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

### 1.1 Product identifier

Trade name : KAPA LTP Library Preparation Kit (PCR-free)

Product code : 07961898001

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

Recommended restrictions on use : For use in research only

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

Company : Roche Diagnostics Deutschland GmbH
-
Sandhoferstrasse 116
68305 Mannheim
Deutschland

Telephone : +496217590
Telefax : +496217592890
Responsible Department : +49(0)621-759-4223
E-mail address : info.dia-sds@roche.com

### 1.4 Emergency telephone number

| | | | |
|---|---|---|---|
| In case of emergencies: | : | Central Works Security<br>Roche Diagnostics GmbH | +49(0)621-759-2203 |
| Centre for detoxification: | : | Mainz<br>Munich | +49(0)6131-19240<br>+49(0)89-19240 |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

The product is a kit consisting of individual ingredients. The classification of the ingredients can be obtained from section 3. Section Label elements contains the resulting labelling for the kit.

### 2.2 Label elements

**Labelling (REGULATION (EC) No 1272/2008)**

Hazard pictograms :



Signal word : Warning

Hazard statements : H319 Causes serious eye irritation.

Precautionary statements : **Prevention:**

P264 Wash skin thoroughly after handling.
P280 Wear eye protection/ face protection.

**Response:**

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.

**2.3 Other hazards**

Ecological information: This substance/mixture contains components considered to have endocrine disrupting properties for environment , according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### *KAPA End-Repair Buffer (10X)*

**Classification (REGULATION (EC) No 1272/2008)**

Eye irritation, Category 2 H319: Causes serious eye irritation.

**Components**

| Chemical name | CAS-No.<br>EC-No.<br>Index-No.<br>Registration number | Classification | Concentration (% w/w) |
|---|---|---|---|
| (R*,R*)-1,4-dimercaptobutane-2,3-diol | 3483-12-3<br>222-468-7<br>01-2120856806-42 | Acute Tox. 4; H302<br>Skin Irrit. 2; H315<br>Eye Dam. 1; H318<br>Aquatic Chronic 3; H412<br>---<br>Acute toxicity estimate<br><br>Acute oral toxicity: 300,03 mg/kg | >= 1,0 - < 2,5 |

For explanation of abbreviations see section 16.

### *Kapa A-Tailing Buffer (10X)*

**Classification (REGULATION (EC) No 1272/2008)**
Not a hazardous substance or mixture.

**Components**
Remarks : No hazardous ingredients

For explanation of abbreviations see section 16.

## *Kapa Ligation Buffer (5X)*

**Classification (REGULATION (EC) No 1272/2008)**
Not a hazardous substance or mixture.

**Components**
Remarks : No hazardous ingredients

For explanation of abbreviations see section 16.

## *KAPA PEG/NaCl*

**Classification (REGULATION (EC) No 1272/2008)**
Not a hazardous substance or mixture.

**Components**
Remarks : No hazardous ingredients

For explanation of abbreviations see section 16.

## *KAPA End Repair Enzyme Mix*

**Classification (REGULATION (EC) No 1272/2008)**
Not a hazardous substance or mixture.

**Components**

| Chemical name | CAS-No.<br>EC-No.<br>Index-No.<br>Registration number | Classification | Concentration (% w/w) |
|---|---|---|---|
| REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : | | | |
| alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl) | 9002-93-1 | Acute Tox. 4; H302<br>Eye Dam. 1; H318<br>Aquatic Chronic 2; H411<br>---<br>Acute toxicity estimate<br><br>Acute oral toxicity: 500 mg/kg | >= 0,1 - < 0,25 |

For explanation of abbreviations see section 16.

### *KAPA Hyper Prep DNA Ligase*

**Classification (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture.

**Components**

| Chemical name | CAS-No.<br>EC-No.<br>Index-No.<br>Registration number | Classification | Concentration (% w/w) |
|---|---|---|---|
| Kinase (phosphorylating), polynucleotide 3' / 5'-Hydroxyl- | 37211-65-7<br>253-400-4 | Not classified | >= 0,1 - < 1,0 |

For explanation of abbreviations see section 16.

### *KAPA A-Tailing Enzyme*

**Classification (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture.

**Components**

| Chemical name | CAS-No.<br>EC-No.<br>Index-No.<br>Registration number | Classification | Concentration (% w/w) |
|---|---|---|---|
| Nucleotidyltransferase, deoxyribonucleate | 9012-90-2<br>232-741-2 | Not classified | < 0,1 |

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Move to fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.

Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Rinse mouth with water.

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

None known.

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

Treatment : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

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

Unsuitable extinguishing media : High volume water jet

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

Specific hazards during firefighting : No information available.

### 5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

## SECTION 6: Accidental release measures

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

Personal precautions : Use personal protective equipment.
Refer to protective measures listed in sections 7 and 8.

### 6.2 Environmental precautions

Environmental precautions : Prevent further leakage or spillage if safe to do so.
Local authorities should be advised if significant spillages cannot be contained.

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

| | | |
|---|---|---|
| Methods for cleaning up | : | Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).<br>Keep in suitable, closed containers for disposal. |

**6.4 Reference to other sections**

Treat recovered material as described in the section "Disposal considerations".

## SECTION 7: Handling and storage

**7.1 Precautions for safe handling**

| | | |
|---|---|---|
| Advice on safe handling | : | Do not breathe vapours/dust.<br>Avoid contact with skin and eyes.<br>For personal protection see section 8.<br>Smoking, eating and drinking should be prohibited in the application area.<br>Dispose of rinse water in accordance with local and national regulations. |
| Advice on protection against fire and explosion | : | Normal measures for preventive fire protection. |
| Hygiene measures | : | When using do not eat or drink. When using do not smoke.<br>Wash hands before breaks and at the end of workday. |

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

| | | |
|---|---|---|
| Requirements for storage areas and containers | : | Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards. |
| Further information on storage conditions | : | See label, package insert or internal guidelines |
| Storage class (TRGS 510) | : | 12, Non Combustible Liquids |
| Further information on storage stability | : | No decomposition if stored and applied as directed. |

**7.3 Specific end use(s)**

| | | |
|---|---|---|
| Specific use(s) | : | This product contains a substance on REACH Annex XIV (substance of very high concern due to endocrine disrupting properties for the environment) at or above 0.1% w/w and may only be used under the exemption from authorisation for scientific research and development (including analytical activities, quality control and In-Vitro Diagnostics) under controlled conditions. Only trained and authorised personnel is allowed to handle the substance. |

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

### *KAPA End-Repair Buffer (10X)*

Contains no substances with occupational exposure limit values.

