SAFETY DATA SHEET



Tag2000 DNA Polymerase, Part Number 600196

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

1.1 Product identifier

Product name : Tag2000 DNA Polymerase, Part Number 600196

Part no. (chemical kit) : 600196

Part no. : Taq2000 DNA 600196-51

Polymerase

10X Taq Polymerase 600131-82

Buffer

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

Material uses : Analytical reagent.

Tag2000 DNA Polymerase 0.1 ml (500U 5U/µl)

10X Tag Polymerase Buffer 1 ml

1.3 Details of the supplier of the safety data sheet

Agilent Technologies LDA UK Ltd.

5500 Lakeside Cheadle Royal Business Park,

Cheadle, Cheshire, SK8 3GR

United Kingdom

Tel: +44 (0) 345 712 5292

e-mail address of person : pdl-msds_author@agilent.com

responsible for this SDS

1.4 Emergency telephone number

Emergency telephone : CHEMTREC®: +(44)-870-8200418

number (with hours of

operation)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Tag2000 DNA Mixture

Polymerase

10X Taq Polymerase Mixture

Buffer

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Taq2000 DNA Polymerase

H412 LONG-TERM (CHRONIC) AQUATIC HAZARD Category 3

Ingredients of unknown : Taq2000 DNA Polymerase Percentage of the mixture consisting of ingredient(s) of

toxicity unknown acute inhalation toxicity: 30 - 60%

10X Taq Polymerase Percentage of the mixture consisting of ingredient(s) of

Buffer unknown acute dermal toxicity: 1 - 10%

Percentage of the mixture consisting of ingredient(s) of

unknown acute inhalation toxicity: 1 - 10%

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

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SECTION 2: Hazards identification

Signal word : Taq2000 DNA

Polymerase

10X Taq Polymerase

Buffer

No signal word.

No signal word.

Hazard statements : Taq2000 DNA

Polymerase

10X Tag Polymerase

Buffer

H412 - Harmful to aquatic life with long lasting effects.

No known significant effects or critical hazards.

Precautionary statements

Prevention : Taq2000 DNA

Polymerase

10X Taq Polymerase

Buffer

P273 - Avoid release to the environment.

Not applicable.

Response : Taq2000 DNA

Polymerase

10X Taq Polymerase

Buffer

Not applicable.

Not applicable.

Storage : Taq2000 DNA Not applicable.

Polymerase

10X Taq Polymerase

Buffer

Not applicable.

Disposal : Tag2000 DNA P501 - Dispose of contents and container in accordance

Polymerase

10X Taq Polymerase

Buffer

with all local, regional, national and international regulations.

Not applicable.

Hazardous ingredients : √aq2000 DNA

Polymerase

Not applicable.

Supplemental label

elements

raq2000 DNA

Polymerase

10X Taq Polymerase

Buffer

Not applicable.

Not applicable.

Annex XVII - Restrictions on the manufacture,

placing on the market and use of certain dangerous substances, mixtures and articles Taq2000 DNA Polymerase

10X Taq Polymerase

Buffer

Not applicable.

Not applicable.

Special packaging requirements

Tactile warning of

danger

: Taq2000 DNA Polymerase

10X Taq Polymerase

Buffer

Not applicable.

Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB

according to Regulation (EC) No. 1907/2006, Annex XIII : Taq2000 DNA Polymerase

10X Taq Polymerase

Buffer

This mixture does not contain any substances that are

assessed to be a PBT or a vPvB.

This mixture does not contain any substances that are

assessed to be a PBT or a vPvB.

Other hazards which do not result in

classification

: Taq2000 DNA Polymerase

10X Taq Polymerase

Buffer

None known.

None known.

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SECTION 3: Composition/information on ingredients

3.1 Substances : Taq2000 DNA Polymerase Mixture 10X Taq Polymerase Buffer Mixture

| Product/ingredient name | Identifiers | % | Regulation (EC) No. 1272/2008 [CLP] | Type |
|---|---|-----------|---|---------|
| ₹aq2000 DNA Polymerase | | | | |
| Glycerol | REACH #: Annex V EC: 200-289-5 CAS: 56-81-5 | ≥50 - ≤75 | Not classified. | [2] |
| Poly(oxy-1,2-ethanediyl), .alpha[(1,1,3,3-tetramethylbutyl)phenyl] omegahydroxy- | CAS: 9036-19-5 | <1 | Eye Irrit. 2, H319 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1) | [1] [5] |
| | | | See Section 16 for the full text of the H statements declared above. | |

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern
- [6] Additional disclosure due to company policy

SECTION 4: First aid measures

| Description | af fluat ald | |
|------------------|--------------|-----------|
| LIBECTINTIAN | of firet ain | mbaelirbe |
| | | |

| 4.1 Description of mis | t did ilicasures | |
|------------------------|---|--|
| Eye contact | : Taq2000 DNA Polymerase 10X Taq Polymerase Buffer | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. |
| Inhalation | : Taq2000 DNA Polymerase | Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| | 10X Taq Polymerase Buffer | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition |

Skin contact : Taq2000 DNA

Polymerase

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes

products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for

thoroughly before reuse.

