

Safety Data Sheet

MDX 219-A

Lyophilized NGS Library Preparation Kit
(End-Repair/A-Tailing & Ligation)

meridian BIOSCIENCE™

End-Repair/A-Tailing Mix

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
 Date of original issue: 29/05/2024 Current revision: 29/05/2024 Version 1.0 Supersedes: None

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

1.1 Product identifier

Product form: Dry Mixture End-Repair/A-Tailing Mix N/A N/A 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.

Product name:

CAS No.:

EC No.:

REACH No.:

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

End-Repair/A-Tailing Mix Classification according to Regulation (EC)

No 1272/2008 Not a hazardous substance or mixture

2.2 Label elements

End-Repair/A-Tailing Mix Labelling according to Regulation (EC)

No 1272/2008 Not a hazardous substance or mixture

Hazard Statements (CLP)	Precautionary Statements (CLP)
None	None

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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

End-Repair/A-Tailing Mix

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.

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

6.2 Environmental precautions

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

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Safety Data Sheet

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6.3 Methods and material for containment and cleaning up

Small Scale release	Make use of general chemical spill kit or other absorbent material. Clean any contaminated equipment and floors with plenty of water. Collect small amounts of leaked material and flush with copious amounts of water into drains.
Large Scale release	Bind any escaping material with inert absorbent material (sand, vermiculite or similar). Block/ prevent material entering any open drain. 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. Provide adequate ventilation. Avoid breathing vapours, mist or gas. Avoid contact with skin, eyes and clothing.
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice. Take off contaminated clothing and wash before reuse. 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. Store in a cool well ventilated place out of direct sunlight. 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.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

End-Repair/A-Tailing Mix				
United Kingdom	United Kingdom	United Kingdom	WEL TWA (mg/m ³)	N/A N/A N/A N/A Contains no substances
United Kingdom	United Kingdom	United Kingdom	WEL TWA (ppm)	with occupational exposure limit values.
United Kingdom	United Kingdom	United Kingdom	WEL STEL (mg/m ³)	
United Kingdom	United Kingdom	United Kingdom	WEL STEL (ppm)	
			Remark (WEL)	

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. Handle in accordance with good industrial hygiene and safety practice.
Respiratory protection	Respiratory protection not required. 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. 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. Wear protective gloves that satisfy the specifications of EU Directive 89/686/EEC and the standard EN374 derived from it. Exact breakthrough times to be found through the manufacturer of the protective gloves and must be observed. Gloves should be removed and replaced if there are any signs of degradation or breakthrough. Splash contact – Material suggested Nitrile Rubber. Full contact – Material suggested Nitrile Rubber. 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.

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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.
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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

End-Repair/A-Tailing Mix	
Physical state:	Powder
Colour:	Colourless No
Molecular Mass:	data available
Odour:	Odourless No
Odour threshold:	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 No
Vapour pressure:	data available No
Relative vapour density at 20 °C:	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:	

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

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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.

End-Repair/A-Tailing Mix	
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 classified.
	Based on available data, the classification criteria are not met.
	Not expected to present a significant hazard under anticipated conditions of normal use.

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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

End-Repair/A-Tailing Mix	
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

End-Repair/A-Tailing Mix	
Biodegradation	No data available

12.3 Bioaccumulative potential

End-Repair/A-Tailing Mix	
Bioconcentration factor (BCF REACH)	No additional information available
Log Pow	Not applicable

12.4 Mobility in soil

End-Repair/A-Tailing Mix	
Ecology - Soil	No data available.

12.5 Results of PBT and vPvB assessment

End-Repair/A-Tailing Mix	
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

End-Repair/A-Tailing Mix	
No additional information available.	

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

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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 No No supplementary information
Marine pollutant	available
Other information	

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

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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 $\geq 0,1\%$ / 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
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16.2 Training Advice

Regular safety training

16.3 Abbreviations and acronyms

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

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)

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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

Ligation Mix

Safety Data Sheet

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

1.1 Product identifier

Product form: Dry Mixture Ligation Mix N/A N/A 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.

Product name:

CAS No.:

EC No.:

REACH No.:

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

Ligation Mix Classification according to Regulation (EC) No 1272/2008 Not a hazardous substance or mixture

2.2 Label elements

Ligation Mix Labelling according to Regulation (EC) No 1272/2008 Not a hazardous substance or mixture

Hazard Statements (CLP)	Precautionary Statements (CLP)
None	None

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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

Ligation Mix

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.

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

6.2 Environmental precautions

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

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6.3 Methods and material for containment and cleaning up

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

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

7.2 Conditions for safe storage, including any incompatibilities

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

7.3 Specific end use(s)

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

Ligation Mix

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
 Date of original issue: 29/05/2024 Current revision: 29/05/2024 Version 1.0 Supersedes: None

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ligation Mix		
United Kingdom	WEL TWA (mg/m ³)	N/A N/A N/A N/A Contains no substances
United Kingdom	WEL TWA (ppm)	with occupational exposure limit values.
United Kingdom	WEL STEL (mg/m ³)	
United Kingdom	WEL STEL (ppm)	
United Kingdom	Remark (WEL)	

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. Handle in accordance with good industrial hygiene and safety practice.
Respiratory protection	Respiratory protection not required. 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. 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. Wear protective gloves that satisfy the specifications of EU Directive 89/686/EEC and the standard EN374 derived from it. Exact breakthrough times to be found through the manufacturer of the protective gloves and must be observed. Gloves should be removed and replaced if there are any signs of degradation or breakthrough. Splash contact – Material suggested Nitrile Rubber. Full contact – Material suggested Nitrile Rubber. 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.

Ligation Mix

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
 Date of original issue: 29/05/2024 Current revision: 29/05/2024 Version 1.0 Supersedes: None

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.
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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

Ligation Mix	
Physical state:	Powder
Colour:	Colourless No
Molecular Mass:	data available
Odour:	Odourless No
Odour threshold:	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 No
Vapour pressure:	data available No
Relative vapour density at 20 °C:	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:	

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

Ligation Mix

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
 Date of original issue: 29/05/2024 Current revision: 29/05/2024 Version 1.0 Supersedes: 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.

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

Ligation Mix

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
 Date of original issue: 29/05/2024 Current revision: 29/05/2024 Version 1.0 Supersedes: None

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

Ligation Mix	
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

Ligation Mix	
Biodegradation	No data available

12.3 Bioaccumulative potential

Ligation Mix	
Bioconcentration factor (BCF REACH)	No additional information available
Log Pow	Not applicable

12.4 Mobility in soil

Ligation Mix	
Ecology - Soil	No data available.

12.5 Results of PBT and vPvB assessment

Ligation Mix	
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

Ligation Mix	
No additional information available.	

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

Ligation Mix

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
 Date of original issue: 29/05/2024 Current revision: 29/05/2024 Version 1.0 Supersedes: None

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 No No supplementary information
Marine pollutant	available
Other information	

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

Ligation Mix

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
 Date of original issue: 29/05/2024 Current revision: 29/05/2024 Version 1.0 Supersedes: None

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 $\geq 0,1\%$ / 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
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16.2 Training Advice

Regular safety training

16.3 Abbreviations and acronyms

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

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)

Ligation Mix

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
Date of original issue: 29/05/2024 Current revision: 29/05/2024 Version 1.0 Supersedes: None

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