### *Kapa A-Tailing Buffer (10X)*

Contains no substances with occupational exposure limit values.

### *Kapa Ligation Buffer (5X)*

**Occupational Exposure Limits**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis |
|---|---|---|---|---|
| Polyethylenglycol 6000 | 25322-68-3 | AGW (Inhalable fraction) | 1.000 mg/m3 | DE TRGS 900 |
| | Peak-limit: excursion factor (category): 8;(II) | | | |
| | Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child | | | |
| | | AGW (Inhalable fraction) | 1.000 mg/m3 | DE TRGS 900 |
| | Peak-limit: excursion factor (category): 8;(II) | | | |
| | Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child | | | |
| | | AGW (Inhalable fraction) | 200 mg/m3 | DE TRGS 900 |
| | Peak-limit: excursion factor (category): 2;(II) | | | |
| | Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child | | | |

### *KAPA PEG/NaCl*

**Occupational Exposure Limits**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis |
|---|---|---|---|---|
| Polyethylenglycol 8000 | 25322-68-3 | AGW (Inhalable fraction) | 1.000 mg/m3 | DE TRGS 900 |
| | Peak-limit: excursion factor (category): 8;(II) | | | |
| | Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child | | | |
| | | AGW (Inhalable fraction) | 1.000 mg/m3 | DE TRGS 900 |
| | Peak-limit: excursion factor (category): 8;(II) | | | |
| | Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child | | | |
| | | AGW (Inhalable fraction) | 200 mg/m3 | DE TRGS 900 |

| | |
|---|---|
| | Peak-limit: excursion factor (category): 2;(II) |
| | Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child |

### *KAPA End Repair Enzyme Mix*

**Occupational Exposure Limits**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis |
|---|---|---|---|---|
| glycerol | 56-81-5 | AGW (Inhalable fraction) | 200 mg/m3 | DE TRGS 900 |
| | Peak-limit: excursion factor (category): 2;(I) | | | |
| | Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child | | | |

### *KAPA Hyper Prep DNA Ligase*

**Occupational Exposure Limits**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis |
|---|---|---|---|---|
| glycerol | 56-81-5 | AGW (Inhalable fraction) | 200 mg/m3 | DE TRGS 900 |
| | Peak-limit: excursion factor (category): 2;(I) | | | |
| | Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child | | | |
| Kinase (phosphorylating), polynucleotide 3' / 5'-Hydroxyl- | 37211-65-7 | IOEL | 0,00006 mg/m3 | Roche Industrial Hygiene Committee (RIHC) |

### *KAPA A-Tailing Enzyme*

**Occupational Exposure Limits**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis |
|---|---|---|---|---|
| glycerol | 56-81-5 | AGW (Inhalable fraction) | 200 mg/m3 | DE TRGS 900 |
| | Peak-limit: excursion factor (category): 2;(I) | | | |
| | Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child | | | |
| Nucleotidyltransferase, deoxyribonucleate | 9012-90-2 | IOEL | 0,00006 mg/m3 | Roche Industrial Hygiene Committee (RIHC) |

**8.2 Exposure controls**

**Engineering measures**

No data available

**Personal protective equipment**

| | | |
|---|---|---|
| Eye protection | : | Eye wash bottle with pure water<br>Tightly fitting safety goggles<br>Wear face-shield and protective suit for abnormal processing problems.<br><br>Use eye protection according to EN 166. |
| Hand protection | | |
| | | In case of contact through splashing: |
| Material | : | Nitrile rubber |
| Break through time | : | > 30 min |
| Glove thickness | : | > 0,11 mm |
| | | In case of full contact: |
| Material | : | butyl-rubber |
| Break through time | : | > 480 min |
| Glove thickness | : | > 0,4 mm |
| Remarks | : | The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. This recommendation is only valid for the product mentioned in the safety data sheet and provided by us and for the application specified by us. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The suitability for a specific workplace should be discussed with the producers of the protective gloves. |
| Skin and body protection | : | Impervious clothing<br>Choose body protection according to the amount and concentration of the dangerous substance at the work place. |

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

### *KAPA End-Repair Buffer (10X)*

| | | |
|---|---|---|
| Physical state | : | liquid |
| Colour | : | colourless |
| Odour | : | odourless |
| Odour Threshold | : | No data available |
| Melting point/range | : | No data available |
| Boiling point/boiling range | : | No data available |
| Upper explosion limit / Upper | : | No data available |

flammability limit

| | | |
|---|---|---|
| Lower explosion limit / Lower flammability limit | : | No data available |
| Flash point | : | does not flash |
| Auto-ignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| pH | : | 7,5 |
| Viscosity | | |
| Viscosity, dynamic | : | No data available |
| Viscosity, kinematic | : | No data available |
| Solubility(ies) | | |
| Water solubility | : | completely miscible |
| Solubility in other solvents | : | No data available |
| Partition coefficient: n-octanol/water | : | No data available |
| Vapour pressure | : | No data available |
| Relative density | : | No data available |
| Density | : | 1,04 g/cm3 |
| Relative vapour density | : | No data available |

