
SAFETY DATA SHEET

Taq2000 DNA Polymerase, Part Number 600198

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

1.1 Product identifier
Product name: Taq2000 DNA Polymerase, Part Number 600198
Part No. (Kit): 600198
Part No.: Taq2000 DNA 600197-51
Polymerase 10X Taq Polymerase Buffer 600131-82

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

<table>
<thead>
<tr>
<th>Identified uses</th>
<th>0.2 ml (1000 U 5 U/µl)</th>
<th>1 ml</th>
</tr>
</thead>
</table>

Analytical reagent.
Taq2000 DNA Polymerase
10X Taq Polymerase Buffer

1.3 Details of the supplier of the safety data sheet
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str. 8
76337 Waldbronn
Germany
0800 603 1000
e-mail address of person responsible for this SDS: pdl-msds_author@agilent.com

1.4 Emergency telephone number
Emergency telephone number (with hours of operation): CHEMTREC®: +(44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Product definition: Taq2000 DNA Polymerase Mixture
10X Taq Polymerase Buffer Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
Not classified.

Ingredients of unknown toxicity
Taq2000 DNA Polymerase Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 30 - 60%
10X Taq Polymerase Buffer Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10%
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10%
Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 1 - 10%
Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1.6%

Ingredients of unknown ecotoxicity
10X Taq Polymerase Buffer

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

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SECTION 2: Hazards identification

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

2.2 Label elements

Signal word:
- **Taq2000 DNA Polymerase**: No signal word.
- **10X Taq Polymerase Buffer**: No signal word.

Hazard statements:
- **Taq2000 DNA Polymerase**: No known significant effects or critical hazards.
- **10X Taq Polymerase Buffer**: No known significant effects or critical hazards.

Precautionary statements

- **Prevention**: Not applicable.
- **Response**: Not applicable.
- **Storage**: Not applicable.
- **Disposal**: Not applicable.

Hazardous ingredients:
- **Taq2000 DNA Polymerase**: Not applicable.
- **10X Taq Polymerase Buffer**: Not applicable.

Supplemental label elements

- **Safety data sheet available on request**.

2.3 Other hazards

- **Other hazards which do not result in classification**: None known.
### Taq2000 DNA Polymerase, Part Number 600198

**SECTION 3: Composition/information on ingredients**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Identifiers</th>
<th>%</th>
<th>Regulation (EC) No. 1272/2008 [CLP]</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td>CAS: 9036-19-5</td>
<td>&lt;1</td>
<td>Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411</td>
<td>[1] [5]</td>
</tr>
<tr>
<td>Poly(oxy-1,2-ethanediyl), .alpha.-[ (1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>[1] Substance classified with a health or environmental hazard</td>
</tr>
<tr>
<td>[2] Substance with a workplace exposure limit</td>
</tr>
<tr>
<td>[5] Substance of equivalent concern</td>
</tr>
<tr>
<td>[6] Additional disclosure due to company policy</td>
</tr>
</tbody>
</table>

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

**SECTION 4: First aid measures**

4.1 Description of first aid measures

- **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. Get medical attention if irritation occurs.

- **Inhalation**
  - Taq2000 DNA Polymerase
  - 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.

- **Skin contact**
  - Taq2000 DNA Polymerase
  - 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

<table>
<thead>
<tr>
<th>Substance</th>
<th>First Aid Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq2000 DNA Polymerase</td>
<td>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed 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.</td>
</tr>
<tr>
<td>10X Taq Polymerase Buffer</td>
<td>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed 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.</td>
</tr>
</tbody>
</table>

### Protection of first-aiders

<table>
<thead>
<tr>
<th>Substance</th>
<th>Protection Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq2000 DNA Polymerase</td>
<td>No action shall be taken involving any personal risk or without suitable training.</td>
</tr>
<tr>
<td>10X Taq Polymerase Buffer</td>
<td>No action shall be taken involving any personal risk or without suitable training.</td>
</tr>
</tbody>
</table>

### Potential acute health effects

**Eye contact**

- Taq2000 DNA Polymerase: No known significant effects or critical hazards.
- 10X Taq Polymerase Buffer: No known significant effects or critical hazards.

**Inhalation**

- Taq2000 DNA Polymerase: No known significant effects or critical hazards.
- 10X Taq Polymerase Buffer: No known significant effects or critical hazards.

**Skin contact**

- Taq2000 DNA Polymerase: No known significant effects or critical hazards.
- 10X Taq Polymerase Buffer: No known significant effects or critical hazards.

**Ingestion**

- Taq2000 DNA Polymerase: No known significant effects or critical hazards.
- 10X Taq Polymerase Buffer: No known significant effects or critical hazards.

