-No. (ADR) | Not regulated |
| UN-No. (IMDG) | Not regulated |
| UN-No. (IATA) | Not regulated |
| UN-No. (ADN) | Not regulated |
| UN-No. (RID) | Not regulated |

### 14.2 UN proper shipping name

| | |
|---|---|
| Proper Shipping Name | Not regulated |
| Proper Shipping Name (IMDG) | Not regulated |
| Proper Shipping Name (IATA) | Not regulated |
| Proper Shipping Name (ADN) | Not regulated |
| Proper Shipping Name (RID) | Not regulated |

### 14.3 Transport hazard class(es)

| | |
|---|---|
| Transport hazard class(es) (ADR) | Not regulated |
| Transport hazard class(es) (IMDG) | Not regulated |
| Transport hazard class(es) (IATA) | Not regulated |
| Transport hazard class(es) (ADN) | Not regulated |
| Transport hazard class(es) (RID) | Not regulated |

### 14.4 Packing group

| | |
|---|---|
| Packing group | Not regulated |
| Packing group (IMDG) | Not regulated |
| Packing group (IATA) | Not regulated |
| Packing group (ADN) | Not regulated |
| Packing group (RID) | Not regulated |

### 14.5 Environmental hazards

| | |
|---|---|
| Dangerous for the environment | No |
| Marine pollutant | No |
| Other information | No supplementary information available |

### 14.6 Special precautions for user

| | |
|---|---|
| Overland transport | Not regulated |
| Transport by sea | Not regulated |
| Air transport | Not regulated |
| Inland waterway transport | Not regulated |
| Rail transport | Not regulated |

### 14.7 Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

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

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list ≥ 0,1 % / SCL

Contains no REACH Annex XIV substances

### 15.2 Chemical safety assessment

**No chemical safety assessment has been carried out**

## SECTION 16: Other Information

### 16.1 Full text of H, EUH and P statements

| | |
|---|---|
| None | N/A |

### 16.2 Training Advice

Regular safety training

### 16.3 Abbreviations and acronyms

| | |
|---|---|
| ADR | Accord européen relatif au transport international des marchandises Dangereuses par Route |
| ATE | Acute Toxicity Estimate |
| CAS | Chemical Abstracts Service number |
| CLP | Classification, Labeling and Packaging |
| DNEL | Derived No effect Limit |
| EC | European Community |
| EC50 | Effective Concentration 50% |
| EN | European Norm |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IBC | Intermediate Bulk Container |
| IMDG | International Maritime Dangerous Goods Code |
| IMO | International Maritime Organisation |
| LC50 | Lethal Concentration 50% |
| LD50 | Lethal Dose 50% |
| MAC | Maximal Allowed Concentration |
| O/W | Oil-in-Water (chemistry) |
| OECD | Organisation for Economic Co-operation and Development |
| PBT | Persistent, bioaccumulative and toxic |
| PMcc | Pensky-Martens Closed Cup test |
| PNEC | Predicted no effect concentration |
| REACH | Registration, Evaluation and Authorisation of CHemicals |
| RID | Règlement concernant le transport international ferroviaire de marchandises |
| STEL | Short Term Exposure Limit |
| TWA | Time Weighted Average |
| UNXXXX | Number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods |
| vPvB | Very persistent and very bioaccumulative |

### 16.4 Recommended Restriction on Use

Only for professional user working under controlled conditions.

Consider employee restrictions for young people (e.g. 94/33/EC)

Consider employee restrictions for pregnant women and nursing women (e.g. 92/85/EEC)

## 16.5 Further Information

**Bioline Reagents Ltd,** part of Meridian Bioscience, provides the information contained herein in good faith being up-to-date of own realizations at revision time. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose.

**Bioline Reagents Ltd,** part of Meridian Bioscience, makes NO REPRESENTATIONS or WARRANTIES, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers.