## *Kapa A-Tailing Buffer (10X)*

| | | |
|---|---|---|
| Physical state | : | liquid |
| Colour | : | colourless |
| Odour | : | odourless |
| Odour Threshold | : | No data available |
| Melting point/range | : | No data available |
| Boiling point/boiling range | : | No data available |
| Upper explosion limit / Upper flammability limit | : | No data available |
| Lower explosion limit / Lower flammability limit | : | No data available |

| | | |
|---|---|---|
| Flash point | | does not flash |
| Auto-ignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| pH | : | 8,0 |
| Viscosity | | |
| Viscosity, dynamic | : | No data available |
| Viscosity, kinematic | : | No data available |
| Solubility(ies) | | |
| Water solubility | : | completely miscible |
| Solubility in other solvents | : | No data available |
| Partition coefficient: n-octanol/water | : | No data available |
| Vapour pressure | : | No data available |
| Relative density | : | No data available |
| Density | : | 1,040 g/cm3 |
| Relative vapour density | : | No data available |

### *Kapa Ligation Buffer (5X)*

| | | |
|---|---|---|
| Physical state | : | liquid |
| Colour | : | colourless |
| Odour | : | odourless |
| Odour Threshold | : | No data available |
| Melting point/range | : | No data available |
| Boiling point/boiling range | : | No data available |
| Upper explosion limit / Upper flammability limit | : | No data available |
| Lower explosion limit / Lower flammability limit | : | No data available |
| Flash point | | does not flash |
| Auto-ignition temperature | : | No data available |

| | | |
|---|---|---|
| Decomposition temperature | : | No data available |
| pH | : | 7,6 |
| Viscosity | | |
| Viscosity, dynamic | : | No data available |
| Viscosity, kinematic | : | No data available |
| Solubility(ies) | | |
| Water solubility | : | No data available |
| Solubility in other solvents | : | No data available |
| Partition coefficient: n-octanol/water | : | No data available |
| Vapour pressure | : | No data available |
| Relative density | : | No data available |
| Density | : | 1,040 g/cm3 |
| Relative vapour density | : | No data available |

### *KAPA PEG/NaCl*

| | | |
|---|---|---|
| Physical state | : | liquid |
| Colour | : | colourless |
| Odour | : | odourless |
| Odour Threshold | : | No data available |
| Melting point/range | : | No data available |
| Boiling point/boiling range | : | No data available |
| Upper explosion limit / Upper flammability limit | : | No data available |
| Lower explosion limit / Lower flammability limit | : | No data available |
| Flash point | | does not flash |
| Auto-ignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| pH | : | 8,1 |

Viscosity
Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Solubility(ies)
Water solubility : completely miscible

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Vapour pressure : No data available

Relative density : No data available

Density : 1,120 g/cm3

Relative vapour density : No data available

### *KAPA End Repair Enzyme Mix*

Physical state : liquid

Colour : colourless

Odour : odourless

Odour Threshold : No data available

Melting point/range : No data available

Boiling point/boiling range : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Flash point does not flash

Auto-ignition temperature : No data available

Decomposition temperature : No data available

pH : 6,0

Viscosity
Viscosity, dynamic : No data available

| | | |
|---|---|---|
| Viscosity, kinematic | : | No data available |
| Solubility(ies) | | |
| Water solubility | : | completely miscible |
| Solubility in other solvents | : | No data available |
| Partition coefficient: n-octanol/water | : | No data available |
| Vapour pressure | : | No data available |
| Relative density | : | No data available |
| Density | : | 1,148 g/cm3 |
| Relative vapour density | : | No data available |

### *KAPA Hyper Prep DNA Ligase*

| | | |
|---|---|---|
| Physical state | : | liquid |
| Colour | : | colourless |
| Odour | : | odourless |
| Odour Threshold | : | No data available |
| Melting point/range | : | No data available |
| Boiling point/boiling range | : | No data available |
| Upper explosion limit / Upper flammability limit | : | No data available |
| Lower explosion limit / Lower flammability limit | : | No data available |
| Flash point | | does not flash |
| Auto-ignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| pH | : | 6,5 |
| Viscosity | | |
| Viscosity, dynamic | : | No data available |
| Viscosity, kinematic | : | No data available |
| Solubility(ies) | | |
| Water solubility | : | completely miscible |

| | | |
|---|---|---|
| Solubility in other solvents | : | No data available |
| Partition coefficient: n-octanol/water | : | No data available |
| Vapour pressure | : | No data available |
| Relative density | : | No data available |
| Density | : | 1,148 g/cm3 |
| Relative vapour density | : | No data available |

### *KAPA A-Tailing Enzyme*

| | | |
|---|---|---|
| Physical state | : | liquid |
| Colour | : | colourless |
| Odour | : | odourless |
| Odour Threshold | : | No data available |
| Melting point/range | : | No data available |
| Boiling point/boiling range | : | No data available |
| Upper explosion limit / Upper flammability limit | : | No data available |
| Lower explosion limit / Lower flammability limit | : | No data available |
| Flash point | | does not flash |
| Auto-ignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| pH | : | 6,0 |
| Viscosity | | |
| Viscosity, dynamic | : | No data available |
| Viscosity, kinematic | : | No data available |
| Solubility(ies) | | |
| Water solubility | : | completely miscible |
| Solubility in other solvents | : | No data available |

| | | |
|---|---|---|
| Partition coefficient: n-octanol/water | : | No data available |
| Vapour pressure | : | No data available |
| Relative density | : | No data available |
| Density | : | 1,148 g/cm3 |
| Relative vapour density | : | No data available |

**9.2 Other information**

### *KAPA End-Repair Buffer (10X)*

| | | |
|---|---|---|
| Oxidizing properties | : | The substance or mixture is not classified as oxidizing. |
| Flammability (liquids) | : | Does not sustain combustion.<br>The product is not flammable. |
| Self-ignition | : | Not applicable |
| Evaporation rate | : | No data available |

### *Kapa A-Tailing Buffer (10X)*

| | | |
|---|---|---|
| Explosives | : | Not explosive |
| Oxidizing properties | : | The substance or mixture is not classified as oxidizing. |
| Flammability (liquids) | : | Does not sustain combustion.<br>The product is not flammable. |
| Self-ignition | : | Not applicable |
| Evaporation rate | : | No data available |