10X Taq Polymerase

Buffer

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if

symptoms occur.

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SECTION 4: First aid measures

Ingestion : Taq2000 DNA

▼aq2000 DNA Wash out mouth with water. Remove dentures if any. If Polymerase material has been swallowed and the exposed person is

conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous.

Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If

unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen

tight clothing such as a collar, tie, belt or waistband.

10X Taq Polymerase Wash out mouth with water. If material has been swallowed Buffer and the exposed person is conscious, give small quantities

and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if

symptoms occur.

Polymerase without suitable training. It may be dangerous to the person

providing aid to give mouth-to-mouth resuscitation.

No action shall be taken involving any personal risk or

Buffer without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact: Tag2000 DNA No known significant effects or critical hazards.

Polymerase

10X Taq Polymerase

10X Taq Polymerase No known significant effects or critical hazards.

Buffer

Inhalation : Taq2000 DNA No known significant effects or critical hazards.

Polymerase

10X Taq Polymerase No known significant effects or critical hazards.

Buffer

Skin contact : Tag2000 DNA No known significant effects or critical hazards.

Polymerase

10X Tag Polymerase No known significant effects or critical hazards.

Buffer

Ingestion : Taq2000 DNA No known significant effects or critical hazards.

Polymerase

10X Taq Polymerase No known significant effects or critical hazards.

Buffer

Over-exposure signs/symptoms

Eye contact : Taq2000 DNA No specific data.

Polymerase

10X Taq Polymerase No specific data.

Buffer

Inhalation : Taq2000 DNA No specific data.

Polymerase

10X Taq Polymerase No specific data.

Buffer

Skin contact: Tag2000 DNA No specific data.

Polymerase

10X Taq Polymerase No specific data.

Buffer

Ingestion : Taq2000 DNA No specific data.

Polymerase

10X Taq Polymerase No specific data.

Buffer

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SECTION 4: First aid measures

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

: Tag2000 DNA Polymerase

10X Taq Polymerase

Buffer

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need

to be kept under medical surveillance for 48 hours.

Specific treatments

: Tag2000 DNA Polymerase

10X Taq Polymerase

Buffer

No specific treatment.

No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

: Taq2000 DNA Polymerase

10X Taq Polymerase

Buffer

Use an extinguishing agent suitable for the surrounding fire.

Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing

media

Tag2000 DNA Polymerase

10X Taq Polymerase

None known.

None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Tag2000 DNA Polymerase

In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being

discharged to any waterway, sewer or drain.

10X Taq Polymerase

Buffer

In a fire or if heated, a pressure increase will occur and the

container may burst.

Hazardous combustion

products

: Tag2000 DNA

Polymerase

Decomposition products may include the following materials:

carbon dioxide carbon monoxide

10X Taq Polymerase

Buffer

Decomposition products may include the following materials:

carbon dioxide carbon monoxide nitrogen oxides

halogenated compounds metal oxide/oxides

5.3 Advice for firefighters

Special precautions for fire-fighters

: Taq2000 DNA Polymerase

10X Taq Polymerase

Buffer

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the

vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for firefighters

: Taq2000 DNA Polymerase

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

10X Taq Polymerase

Buffer

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a

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SECTION 5: Firefighting measures

basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: Taq2000 DNA Polymerase No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

10X Taq Polymerase

Buffer

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas.
Keep unnecessary and unprotected personnel from entering.

Do not touch or walk through spilt material. Put on

appropriate personal protective equipment.

For emergency responders

: Taq2000 DNA Polymerase If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-

emergency personnel".

10X Taq Polymerase

Buffer

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-

emergency personnel".

6.2 Environmental precautions

Taq2000 DNA Polymerase Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large

quantities.

10X Taq Polymerase

Buffer

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution

(sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

Methods for cleaning up

: Taq2000 DNA Polymerase

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. May be harmful to the environment if released. Dispose of spillages

under controlled conditions.

10X Taq Polymerase

Buffer

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose

of via a licensed waste disposal contractor.

6.4 Reference to other sections

: See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment.