Accordingly, **Bioline Reagents Ltd**, Meridian Bioscience or other subsidiaries, will not be responsible for damages resulting from use of or reliance upon this information. See terms and conditions at the end of our price lists for additional information.

## 16.6 Sources of Key Data

UK – Control of Substances Hazardous to Health Regulations 2002 (as amended). Health and Safety at Work etc. Act 1974 (as amended). Guidance Workplace Exposure Limits EH40.

EU – REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. Regulation 453/2010/EU REACH - REQUIREMENTS FOR THE COMPILATION OF SAFETY DATA SHEETS Regulation 487/2013/EU, 4th adaptation of CLP regulation to technical and scientific progress. Legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Commission Regulation (EU) No 2020/878.

German act governing protection from hazardous substances (Chemicals Act / Chemikaliengesetz- ChemG), revised on August 2013 German order governing protection from hazardous substances (Ordinance on Hazardous Substances / Gefahrstoffverordnung - GefStoffV), revised on November 2010, according to Directive 98/24/EC
TRGS 900, German engineering rules governing limits in air at work, updated February 2015 SUVA .CH, Limits in air at work 2009, revised on 01.2009. KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)., updated October 2011

Republic of China – 职业病防治法

USA – Occupational Safety and Health Administration (OSHA) Occupational Exposure Limits - Table Z-1 Limits for Air Contaminants. The American Conference of Governmental Industrial Hygienists (ACGIH).

Australia - Work Health and Safety (WHS) Act and the WHS Regulations.

Canada – Hazardous Products Regulations SOR/2015-17

# Lyo-Ready Klenow Reaction Buffer, 5x

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
Date of original issue: 18/03/2024 Current revision: 18/03/2024 Version 1.0 Supersedes: None

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

### 1.1 Product identifier

| | |
|---|---|
| Product form: | Mixture |
| Product name: | Lyo-Ready Klenow Reaction Buffer, 5x |
| CAS No.: | N/A |
| EC No.: | N/A |
| REACH No.: | A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline. |

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

| | |
|---|---|
| **Relevant identified uses:** | Product for analytical use |
| **Uses advised against:** | Not described |

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

Bioline Reagents Ltd, part of Meridian Bioscience
Humber Road
London
NW2 6EW
United Kingdom

Phone: +44 (0)20 8830 5300
Fax: +44 (0)20 8452 2822
E-mail: mbi.tech@meridianlifescience.com

### 1.4 Emergency telephone number

| | |
|---|---|
| Emergency number: | +44 (0)1865 407 333 – English speaking (24 hours, 7 days) |
| Contact: | CareChem 24 |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Lyo-Ready Klenow Reaction Buffer, 5x Classification according to Regulation (EC) No 1272/2008**

Not a hazardous substance or mixture

### 2.2 Label elements

**Lyo-Ready Klenow Reaction Buffer, 5x Labelling according Regulation (EC) No 1272/2008**

Not a hazardous substance or mixture

| Hazard Statements (CLP) | Precautionary Statements (CLP) |
|---|---|
| None | None |

### 2.3 Other hazards

**Possible hazards from physicochemical properties:**

Some hazards associated with individual components of this mixture are not relevant because the substances are present in concentrations below the GHS cut-off levels, change of physical state or because the mixture/ solution is buffered to pH 4-9 (see GHS Directive 1272/2008/EC Annex I, chapter 3.2.3.1.2.).