### *Kapa Ligation Buffer (5X)*

| | | |
|---|---|---|
| Explosives | : | Not explosive |
| Oxidizing properties | : | The substance or mixture is not classified as oxidizing. |
| Flammability (liquids) | : | Does not sustain combustion.<br>The product is not flammable. |
| Self-ignition | : | Not applicable |

| | | |
|---|---|---|
| Evaporation rate | : | No data available |

### *KAPA PEG/NaCl*

| | | |
|---|---|---|
| Explosives | : | Not explosive |
| Oxidizing properties | : | The substance or mixture is not classified as oxidizing. |
| Flammability (liquids) | : | Does not sustain combustion.<br>The product is not flammable. |
| Self-ignition | : | Not applicable |
| Evaporation rate | : | No data available |

### *KAPA End Repair Enzyme Mix*

| | | |
|---|---|---|
| Explosives | : | Not explosive |
| Oxidizing properties | : | The substance or mixture is not classified as oxidizing. |
| Flammability (liquids) | : | Does not sustain combustion.<br>The product is not flammable. |
| Self-ignition | : | Not applicable |
| Evaporation rate | : | No data available |

### *KAPA Hyper Prep DNA Ligase*

| | | |
|---|---|---|
| Explosives | : | Not explosive |
| Oxidizing properties | : | The substance or mixture is not classified as oxidizing. |
| Flammability (liquids) | : | Does not sustain combustion.<br>The product is not flammable. |
| Self-ignition | : | Not applicable |
| Evaporation rate | : | No data available |

### *KAPA A-Tailing Enzyme*

| | | |
|---|---|---|
| Explosives | : | Not explosive |
| Oxidizing properties | : | The substance or mixture is not classified as oxidizing. |
| Flammability (liquids) | : | Does not sustain combustion. |

The product is not flammable.

Self-ignition : Not applicable

Evaporation rate : No data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No dangerous reaction known under conditions of normal use.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

No decomposition if stored and applied as directed.

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

Materials to avoid : Strong oxidizing agents

### 10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

## SECTION 11: Toxicological information

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

### *KAPA End-Repair Buffer (10X)*

**Acute toxicity**

Not classified based on available information.

**Components:**

**(R*,R*)-1,4-dimercaptobutane-2,3-diol:**

Acute oral toxicity : LD50 (Rat, female): > 300 - < 2.000 mg/kg
Method: OECD Test Guideline 423
GLP: yes

Acute toxicity estimate: 300,03 mg/kg
Method: Calculation method

Acute toxicity (other routes of administration) : Symptoms: May cause cardiac arrhythmia., Convulsions, Vomiting

**Skin corrosion/irritation**

Not classified based on available information.

**Components:**

**(R*,R*)-1,4-dimercaptobutane-2,3-diol:**

| | | |
|---|---|---|
| Species | : | human keratinocytes |
| Exposure time | : | 4 h |
| Method | : | OECD Test Guideline 431 |
| Result | : | Irritating to skin. |
| GLP | : | yes |

| | | |
|---|---|---|
| Species | : | reconstructed human epidermis (RhE) |
| Exposure time | : | 60 min |
| Method | : | OECD Test Guideline 439 |
| Result | : | Irritating to skin. |
| GLP | : | yes |

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Components:**

**(R*,R*)-1,4-dimercaptobutane-2,3-diol:**

| | | |
|---|---|---|
| Species | : | Chicken eye |
| Exposure time | : | 10 s |
| Method | : | OECD Test Guideline 438 |
| Result | : | Risk of serious damage to eyes. |
| GLP | : | yes |

| | | |
|---|---|---|
| Species | : | Human |
| Exposure time | : | 6 h |
| Method | : | OECD Test Guideline 492 |
| Result | : | Risk of serious damage to eyes. |
| GLP | : | yes |

**Respiratory or skin sensitisation**

**Skin sensitisation**

Not classified based on available information.

**Respiratory sensitisation**

Not classified based on available information.

**Components:**

**(R*,R*)-1,4-dimercaptobutane-2,3-diol:**

| | | |
|---|---|---|
| Test Type | : | Local lymph node assay (LLNA) |
| Species | : | Mouse |
| Assessment | : | Does not cause skin sensitisation. |
| Method | : | OECD Test Guideline 429 |

GLP : yes

**Germ cell mutagenicity**

Not classified based on available information.

**Components:**

**(R*,R*)-1,4-dimercaptobutane-2,3-diol:**

Genotoxicity in vitro : Test Type: Microbial mutagenesis assay (Ames test)
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
Result: negative
GLP: yes

Test Type: Microbial mutagenesis assay (Ames test)
Test system: Escherichia coli
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

**Carcinogenicity**

Not classified based on available information.

**Reproductive toxicity**

Not classified based on available information.

**STOT - single exposure**

Not classified based on available information.

**STOT - repeated exposure**

Not classified based on available information.

**Aspiration toxicity**

Not classified based on available information.

## *Kapa A-Tailing Buffer (10X)*

**Acute toxicity**

Not classified based on available information.

**Skin corrosion/irritation**

Not classified based on available information.

**Serious eye damage/eye irritation**

Not classified based on available information.

**Respiratory or skin sensitisation**

**Skin sensitisation**

Not classified based on available information.