### Over-exposure signs/symptoms

**Eye contact**

- Taq2000 DNA Polymerase: No specific data.
- 10X Taq Polymerase Buffer: No specific data.

**Inhalation**

- Taq2000 DNA Polymerase: No specific data.
- 10X Taq Polymerase Buffer: No specific data.

**Skin contact**

- Taq2000 DNA Polymerase: No specific data.
- 10X Taq Polymerase Buffer: No specific data.

**Ingestion**

- Taq2000 DNA Polymerase: No specific data.
- 10X Taq Polymerase Buffer: No specific data.

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

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SECTION 4: First aid measures

### Notes to physician

- **Taq2000 DNA Polymerase**
  - 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.

- **10X Taq Polymerase Buffer**
  - 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

- **Taq2000 DNA Polymerase**
  - No specific treatment.

- **10X Taq Polymerase Buffer**
  - No specific treatment.

SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

- **Suitable extinguishing media**
  - **Taq2000 DNA Polymerase**
    - Use an extinguishing agent suitable for the surrounding fire.
  - **10X Taq Polymerase Buffer**
    - Use an extinguishing agent suitable for the surrounding fire.

- **Unsuitable extinguishing media**
  - **Taq2000 DNA Polymerase**
    - None known.
  - **10X Taq Polymerase Buffer**
    - None known.

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

- **Hazardous combustion products**
  - **Taq2000 DNA Polymerase**
    - Decomposition products may include the following materials:
      - carbon dioxide
      - carbon monoxide
      - 10X Taq Polymerase Buffer
    - In a fire or if heated, a pressure increase will occur and the container may burst.

- **10X Taq Polymerase Buffer**
  - Decomposition products may include the following materials:
    - carbon dioxide
    - carbon monoxide
    - nitrogen oxides
    - halogenated compounds
    - metal oxide/oxides
  - In a fire or if heated, a pressure increase will occur and the container may burst.

#### 5.3 Advice for firefighters

- **Special precautions for fire-fighters**
  - **Taq2000 DNA Polymerase**
    - 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.
  - **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.

- **Special protective equipment for fire-fighters**
  - **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 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. 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).
- 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. Dispose of via a licensed waste disposal contractor.
- 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.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures:
- Taq2000 DNA Polymerase: Put on appropriate personal protective equipment (see Section 8).
- 10X Taq Polymerase Buffer: Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene:
- Taq2000 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.
SECTION 7: Handling and storage

Taq2000 DNA 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.

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.

7.2 Conditions for safe storage, including any incompatibilities

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
Taq2000 DNA Polymerase
Not applicable.

10X Taq Polymerase Buffer
Not applicable.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Exposure limit values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq2000 DNA Polymerase</td>
<td>EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 10 mg/m³ 8 hours. Form: Mist</td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
</tr>
</tbody>
</table>

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.

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SECTION 8: Exposure controls/personal protection

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 side-shields.

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.

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.

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

9.1 Information on basic physical and chemical properties

Appearance

Physical state
- Taq2000 DNA Polymerase Liquid.
- 10X Taq Polymerase Buffer Liquid.

Colour
- Taq2000 DNA Polymerase Not available.
- 10X Taq Polymerase Buffer Not available.

Odour
- Taq2000 DNA Polymerase Not available.
- 10X Taq Polymerase Buffer Not available.
### Taq2000 DNA Polymerase, Part Number 600198

#### SECTION 9: Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Taq2000 DNA Polymerase</th>
<th>10X Taq Polymerase Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odour threshold</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH</td>
<td>8</td>
<td>8.8</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

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SECTION 9: Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Taq2000 DNA Polymerase</th>
<th>10X Taq Polymerase Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decomposition temperature</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

9.2 Other information
No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity
No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability
The product is stable.

10.3 Possibility of hazardous reactions
Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid
No specific data.

10.5 Incompatible materials
May react or be incompatible with oxidising materials.

10.6 Hazardous decomposition products
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

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq2000 DNA Polymerase</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2800 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Acute toxicity estimates
Not available.

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq2000 DNA Polymerase</td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>1%</td>
<td>-</td>
</tr>
</tbody>
</table>

Sensitiser

Conclusion/Summary: Not available.

Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>10X Taq Polymerase Buffer</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
</tbody>
</table>

Specific target organ toxicity (repeated exposure)
Not available.

Aspiration hazard
Not available.