This substance/mixture contains no components considered to have endocrine disrupting effects or be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.1/3.2 Substance or Mixture

**Lyo-Ready Klenow Reaction Buffer, 5x**

| Name, synonyms and formulae | Product Identifier | Composition | Classification according to Regulation (EC) No. 1272/2008 (CLP) |
|---|---|---|---|
| N/A | N/A | N/A | N/A |

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH annex II

### 3.3 Remarks

List of H, EUR and P phrases: see section 16

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

| | |
|---|---|
| First-aid measures general | If necessary consult a physician. Show this safety data sheet to the medical professional in attendance. |
| First-aid measures after inhalation | Remove to fresh air, keep the patient warm and provide resuscitation if necessary. If symptoms develop, obtain medical attention. |
| First-aid measures after skin contact | Remove contaminated clothing. Rinse the affected skin or mucous membrane thoroughly under running water. (If possible) use soap. |
| First-aid measures after eye contact | After contact with the eyes rinse thoroughly with plenty of water for at least 15 minutes with the eyelid wide open. |
| First-aid measures after ingestion | Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth and drink plenty of water. |

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

The most important known symptoms and effects are described in the labelling section 2.2 and/or in section 11

Not expected to present a significant hazard under anticipated conditions of normal use.

May cause slight irritation to eyes.

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

No additional recommendations.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area.

| | |
|---|---|
| Suitable extinguishing media | All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used. |
| Unsuitable extinguishing media | None known. |

### 5.2 Special hazards arising from the substance or mixture

| | |
|---|---|
| Fire Hazard | Not flammable. |
| Hazardous decomposition products in case of fire | Carbon oxides, Nitrogen oxides, Hydrogen chloride gas, Sulphur oxides, Magnesium oxide, Phosphorus oxides, Potassium Oxides, Lithium oxides. |

### 5.3 Advice for firefighters

| | |
|---|---|
| Firefighting instructions | Product package burns like paper or plastic.<br>Spray any vapours released with water.<br>Retain fire water where possible. |
| Protection during firefighting | Protective breathing apparatus, independent of the ambient air (isolated equipment), and sealed protective clothing is necessary in the event of large-scale formation of toxic substances. |

### 5.4 Additional Information

None.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

| | |
|---|---|
| For non-emergency personnel | Evacuate unnecessary personnel.<br>Avoid breathing vapours, mist or gas.<br>Avoid contact with skin, eyes and clothing.<br>Regular staff training is necessary, indicating hazards and precautions on the basis of operating instructions.<br>Restrictions on activity must be observed. |
| For emergency responders | Wear suitable protective equipment as defined in section 8.2<br>Prevent further leakage or spillage if safe to do so.<br>Avoid release of materials into the environment. |

### 6.2 Environmental precautions

Notify authorities if large amounts of the product enters sewers or public waters.

### 6.3 Methods and material for containment and cleaning up

| | |
|---|---|
| Small Scale release | Make use of general chemical spill kit or other absorbent material.<br>Clean any contaminated equipment and floors with plenty of water.<br>Collect small amounts of leaked liquid and flush with copious amounts of water into drains. |
| Large Scale release | Bind any escaping liquid with inert absorbent material (sand, vermiculite or similar).<br>Block/ prevent liquid entering any open drain.<br>Collect contaminated materials and dispose in accordance to local regulations for the disposal of hazardous chemicals. |

### 6.4 Reference to other sections

SECTION 5.4: Additional fire precautions.

SECTION 8: Exposure controls/personal protection.

SECTION 13: Disposal considerations.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

| | |
|---|---|
| Precautions for safe handling | Handling in accordance with the instructions supplied with the product.<br>Provide adequate ventilation.<br>Avoid breathing vapours, mist or gas.<br>Avoid contact with skin, eyes and clothing. |
| Hygiene measures | Handle in accordance with good industrial hygiene and safety practice.<br>Take off contaminated clothing and wash before reuse.<br>Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. |

### 7.2 Conditions for safe storage, including any incompatibilities

| | |
|---|---|
| Storage conditions | Keep only in the original container.<br>Store in a cool well ventilated place out of direct sunlight.<br>Keep container closed when not in use. |
| Incompatible materials | Store separately from: bases, oxidizing/reducing agents, acids, aluminium, zinc. |