**Respiratory sensitisation**
Not classified based on available information.

**Germ cell mutagenicity**
Not classified based on available information.

**Carcinogenicity**
Not classified based on available information.

**Reproductive toxicity**
Not classified based on available information.

**STOT - single exposure**
Not classified based on available information.

**STOT - repeated exposure**
Not classified based on available information.

**Aspiration toxicity**
Not classified based on available information.

***Kapa Ligation Buffer (5X)***

**Acute toxicity**
Not classified based on available information.

**Skin corrosion/irritation**
Not classified based on available information.

**Serious eye damage/eye irritation**
Not classified based on available information.

**Respiratory or skin sensitisation**

**Skin sensitisation**
Not classified based on available information.

**Respiratory sensitisation**
Not classified based on available information.

**Germ cell mutagenicity**
Not classified based on available information.

**Carcinogenicity**
Not classified based on available information.

**Reproductive toxicity**
Not classified based on available information.

**STOT - single exposure**
Not classified based on available information.

**STOT - repeated exposure**
Not classified based on available information.

**Aspiration toxicity**
Not classified based on available information.

***KAPA PEG/NaCl***

**Acute toxicity**
Not classified based on available information.

**Skin corrosion/irritation**
Not classified based on available information.

**Serious eye damage/eye irritation**
Not classified based on available information.

**Respiratory or skin sensitisation**

**Skin sensitisation**
Not classified based on available information.

**Respiratory sensitisation**
Not classified based on available information.

**Germ cell mutagenicity**
Not classified based on available information.

**Carcinogenicity**
Not classified based on available information.

**Reproductive toxicity**
Not classified based on available information.

**STOT - single exposure**
Not classified based on available information.

**STOT - repeated exposure**
Not classified based on available information.

**Aspiration toxicity**
Not classified based on available information.

### *KAPA End Repair Enzyme Mix*

**Acute toxicity**
Not classified based on available information.

**Components:**

**alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl):**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 Oral (Rat): 1.900 - 5.000 mg/kg<br><br>Acute toxicity estimate: 500 mg/kg<br>Method: Expert judgement |
| Acute dermal toxicity | : | LD50 Dermal (Rabbit): > 3.000 mg/kg |

**Skin corrosion/irritation**
Not classified based on available information.

**Serious eye damage/eye irritation**
Not classified based on available information.

**Components:**

**alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl):**

Result : Risk of serious damage to eyes.
Remarks : May cause irreversible eye damage.

**Respiratory or skin sensitisation**

**Skin sensitisation**
Not classified based on available information.

**Respiratory sensitisation**
Not classified based on available information.

**Germ cell mutagenicity**
Not classified based on available information.

**Carcinogenicity**
Not classified based on available information.

**Reproductive toxicity**
Not classified based on available information.

**STOT - single exposure**
Not classified based on available information.

**STOT - repeated exposure**
Not classified based on available information.

**Aspiration toxicity**
Not classified based on available information.

## *KAPA Hyper Prep DNA Ligase*

**Acute toxicity**
Not classified based on available information.

**Skin corrosion/irritation**
Not classified based on available information.

**Serious eye damage/eye irritation**
Not classified based on available information.

**Respiratory or skin sensitisation**

**Skin sensitisation**
Not classified based on available information.

**Respiratory sensitisation**
Not classified based on available information.

**Germ cell mutagenicity**
Not classified based on available information.

**Carcinogenicity**
Not classified based on available information.

**Components:**

**Kinase (phosphorylating), polynucleotide 3' / 5'-Hydroxyl-:**

Remarks : No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity**

Not classified based on available information.

**STOT - single exposure**

Not classified based on available information.

**Components:**

**Kinase (phosphorylating), polynucleotide 3' / 5'-Hydroxyl-:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

**STOT - repeated exposure**

Not classified based on available information.

**Components:**

**Kinase (phosphorylating), polynucleotide 3' / 5'-Hydroxyl-:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Aspiration toxicity**

Not classified based on available information.

**Components:**

**Kinase (phosphorylating), polynucleotide 3' / 5'-Hydroxyl-:**

No data available

## *KAPA A-Tailing Enzyme*

**Acute toxicity**

Not classified based on available information.

**Skin corrosion/irritation**

Not classified based on available information.

**Serious eye damage/eye irritation**

Not classified based on available information.

**Respiratory or skin sensitisation**

**Skin sensitisation**

Not classified based on available information.

**Respiratory sensitisation**

Not classified based on available information.

**Germ cell mutagenicity**

Not classified based on available information.

**Carcinogenicity**

Not classified based on available information.

**Reproductive toxicity**

Not classified based on available information.

**STOT - single exposure**

Not classified based on available information.

**Components:**

**Nucleotidyltransferase, deoxyribonucleate:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

**STOT - repeated exposure**

Not classified based on available information.

**Components:**

**Nucleotidyltransferase, deoxyribonucleate:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Aspiration toxicity**

Not classified based on available information.

**Components:**

**Nucleotidyltransferase, deoxyribonucleate:**

No data available

### 11.2 Information on other hazards

**Endocrine disrupting properties**

**Product:**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## *KAPA End-Repair Buffer (10X)*

**Endocrine disrupting properties**

**Product:**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at

levels of 0.1% or higher.

### *Kapa A-Tailing Buffer (10X)*

**Endocrine disrupting properties**

**Product:**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### *Kapa Ligation Buffer (5X)*

**Endocrine disrupting properties**

**Product:**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### *KAPA PEG/NaCl*

**Endocrine disrupting properties**

**Product:**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### *KAPA End Repair Enzyme Mix*

**Endocrine disrupting properties**

**Product:**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### *KAPA Hyper Prep DNA Ligase*

**Endocrine disrupting properties**

**Product:**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation

(EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### *KAPA A-Tailing Enzyme*

**Endocrine disrupting properties**

**Product:**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## SECTION 12: Ecological information

### 12.1 Toxicity

### *KAPA End-Repair Buffer (10X)*

**Components:**

**(R*,R*)-1,4-dimercaptobutane-2,3-diol:**

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 34,8 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: semi-static test
Method: OECD Test Guideline 202
GLP: yes
Remarks: nominal concentration

NOEC (Daphnia magna (Water flea)): 25,0 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: semi-static test
Method: OECD Test Guideline 202
GLP: yes
Remarks: nominal concentration

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): 24,3 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes
Remarks: nominal concentration

NOErC (Raphidocelis subcapitata (freshwater green alga)): 3,2 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test

Method: OECD Test Guideline 201
GLP: yes
Remarks: nominal concentration

NOEyC (Raphidocelis subcapitata (freshwater green alga)): 1,0 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes
Remarks: nominal concentration

### *Kapa A-Tailing Buffer (10X)*

No data available

### *Kapa Ligation Buffer (5X)*

No data available

### *KAPA PEG/NaCl*

No data available

### *KAPA End Repair Enzyme Mix*

**Components:**

**alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl):**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Pimephales promelas (fathead minnow)): 4 - 8,9 mg/l<br>Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 18 - 26 mg/l<br>Exposure time: 48 h |