Information on likely routes of exposure:
- Taq2000 DNA Polymerase
- 10X Taq Polymerase Buffer

Potential acute health effects

Inhalation:
- Taq2000 DNA Polymerase
- 10X Taq Polymerase Buffer

Ingestion:
- Taq2000 DNA Polymerase
- 10X Taq Polymerase Buffer

Skin contact:
- Taq2000 DNA Polymerase
- 10X Taq Polymerase Buffer

Eye contact:
- Taq2000 DNA Polymerase
- 10X Taq Polymerase Buffer

Symptoms related to the physical, chemical and toxicological characteristics

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### Taq2000 DNA Polymerase, Part Number 600198

#### SECTION 11: Toxicological information

<table>
<thead>
<tr>
<th>Inhalation</th>
<th>Taq2000 DNA Polymerase</th>
<th>No specific data.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10X Taq Polymerase Buffer</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Taq2000 DNA Polymerase</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>10X Taq Polymerase Buffer</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Taq2000 DNA Polymerase</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>10X Taq Polymerase Buffer</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Taq2000 DNA Polymerase</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>10X Taq Polymerase Buffer</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

**General**

No known significant effects or critical hazards.

**Carcinogenicity**

No known significant effects or critical hazards.

**Mutagenicity**

No known significant effects or critical hazards.

**Teratogenicity**

No known significant effects or critical hazards.

**Developmental effects**

No known significant effects or critical hazards.

**Fertility effects**

No known significant effects or critical hazards.

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SECTION 12: Ecological information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq2000 DNA Polymerase Poly(oxy-1,2-ethanediyl), \alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-</td>
<td>Acute EC50 210 μg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 10800 μg/l Marine water</td>
<td>Crustaceans - Pandalus montagui - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 8600 to 9800 μg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 7200 μg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability
Not available.

12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq2000 DNA Polymerase Poly(oxy-1,2-ethanediyl), \alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-</td>
<td>3.77</td>
<td>78.67</td>
<td>low</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

- Soil/water partition coefficient (K<sub>OC</sub>) : Not available.
- Mobility : Not available.

12.5 Results of PBT and vPvB assessment

- PBT : Not applicable.
- vPvB : Not applicable.

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** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

- **Packaging**
  - 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.

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Taq2000 DNA Polymerase, Part Number 600198

SECTION 13: Disposal considerations

Special precautions: This material and its container must be disposed of in a safe way. 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: Not regulated.

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 Annex II of Marpol and the IBC Code: 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

None of the components are listed.

Substances of very high concern

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Intrinsic property</th>
<th>Status</th>
<th>Reference number</th>
<th>Date of revision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq2000 DNA Polymerase</td>
<td>Substance of equivalent concern for environment</td>
<td>Recommended</td>
<td>ED/169/2012</td>
<td>2/10/2014</td>
</tr>
<tr>
<td>Poly(oxy-1,2-ethanediyl), .alpha.-(1,1,3, 3-tetramethylbutyl)phenyl)-.omega.-hydroxy-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

None of the components are listed.

Other EU regulations

Ozone depleting substances (1005/2009/EU)

Not listed.

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

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 (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

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Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals
Not listed.

Inventory list

<table>
<thead>
<tr>
<th>Country</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Canada</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>China</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Europe</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Japan</td>
<td><strong>Japan inventory (ENCS)</strong>: Not determined.</td>
</tr>
<tr>
<td></td>
<td><strong>Japan inventory (ISHL)</strong>: Not determined.</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Not determined.</td>
</tr>
<tr>
<td>New Zealand</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Philippines</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Taiwan</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Thailand</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Turkey</td>
<td>Not determined.</td>
</tr>
<tr>
<td>United States</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>Not determined.</td>
</tr>
</tbody>
</table>

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]
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number

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

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq2000 DNA Polymerase</td>
<td></td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>H411</td>
<td>Toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>10X Taq Polymerase Buffer</td>
<td></td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation.</td>
</tr>
</tbody>
</table>

Full text of classifications [CLP/GHS]

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SECTION 16: Other information

<table>
<thead>
<tr>
<th>Taq2000 DNA Polymerase</th>
<th>10X Taq Polymerase Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic Chronic 2, H411</td>
<td>Eye Irrit. 2, H319</td>
</tr>
<tr>
<td>Eye Dam. 1, H318</td>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td>Skin Irrit. 2, H315</td>
<td>STOT SE 3, H335</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2</td>
<td>SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2</td>
</tr>
<tr>
<td></td>
<td>SKIN CORROSION/IRRITATION - Category 2</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Eye Irrit. 2, H319</td>
<td></td>
</tr>
<tr>
<td>Skin Irrit. 2, H315</td>
<td></td>
</tr>
<tr>
<td>STOT SE 3, H335</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2</td>
</tr>
<tr>
<td></td>
<td>SKIN CORROSION/IRRITATION - Category 2</td>
</tr>
<tr>
<td></td>
<td>SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3</td>
</tr>
</tbody>
</table>

Date of issue/Date of revision: 26/05/2017

Date of previous issue: No previous validation.

Version: 1

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