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

| Lyo-Ready Klenow Reaction Buffer, 5x | | |
|---|---|---|
| United Kingdom | WEL TWA (mg/m³) | N/A |
| United Kingdom | WEL TWA (ppm) | N/A |
| United Kingdom | WEL STEL (mg/m³) | N/A |
| United Kingdom | WEL STEL (ppm) | N/A |
| United Kingdom | Remark (WEL) | Contains no substances with occupational exposure limit values. |

### 8.2 Exposure controls

| | |
|---|---|
| Appropriate engineering controls: | Good ventilation or extraction system in the room, floor resistant to chemicals and washing facilities available. |
| General controls | Avoid all unnecessary exposure.<br>Handle in accordance with good industrial hygiene and safety practice. |
| Respiratory protection | Respiratory protection not required.<br>For nuisance exposures or if risk assessment requires, use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). |
| Eye protection | Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166 (EU) with integrated side shields or wrap-around protection. |
| Hand protection | Handle with gloves.<br>Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product.<br>Wear protective gloves that satisfy the specifications of EU Directive 89/686/EEC and the standard EN374 derived from it.<br>Exact breakthrough times to be found through the manufacturer of the protective gloves and must be observed.<br>Gloves should be removed and replaced if there are any signs of degradation or breakthrough.<br><br>Splash contact – Material suggested Nitrile Rubber.<br><br>Full contact – Material suggested Nitrile Rubber.<br><br>If used in solution, or mixed with other substances, and under conditions which differ from EN374, contact the supplier of the CE approved gloves. |
| Skin and body protection | Long sleeved protective clothing. |
| Thermal protection | Not required for normal conditions of use. |

| | |
|---|---|
| Other information | Eating, drinking, smoking, taking snuff and storage of food in work areas and at outdoor workplaces is prohibited. Avoid contact with the skin, eyes and clothing. Rinse any clothing on which the substance has been spilled, and soak it in water. Wash hands thoroughly with soap and water when stopping work and before eating. |

These recommendations are advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| **Lyo-Ready Klenow Reaction Buffer, 5x** | |
|---|---|
| Physical state: | Liquid |
| Colour: | Colourless |
| Molecular Mass: | No data available |
| Odour: | Odourless |
| Odour threshold: | No data available |
| pH: | Not applicable |
| Relative evaporation rate (butylacetate=1): | No data available |
| Melting point: | No data available |
| Freezing point: | No data available |
| Boiling point or initial boiling point and boiling range: | No data available |
| Flash point: | No data available |
| Auto-ignition temperature: | No data available |
| Decomposition temperature: | No data available |
| Flammability (solid, liquid, gas): | Not applicable |
| Vapour pressure: | No data available |
| Relative vapour density at 20 °C: | No data available |
| Density and/or Relative density: | No data available |
| Solubility: | No data available |
| Log Pow: | No data available |
| Viscosity, kinematic: | No data available |
| Viscosity, dynamic: | No data available |
| Oxidising properties: | No data available |
| Explosive properties: | No data available |
| Explosive limits: | No data available |

### 9.2 Other information

Data for the other parameters of the mixtures are not available, because no registration and no chemical safety report is required.

**Relevant Properties of Substance Group**: None

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Stable under normal conditions.

### 10.2 Chemical stability

Stable under recommended conditions.

### 10.3 Possibility of hazardous reactions

None known.

### 10.4 Conditions to avoid

Extremely high or low temperatures.

### 10.5 Incompatible materials

Bases, Oxidizing agents.

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions - Carbon oxides, Nitrogen oxides, Hydrogen chloride gas, Sulphur oxides, Phosphorus oxides, Potassium oxides, Lithium oxides, Magnesium oxide.