**Ecotoxicology Assessment**

| | | |
|---|---|---|
| Chronic aquatic toxicity | : | Toxic to aquatic life with long lasting effects. |
| Toxicity Data on Soil | : | Not expected to adsorb on soil. |
| Other organisms relevant to the environment | : | No data available |

### *KAPA Hyper Prep DNA Ligase*

**Components:**

**Kinase (phosphorylating), polynucleotide 3' / 5'-Hydroxyl-:**

**Ecotoxicology Assessment**

| | | |
|---|---|---|
| Toxicity Data on Soil | : | Not expected to adsorb on soil. |
| Other organisms relevant to the environment | : | No data available |

### *KAPA A-Tailing Enzyme*

**Components:**

**Nucleotidyltransferase, deoxyribonucleate:**

**Ecotoxicology Assessment**

Toxicity Data on Soil : Not expected to adsorb on soil.

Other organisms relevant to the environment : No data available

**12.2 Persistence and degradability**

### *KAPA End-Repair Buffer (10X)*

**Components:**

**(R*,R*)-1,4-dimercaptobutane-2,3-diol:**

Biodegradability : Test Type: aerobic
Inoculum: activated sludge, non-adapted
Concentration: 64,3 mg/l
Result: Not readily biodegradable.
Biodegradation: 53 %
Exposure time: 43 d
Method: OECD Test Guideline 301B
GLP: yes
Remarks: The 10 day time window criterion is not fulfilled.

Physico-chemical removability : Method: see user defined free text
Remarks: Not abiotically degradable

### *Kapa A-Tailing Buffer (10X)*

No data available

### *Kapa Ligation Buffer (5X)*

No data available

### *KAPA PEG/NaCl*

No data available

### *KAPA End Repair Enzyme Mix*

**Components:**

**alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl):**

Biodegradability : Biodegradation: > 60 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
Remarks: According to the results of tests of biodegradability this product is not readily biodegradable.

### *KAPA Hyper Prep DNA Ligase*

No data available

### *KAPA A-Tailing Enzyme*

No data available

**12.3 Bioaccumulative potential**

### *KAPA End-Repair Buffer (10X)*

**Components:**

**(R*,R*)-1,4-dimercaptobutane-2,3-diol:**

| | | |
|---|---|---|
| Partition coefficient: n-octanol/water | : | log Pow: 0,07 (25 °C)<br>pH: 5,0<br>Method: OECD Test Guideline 117<br>GLP: yes |

### *Kapa A-Tailing Buffer (10X)*

No data available

### *Kapa Ligation Buffer (5X)*

No data available

### *KAPA PEG/NaCl*

No data available

### *KAPA End Repair Enzyme Mix*

**Components:**

**alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl):**

| | | |
|---|---|---|
| Bioaccumulation | : | Remarks: No bioaccumulation is to be expected (log Pow <= 4). |
| Partition coefficient: n-octanol/water | : | Remarks: No data available |

### *KAPA Hyper Prep DNA Ligase*

**Components:**

**Kinase (phosphorylating), polynucleotide 3' / 5'-Hydroxyl-:**

| | | |
|---|---|---|
| Partition coefficient: n-octanol/water | : | Remarks: No data available |

### *KAPA A-Tailing Enzyme*

**Components:**

**Nucleotidyltransferase, deoxyribonucleate:**

| | | |
|---|---|---|
| Partition coefficient: n-octanol/water | : | Remarks: No data available |

**12.4 Mobility in soil**

### *KAPA End-Repair Buffer (10X)*

No data available

### *Kapa A-Tailing Buffer (10X)*

No data available

### *Kapa Ligation Buffer (5X)*

No data available

### *KAPA PEG/NaCl*

No data available

### *KAPA End Repair Enzyme Mix*

No data available

### *KAPA Hyper Prep DNA Ligase*

No data available

### *KAPA A-Tailing Enzyme*

No data available

**12.5 Results of PBT and vPvB assessment**

### *KAPA End-Repair Buffer (10X)*

Not relevant

### *Kapa A-Tailing Buffer (10X)*

Not relevant

### *Kapa Ligation Buffer (5X)*

Not relevant

### *KAPA PEG/NaCl*

Not relevant

### *KAPA End Repair Enzyme Mix*

Not relevant

### *KAPA Hyper Prep DNA Ligase*

Not relevant

### *KAPA A-Tailing Enzyme*

Not relevant

**12.6 Endocrine disrupting properties**

**Product:**

Assessment : This substance/mixture contains components considered to have endocrine disrupting properties for environment , according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

### *KAPA End-Repair Buffer (10X)*

**Product:**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### *Kapa A-Tailing Buffer (10X)*

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### *Kapa Ligation Buffer (5X)*

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### *KAPA PEG/NaCl*

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### *KAPA End Repair Enzyme Mix*

Assessment : This substance/mixture contains components considered to have endocrine disrupting properties for environment , according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

**Components:**

**alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl):**

Assessment : The substance is considered to have endocrine disrupting properties according to REACH Article 57(f) for the environment.