See Section 13 for additional waste treatment information.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures

: Tag2000 DNA Polymerase

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse

10X Tag Polymerase

Buffer

Put on appropriate personal protective equipment (see

Section 8).

container.

Advice on general occupational hygiene Tag2000 DNA Polymerase

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

10X Taq Polymerase Buffer

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Storage

: Tag2000 DNA Polymerase

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials

before handling or use.

10X Taq Polymerase Buffer

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental

contamination. See Section 10 for incompatible materials

before handling or use.

7.3 Specific end use(s)

Recommendations

: Taq2000 DNA Polymerase

Industrial applications, Professional applications.

10X Taq Polymerase

Buffer

Industrial applications, Professional applications.

Industrial sector specific

solutions

Tag2000 DNA Polymerase

Not available.

10X Taq Polymerase

Buffer

Not available.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

| Product/ingredient name | Exposure limit values |
|--|--|
| Faq2000 DNA Polymerase Glycerol | EH40/2005 WELs (United Kingdom (UK), 1/2020). TWA: 10 mg/m ³ 8 hours. Form: Mist |

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls

 Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with sideshields.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

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SECTION 8: Exposure controls/personal protection

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Liquid.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Taq2000 DNA Liquid.

Polymerase

10X Taq Polymerase

Buffer

: Taq2000 DNA Not available. Colour

Polymerase

10X Taq Polymerase Not available.

Buffer

Odour Tag2000 DNA Not available.

Polymerase

10X Tag Polymerase Not available.

Buffer

Odour threshold Taq2000 DNA Not available.

Polymerase

10X Taq Polymerase Not available.

Buffer

Melting point/freezing

point

Tag2000 DNA Polymerase

Not available.

10X Taq Polymerase Not available.

Buffer

Initial boiling point and

boiling range

Tag2000 DNA

Not available.

Polymerase

10X Taq Polymerase Not available.

Buffer

Flammability (solid, gas) Tag2000 DNA Not applicable.

Polymerase

10X Taq Polymerase

Buffer

Not applicable.

Upper/lower flammability

or explosive limits

Taq2000 DNA

Polymerase

Not available.

10X Taq Polymerase

Buffer

Not available.

Flash point

| | Closed cup Ope | | Open | cup | | |
|--|----------------|--------|-----------|-----|----|--------|
| Ingredient name | °C | °F | Method | °C | °F | Method |
| Taq2000 DNA Polymerase | | | | | | |
| Edetic acid | >100 | >212 | DIN 51758 | | | |
| Poly(oxy-1,2-ethanediyl), . alpha[(1,1,3,3-tetramethylbutyl) phenyl]omegahydroxy- | >109.85 | >229.7 | | | | |

Auto-ignition temperature

| Ingredient name | °C | °F | Method |
|------------------------|------|------|----------|
| Taq2000 DNA Polymerase | | | |
| Glycerol | 370 | 698 | |
| Edetic acid | >400 | >752 | VDI 2263 |

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SECTION 9: Physical and chemical properties

Decomposition

Taq2000 DNA

Not available.

temperature

Polymerase 10X Taq Polymerase

Not available.

Buffer

pH

Taq2000 DNA

Polymerase

10X Taq Polymerase

8.8

8

: Taq2000 DNA

Viscosity

Polymerase

Not available.

10X Taq Polymerase

Buffer

Buffer

Not available.

Solubility(ies)

Tag2000 DNA

Polymerase

Soluble in the following materials: cold water and hot water.

10X Taq Polymerase Buffer

Easily soluble in the following materials: cold water and hot

water.

Partition coefficient: noctanol/water

Vapour pressure

: Tag2000 DNA Polymerase

Not applicable.

Not applicable.

10X Taq Polymerase

Buffer

| | Vapour Pressure at 20°C | | Vapour pressure at 50° | | | |
|---|-------------------------|-----------|------------------------|-------------|----------|--------|
| Ingredient name | mm Hg | kPa | Method | mm Hg | kPa | Method |
| Taq2000 DNA Polymerase | | | | | | |
| water | 23.8 | 3.2 | | 92.258 | 12.3 | |
| Sorbitan monolaurate, ethoxylated | <1 | <0.13 | | | | |
| 10X Taq Polymerase Buffer | | | | | | |
| water | 23.8 | 3.2 | | 92.258 | 12.3 | |
| 2-Amino-2- (hydroxymethyl)propane- 1,3-diol hydrochloride | 0.000027 | 0.0000036 | | 0.000007501 | 0.000001 | |

Evaporation rate

Taq2000 DNA

Not available.

Polymerase

10X Taq Polymerase Buffer

Not available.

Relative density

: Tag2000 DNA

Not available.