In the event of fire: see section 5

## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Quantitative data on the toxicity of this product is not available.

| **Lyo-Ready Klenow Reaction Buffer, 5x** | |
|---|---|
| Acute toxicity | Not classified. |
| Additional information | Based on available data, the classification criteria are not met. |
| Skin corrosion/irritation | Not classified. |
| Additional information | Based on available data, the classification criteria are not met. |
| Serious eye damage/irritation | Not classified. |
| Additional information | Based on available data, the classification criteria are not met. |
| Respiratory or skin sensitisation | Not classified. |
| Additional information | Based on available data, the classification criteria are not met. |
| Germ cell mutagenicity | Not classified. |
| Additional information | Based on available data, the classification criteria are not met. |
| Carcinogenicity | Not classified. |
| Additional information | Based on available data, the classification criteria are not met. |
| Reproductive toxicity | Not classified. |
| Additional information | Based on available data, the classification criteria are not met. |
| Specific target organ toxicity (single exposure) | Not classified. |
| Additional information | Based on available data, the classification criteria are not met. |
| Aspiration hazard | Not classified. |
| Additional information | Based on available data, the classification criteria are not met. |
| Potential adverse human health effects and symptoms: | Not expected to present a significant hazard under anticipated conditions of normal use. |

### 11.2 Information on other hazards

This product does not contain any known or suspected endocrine disrupting properties for human health.
To the best of our knowledge, data on the chemical, physical, and toxicological properties are not available.
Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

## SECTION 12: Ecological information

### 12.1 Toxicity

| Lyo-Ready Klenow Reaction Buffer, 5x | |
|---|---|
| Ecology - Water | Not Classified |

Environmental hazards must not be labelled with P phrases until 125 mL or 125 g (EU 1272/2008 Annex I - 1.5.2).

### 12.2 Persistence and degradability

| Lyo-Ready Klenow Reaction Buffer, 5x | |
|---|---|
| Biodegradation | No data available |

### 12.3 Bioaccumulative potential

| Lyo-Ready Klenow Reaction Buffer, 5x | |
|---|---|
| Bioconcentration factor (BCF REACH) | No additional information available |
| Log Pow | Not applicable |

### 12.4 Mobility in soil

| Lyo-Ready Klenow Reaction Buffer, 5x | |
|---|---|
| Ecology - Soil | No data available. |

### 12.5 Results of PBT and vPvB assessment

| Lyo-Ready Klenow Reaction Buffer, 5x |
|---|
| This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII |
| This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |

### 12.6 Endocrine disrupting properties

Assess endocrine disrupting properties for the environment:

Substance identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605: NONE

### 12.7 Other adverse effects

| Lyo-Ready Klenow Reaction Buffer, 5x |
|---|
| No additional information available. |

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

| | |
|---|---|
| Waste disposal recommendations: | **Product**<br>Offer surplus and non-recyclable solutions to a licensed disposal company.<br><br>**Contaminated packaging**<br>Dispose of as unused product. |

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1 UN number

| | |
|---|---|
| UN-No. (ADR) | Not regulated |
| UN-No. (IMDG) | Not regulated |
| UN-No. (IATA) | Not regulated |
| UN-No. (ADN) | Not regulated |
| UN-No. (RID) | Not regulated |

### 14.2 UN proper shipping name

| | |
|---|---|
| Proper Shipping Name | Not regulated |
| Proper Shipping Name (IMDG) | Not regulated |
| Proper Shipping Name (IATA) | Not regulated |
| Proper Shipping Name (ADN) | Not regulated |
| Proper Shipping Name (RID) | Not regulated |

### 14.3 Transport hazard class(es)

| | |
|---|---|
| Transport hazard class(es) (ADR) | Not regulated |
| Transport hazard class(es) (IMDG) | Not regulated |
| Transport hazard class(es) (IATA) | Not regulated |
| Transport hazard class(es) (ADN) | Not regulated |
| Transport hazard class(es) (RID) | Not regulated |

### 14.4 Packing group

| | |
|---|---|
| Packing group | Not regulated |
| Packing group (IMDG) | Not regulated |
| Packing group (IATA) | Not regulated |
| Packing group (ADN) | Not regulated |
| Packing group (RID) | Not regulated |