### *KAPA Hyper Prep DNA Ligase*

**Product:**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### *KAPA A-Tailing Enzyme*

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**12.7 Other adverse effects**

***KAPA End-Repair Buffer (10X)***

No data available

***Kapa A-Tailing Buffer (10X)***

No data available

***Kapa Ligation Buffer (5X)***

No data available

***KAPA PEG/NaCl***

No data available

***KAPA End Repair Enzyme Mix***

No data available

***KAPA Hyper Prep DNA Ligase***

No data available

***KAPA A-Tailing Enzyme***

No data available

## SECTION 13: Disposal considerations

**13.1 Waste treatment methods**

| | | |
|---|---|---|
| Product | : | The product contains a substance on REACH Annex XIV at or above 0.1% w/w. Cartridges / rests of product to be disposed of as if it was hazardous waste.<br><br>The product should not be allowed to enter drains, water courses or the soil.<br>Do not contaminate ponds, waterways or ditches with chemical or used container.<br>Send to a licensed waste management company. |
| Contaminated packaging | : | Empty remaining contents.<br>Dispose of as unused product.<br>Empty containers should be taken to an approved waste handling site for recycling or disposal.<br>Do not re-use empty containers. |

## SECTION 14: Transport information

**14.1 UN number or ID number**

Not regulated as a dangerous good

**14.2 UN proper shipping name**

Not regulated as a dangerous good

**14.3 Transport hazard class(es)**

Not regulated as a dangerous good

**14.4 Packing group**

Not regulated as a dangerous good

**14.5 Environmental hazards**

Not regulated as a dangerous good

**14.6 Special precautions for user**

Remarks : Not dangerous goods in the meaning of ADR/RID, ADN, IMDG-Code, ICAO/IATA-DGR

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

Remarks : Not applicable

## SECTION 15: Regulatory information

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

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : Not applicable

Water hazard class (Germany) : WGK 1 slightly hazardous to water

### *KAPA End-Repair Buffer (10X)*

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Conditions of restriction for the following entries should be considered: Number on list 3

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

**The components of this product are reported in the following inventories:**

| | | |
|---|---|---|
| AIIC | : | Not in compliance with the inventory |
| DSL | : | This product contains the following components that are not on the Canadian DSL nor NDSL.<br><br>Guanosine 5'-(tetrahydrogen triphosphate), 2'-deoxy-, trisodium salt<br>2'-deoxyadenosine 5'-(tetrahydrogen triphosphate)<br>2'-Deoxycytidine 5'-triphosphate disodium salt<br>Thymidine 5'-(tetrahydrogen triphosphate), sodium salt<br>Adenosine 5′-triphosphate disodium salt hydrate |
| NZIoC | : | On the inventory, or in compliance with the inventory |
| ENCS | : | Not in compliance with the inventory |
| ISHL | : | Not in compliance with the inventory |
| KECI | : | Not in compliance with the inventory |
| PICCS | : | Not in compliance with the inventory |
| IECSC | : | Not in compliance with the inventory |
| TCSI | : | Not in compliance with the inventory |
| TSCA | : | Product contains substance(s) not listed on TSCA inventory. |
| TECI | : | Not in compliance with the inventory |
| Volatile organic compounds | : | Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)<br>Not applicable |

**Labelling (REGULATION (EC) No 1272/2008)**

Hazard pictograms :



| | | |
|---|---|---|
| Signal word | : | Warning |
| Hazard statements | : | H319 Causes serious eye irritation. |
| Precautionary statements | : | **Prevention:**<br>P264 Wash skin thoroughly after handling.<br>P280 Wear eye protection/ face protection.<br>**Response:** |

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.

### *Kapa A-Tailing Buffer (10X)*

| | | |
|---|---|---|
| REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) | : | Not applicable |
| REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). | : | Not applicable |
| Regulation (EC) No 1005/2009 on substances that deplete the ozone layer | : | Not applicable |
| Regulation (EU) 2019/1021 on persistent organic pollutants (recast) | : | Not applicable |
| Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals | : | Not applicable |
| REACH - List of substances subject to authorisation (Annex XIV) | : | Not applicable |

**The components of this product are reported in the following inventories:**

| | | |
|---|---|---|
| AIIC | : | Not in compliance with the inventory |
| DSL | : | This product contains the following components that are not on the Canadian DSL nor NDSL.<br><br>2'-deoxyadenosine 5'-(tetrahydrogen triphosphate) |
| NZIoC | : | On the inventory, or in compliance with the inventory |
| ENCS | : | Not in compliance with the inventory |
| ISHL | : | Not in compliance with the inventory |
| KECI | : | Not in compliance with the inventory |
| PICCS | : | Not in compliance with the inventory |
| IECSC | : | Not in compliance with the inventory |
| TCSI | : | On the inventory, or in compliance with the inventory |

| | | |
|---|---|---|
| TSCA | : | Product contains substance(s) not listed on TSCA inventory. |
| TECI | : | Not in compliance with the inventory |
| Volatile organic compounds | : | Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)<br>Not applicable |

**Labelling (REGULATION (EC) No 1272/2008)**
Not a hazardous substance or mixture.

## *Kapa Ligation Buffer (5X)*

| | | |
|---|---|---|
| REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) | : | Not applicable |
| REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). | : | Not applicable |
| Regulation (EC) No 1005/2009 on substances that deplete the ozone layer | : | Not applicable |
| Regulation (EU) 2019/1021 on persistent organic pollutants (recast) | : | Not applicable |
| Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals | : | Not applicable |
| REACH - List of substances subject to authorisation (Annex XIV) | : | Not applicable |

**The components of this product are reported in the following inventories:**

| | | |
|---|---|---|
| AIIC | : | Not in compliance with the inventory |
| DSL | : | This product contains the following components that are not on the Canadian DSL nor NDSL.<br>Adenosine 5′-triphosphate disodium salt hydrate |
| NZIoC | : | On the inventory, or in compliance with the inventory |
| ENCS | : | Not in compliance with the inventory |
| ISHL | : | Not in compliance with the inventory |
| KECI | : | Not in compliance with the inventory |

| | | |
|---|---|---|
| PICCS | : | Not in compliance with the inventory |
| IECSC | : | Not in compliance with the inventory |
| TCSI | : | On the inventory, or in compliance with the inventory |
| TSCA | : | Product contains substance(s) not listed on TSCA inventory. |
| TECI | : | Not in compliance with the inventory |
| Volatile organic compounds | : | Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)<br>Not applicable |

**Labelling (REGULATION (EC) No 1272/2008)**
Not a hazardous substance or mixture.

## *KAPA PEG/NaCl*

| | | |
|---|---|---|
| REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) | : | Not applicable |
| REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). | : | Not applicable |
| Regulation (EC) No 1005/2009 on substances that deplete the ozone layer | : | Not applicable |
| Regulation (EU) 2019/1021 on persistent organic pollutants (recast) | : | Not applicable |
| Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals | : | Not applicable |
| REACH - List of substances subject to authorisation (Annex XIV) | : | Not applicable |