Polymerase

10X Taq Polymerase Buffer

Not available.

Vapour density

Tag2000 DNA Polymerase

Not available.

10X Taq Polymerase

Not available.

Oxidising properties

Taq2000 DNA

Not available.

Polymerase

10X Taq Polymerase

Not available.

Buffer

Buffer

Particle characteristics

Median particle size

Taq2000 DNA

Not applicable.

Polymerase

10X Taq Polymerase

Not applicable.

Buffer

9.2 Other information

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SECTION 9: Physical and chemical properties

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity

: Taq2000 DNA Polymerase No specific test data related to reactivity available for this

product or its ingredients.

10X Taq Polymerase

Buffer

No specific test data related to reactivity available for this

product or its ingredients.

10.2 Chemical stability

: Taq2000 DNA

Polymerase

10X Taq Polymerase

Buffer

The product is stable.

The product is stable.

10.3 Possibility of hazardous reactions

Taq2000 DNA Polymerase

10X Taq Polymerase

Buffer

Under normal conditions of storage and use, hazardous

reactions will not occur.

Under normal conditions of storage and use, hazardous

reactions will not occur.

10.4 Conditions to avoid

: Taq2000 DNA

Polymerase

10X Taq Polymerase

Buffer

No specific data.

No specific data.

10.5 Incompatible materials

Taq2000 DNA Polymerase

10X Taq Polymerase

Buffer

May react or be incompatible with oxidising materials.

May react or be incompatible with oxidising materials.

10.6 Hazardous decomposition products

: Taq2000 DNA Polymerase

10X Taq Polymerase

Buffer

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous

decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|-----------|---------|------------|----------|
| Taq2000 DNA Polymerase Poly(oxy-1,2-ethanediyl), . alpha[(1,1,3,3-tetramethylbutyl) phenyl]omegahydroxy- | LD50 Oral | Rat | 2800 mg/kg | - |

Acute toxicity estimates

| Product/ingredient name | Oral (mg/ kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapours) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|---|------------------|-------------------|--------------------------------|-----------------------------------|--|
| Taq2000 DNA Polymerase Poly(oxy-1,2-ethanediyl), .alpha[(1,1,3,3-tetramethylbutyl)phenyl]omegahydroxy- | 2800 | N/A | N/A | N/A | N/A |

Irritation/Corrosion

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SECTION 11: Toxicological information

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|------------------------|---------|-------|----------|-------------|
| Paq2000 DNA Polymerase Poly(oxy-1,2-ethanediyl), . alpha[(1,1,3,3-tetramethylbutyl) phenyl]omegahydroxy- | Eyes - Severe irritant | Rabbit | - | 1 % | - |

Sensitiser

Conclusion/Summary

: Not available.

Mutagenicity

Conclusion/Summary

: Not available.

Carcinogenicity

Conclusion/Summary

: Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary Not available. Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure

: Taq2000 DNA Polymerase

Routes of entry anticipated: Oral, Dermal, Inhalation.

10X Taq Polymerase

Buffer

Not available.

Potential acute health effects

Inhalation

: Taq2000 DNA Polymerase

No known significant effects or critical hazards.

10X Taq Polymerase

No known significant effects or critical hazards.

Buffer

Ingestion

Taq2000 DNA Polymerase

No known significant effects or critical hazards.

10X Taq Polymerase No known significant effects or critical hazards.

Buffer

Skin contact

: Tag2000 DNA

No known significant effects or critical hazards.

Polymerase

10X Tag Polymerase

Buffer

No known significant effects or critical hazards.

Tag2000 DNA

Eye contact

Polymerase

No known significant effects or critical hazards.

10X Taq Polymerase

No known significant effects or critical hazards.

Buffer

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : Tag2000 DNA No specific data.

Polymerase

10X Taq Polymerase No specific data.

Buffer

Taq2000 DNA Ingestion No specific data.

Polymerase

10X Taq Polymerase No specific data.

Buffer

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SECTION 11: Toxicological information

Skin contact: Taq2000 DNA No specific data.

Polymerase

10X Taq Polymerase No specific data.

Buffer

Eye contact : Taq2000 DNA No specific data.

Polymerase

10X Taq Polymerase No specific data.

Buffer

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate

effects

: Not available.

Potential delayed

effects

: Not available.

Long term exposure

Potential immediate

effects

: Not available.

Potential delayed

effects

: Not available.

Potential chronic health effects

General : Taq2000 DNA No known significant effects or critical hazards.

Polymerase

10X Taq Polymerase No known significant effects or critical hazards.

Buffer

Carcinogenicity: Taq2000 DNA

No known significant effects or critical hazards.