### 14.5 Environmental hazards

| | |
|---|---|
| Dangerous for the environment | No |
| Marine pollutant | No |
| Other information | No supplementary information available |

### 14.6 Special precautions for user

| | |
|---|---|
| Overland transport | Not regulated |
| Transport by sea | Not regulated |
| Air transport | Not regulated |
| Inland waterway transport | Not regulated |
| Rail transport | Not regulated |

### 14.7 Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

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

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list ≥ 0,1 % / SCL

Contains no REACH Annex XIV substances

### 15.2 Chemical safety assessment

**No chemical safety assessment has been carried out**

## SECTION 16: Other Information

### 16.1 Full text of H, EUH and P statements

| | |
|---|---|
| None | N/A |

### 16.2 Training Advice

Regular safety training

### 16.3 Abbreviations and acronyms

| | |
|---|---|
| ADR | Accord européen relatif au transport international des marchandises Dangereuses par Route |
| ATE | Acute Toxicity Estimate |
| CAS | Chemical Abstracts Service number |
| CLP | Classification, Labeling and Packaging |
| DNEL | Derived No effect Limit |
| EC | European Community |
| EC50 | Effective Concentration 50% |
| EN | European Norm |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IBC | Intermediate Bulk Container |
| IMDG | International Maritime Dangerous Goods Code |
| IMO | International Maritime Organisation |
| LC50 | Lethal Concentration 50% |
| LD50 | Lethal Dose 50% |
| MAC | Maximal Allowed Concentration |
| O/W | Oil-in-Water (chemistry) |
| OECD | Organisation for Economic Co-operation and Development |
| PBT | Persistent, bioaccumulative and toxic |
| PMcc | Pensky-Martens Closed Cup test |
| PNEC | Predicted no effect concentration |
| REACH | Registration, Evaluation and Authorisation of CHemicals |
| RID | Règlement concernant le transport international ferroviaire de marchandises |
| STEL | Short Term Exposure Limit |
| TWA | Time Weighted Average |
| UNXXXX | Number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods |
| vPvB | Very persistent and very bioaccumulative |

### 16.4 Recommended Restriction on Use

Only for professional user working under controlled conditions.

Consider employee restrictions for young people (e.g. 94/33/EC)

Consider employee restrictions for pregnant women and nursing women (e.g. 92/85/EEC)

## 16.5 Further Information

**Bioline Reagents Ltd,** part of Meridian Bioscience, provides the information contained herein in good faith being up-to-date of own realizations at revision time. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose.

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## 16.6 Sources of Key Data

UK – Control of Substances Hazardous to Health Regulations 2002 (as amended). Health and Safety at Work etc. Act 1974 (as amended). Guidance Workplace Exposure Limits EH40.

EU – REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. Regulation 453/2010/EU REACH - REQUIREMENTS FOR THE COMPILATION OF SAFETY DATA SHEETS Regulation 487/2013/EU, 4th adaptation of CLP regulation to technical and scientific progress. Legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Commission Regulation (EU) No 2020/878.

German act governing protection from hazardous substances (Chemicals Act / Chemikaliengesetz- ChemG), revised on August 2013 German order governing protection from hazardous substances (Ordinance on Hazardous Substances / Gefahrstoffverordnung - GefStoffV), revised on November 2010, according to Directive 98/24/EC
TRGS 900, German engineering rules governing limits in air at work, updated February 2015 SUVA .CH, Limits in air at work 2009, revised on 01.2009. KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)., updated October 2011

Republic of China – 职业病防治法

USA – Occupational Safety and Health Administration (OSHA) Occupational Exposure Limits - Table Z-1 Limits for Air Contaminants. The American Conference of Governmental Industrial Hygienists (ACGIH).

Australia - Work Health and Safety (WHS) Act and the WHS Regulations.

Canada – Hazardous Products Regulations SOR/2015-17