**The components of this product are reported in the following inventories:**

| | | |
|---|---|---|
| AIIC | : | On the inventory, or in compliance with the inventory |
| DSL | : | All components of this product are on the Canadian DSL |
| NZIoC | : | On the inventory, or in compliance with the inventory |
| ENCS | : | On the inventory, or in compliance with the inventory |

| | | |
|---|---|---|
| ISHL | : | On the inventory, or in compliance with the inventory |
| KECI | : | On the inventory, or in compliance with the inventory |
| PICCS | : | On the inventory, or in compliance with the inventory |
| IECSC | : | On the inventory, or in compliance with the inventory |
| TCSI | : | On the inventory, or in compliance with the inventory |
| TSCA | : | All substances listed as active on the TSCA inventory |
| TECI | : | Not in compliance with the inventory |
| Volatile organic compounds | : | Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)<br>Not applicable |

**Labelling (REGULATION (EC) No 1272/2008)**
Not a hazardous substance or mixture.

## *KAPA End Repair Enzyme Mix*

| | | |
|---|---|---|
| REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) | : | Not applicable |
| REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). | : | alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl) |
| Regulation (EC) No 1005/2009 on substances that deplete the ozone layer | : | Not applicable |
| Regulation (EU) 2019/1021 on persistent organic pollutants (recast) | : | Not applicable |
| Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals | : | Not applicable |
| REACH - List of substances subject to authorisation (Annex XIV) | : | alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)<br>For customers in the European Economic Area:, Contains SVHC:, octyl/nonylphenol ethoxylates., For use in research and under controlled conditions only, – acc. to Art. 56.3 and 3.23 REACH Regulation. |

**The components of this product are reported in the following inventories:**

| | | |
|---|---|---|
| AIIC | : | Not in compliance with the inventory |
| DSL | : | This product contains the following components listed on the Canadian NDSL. All other components are on the Canadian DSL.<br><br>Nucleotidyltransferase, deoxyribonucleate<br>Kinase (phosphorylating), polynucleotide 3' / 5'-Hydroxyl- |
| NZIoC | : | On the inventory, or in compliance with the inventory |
| ENCS | : | Not in compliance with the inventory |
| ISHL | : | Not in compliance with the inventory |
| KECI | : | Not in compliance with the inventory |
| PICCS | : | Not in compliance with the inventory |
| IECSC | : | Not in compliance with the inventory |
| TCSI | : | On the inventory, or in compliance with the inventory |
| TSCA | : | All substances listed as active on the TSCA inventory |
| TECI | : | Not in compliance with the inventory |
| Volatile organic compounds | : | Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)<br>Not applicable |

**Labelling (REGULATION (EC) No 1272/2008)**
Not a hazardous substance or mixture.

## *KAPA Hyper Prep DNA Ligase*

| | | |
|---|---|---|
| REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) | : | Not applicable |
| REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). | : | Not applicable |
| Regulation (EC) No 1005/2009 on substances that deplete the ozone layer | : | Not applicable |
| Regulation (EU) 2019/1021 on persistent organic pollu- | : | Not applicable |

tants (recast)

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

**The components of this product are reported in the following inventories:**

AIIC : Not in compliance with the inventory

DSL : This product contains the following components listed on the Canadian NDSL. All other components are on the Canadian DSL.

Kinase (phosphorylating), polynucleotide 3' / 5'-Hydroxyl-

NZIoC : On the inventory, or in compliance with the inventory

ENCS : Not in compliance with the inventory

ISHL : Not in compliance with the inventory

KECI : Not in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : Not in compliance with the inventory

TCSI : On the inventory, or in compliance with the inventory

TSCA : All substances listed as active on the TSCA inventory

TECI : Not in compliance with the inventory

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
Not applicable

**Labelling (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture.

## *KAPA A-Tailing Enzyme*

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Not applicable

| | | |
|---|---|---|
| REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). | : | Not applicable |
| Regulation (EC) No 1005/2009 on substances that deplete the ozone layer | : | Not applicable |
| Regulation (EU) 2019/1021 on persistent organic pollutants (recast) | : | Not applicable |
| Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals | : | Not applicable |
| REACH - List of substances subject to authorisation (Annex XIV) | : | Not applicable |

**The components of this product are reported in the following inventories:**

| | | |
|---|---|---|
| AIIC | : | Not in compliance with the inventory |
| DSL | : | This product contains the following components listed on the Canadian NDSL. All other components are on the Canadian DSL.<br><br>Nucleotidyltransferase, deoxyribonucleate |
| NZIoC | : | On the inventory, or in compliance with the inventory |
| ENCS | : | Not in compliance with the inventory |
| ISHL | : | Not in compliance with the inventory |
| KECI | : | Not in compliance with the inventory |
| PICCS | : | Not in compliance with the inventory |
| IECSC | : | Not in compliance with the inventory |
| TCSI | : | On the inventory, or in compliance with the inventory |
| TSCA | : | All substances listed as active on the TSCA inventory |
| TECI | : | Not in compliance with the inventory |
| Volatile organic compounds | : | Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)<br>Not applicable |

**Labelling (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture.

**15.2 Chemical safety assessment**

Chemical Safety Assessments for all substances in this product are either Complete or Not applicable.

## SECTION 16: Other information

**Full text of H-Statements**

| | | |
|---|---|---|
| H302 | : | Harmful if swallowed. |
| H315 | : | Causes skin irritation. |
| H318 | : | Causes serious eye damage. |
| H411 | : | Toxic to aquatic life with long lasting effects. |
| H412 | : | Harmful to aquatic life with long lasting effects. |

**Full text of other abbreviations**

| | | |
|---|---|---|
| Acute Tox. | : | Acute toxicity |
| Aquatic Chronic | : | Long-term (chronic) aquatic hazard |
| Eye Dam. | : | Serious eye damage |
| Skin Irrit. | : | Skin irritation |

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

**Further information**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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