Polymerase

10X Taq Polymerase No known significant effects or critical hazards.

Buffer

Mutagenicity: Taq2000 DNA: No known significant effects or critical hazards.

Polymerase

10X Taq Polymerase No known significant effects or critical hazards.

Buffer

Reproductive toxicity: Taq2000 DNA

No known significant effects or critical hazards.

Polymerase

10X Taq Polymerase No known significant effects or critical hazards.

Buffer

SECTION 12: Ecological information

12.1 Toxicity

| Product/ingredient name | Result | Species | Exposure |
|---|------------------------------------|--|----------|
| Paq2000 DNA Polymerase Poly(oxy-1,2-ethanediyl), . alpha[(1,1,3,3-tetramethylbutyl) phenyl]omegahydroxy- | Acute EC50 210 μg/l Fresh water | Algae - Selenastrum sp. | 96 hours |
| ,, ,g,, | Acute LC50 10800 µg/l Marine water | Crustaceans - Pandalus montagui - Adult | 48 hours |
| | Acute LC50 8600 μg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 7200 μg/l Fresh water | Fish - Oncorhynchus mykiss | 96 hours |

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

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| Product/ingredient name | LogPow | BCF | Potential |
|---|--------|-------|-----------|
| Taq2000 DNA Polymerase Poly(oxy-1,2-ethanediyl), . alpha[(1,1,3,3-tetramethylbutyl) phenyl]omegahydroxy- | 3.77 | 78.67 | low |

12.4 Mobility in soil

Soil/water partition coefficient (Koc)

Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects: No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal

: The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste

Packaging

: The classification of the product may meet the criteria for a hazardous waste.

Methods of disposal

: The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions

: Dispose of material(s) and residues under controlled conditions. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

| | ADR/RID | IMDG | IATA |
|----------------------------------|----------------|----------------|----------------|
| 14.1 UN number | Not regulated. | Not regulated. | Not regulated. |
| 14.2 UN proper shipping name | - | - | - |
| 14.3 Transport hazard class(es) | - | - | - |
| 14.4 Packing group | - | - | - |
| 14.5 Environmental hazards | No. | No. | No. |

Additional information

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SECTION 14: Transport information

14.6 Special precautions for user

: **Transport within user's premises**: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments

: Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

| Ingredient name | Intrinsic property | Status | Reference number | Date of revision |
|--|---|--------|------------------|------------------|
| Paq2000 DNA Polymerase Poly(oxy-1,2-ethanediyl), .alpha[(1,1,3,3-tetramethylbutyl)phenyl]omega hydroxy- | Substance of equivalent concern for environment | Listed | 42 | 7/3/2017 |

Substances of very high concern

| Ingredient name | Intrinsic property | Status | Reference number | Date of revision |
|--|---|-------------|------------------|------------------|
| Faq2000 DNA Polymerase Poly(oxy-1,2-ethanediyl), .alpha[(1,1,3,3-tetramethylbutyl)phenyl]omega hydroxy- | Substance of equivalent concern for environment | Recommended | ED/169/2012 | 7/3/2017 |

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Label

: Taq2000 DNA Polymerase Not applicable. 10X Taq Polymerase Buffer Not applicable.

Other EU regulations

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

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SECTION 15: Regulatory information

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

China : All components are listed or exempted.

Europe : All components are listed or exempted.

Japan : Japan inventory (CSCL): Not determined.

Japan inventory (ISHL): Not determined.

New Zealand : All components are listed or exempted.

Philippines : All components are listed or exempted.

Republic of Korea : Not determined.

Taiwan : All components are listed or exempted.

Thailand : Not determined.

Turkey : Not determined.

United States : All components are active or exempted.

Viet Nam : All components are listed or exempted.

15.2 Chemical safety

assessment

: This product contains substances for which Chemical Safety Assessments might still

be required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms

: ATE = Acute Toxicity Estimate

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No.

1272/2008]

DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level

EUH statement = CLP-specific Hazard statement

N/A = Not available

PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number

vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

| Classification | Justification |
|--|--------------------|
| raq2000 DNA Polymerase Aquatic Chronic 3, H412 | Calculation method |

Full text of abbreviated H statements

| √aq2000 DNA Polymerase | |
|------------------------|---|
| H319 | Causes serious eye irritation. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |

Full text of classifications [CLP/GHS]

| q2000 DNA Polymerase | |
|----------------------|---|
| juatic Acute 1 | SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 |
| uatic Chronic 1 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 |
| uatic Chronic 3 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 |
| e Irrit. 2 | SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 |

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SECTION 16: Other information

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Notice to reader

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