SAFETY DATA SHEET
QC-Plex

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

1.1 Product identifier

Product name: QC-Plex
Part no. (chemical kit): QC-0521.100
Part no.: PCR Mix I-1228
Taq DNA Polymerase I-1229

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

Material uses: Analytical reagent.
For Research Use Only. Not for use in diagnostic procedures.
PCR Mix: 4 x 0.325 ml
Taq DNA Polymerase: 0.015 ml

1.3 Details of the supplier of the safety data sheet

Agilent Technologies Belgium
De Kleetlaan 5 bus 9
1831 Diegem
Belgium
Tel.: +32(0)2 404 90 00

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: PCR Mix Mixture
Taq DNA Polymerase Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
Taq DNA Polymerase
H412 - LONG-TERM (CHRONIC) AQUATIC HAZARD

Ingredients of unknown toxicity: Taq DNA Polymerase Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%

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

Signal word: PCR Mix Taq DNA Polymerase No signal word.

Hazard statements: PCR Mix Taq DNA Polymerase
No known significant effects or critical hazards.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements
QC-Plex


SECTION 2: Hazards identification

Prevention: PCR Mix Not applicable.
Taq DNA Polymerase P273 - Avoid release to the environment.

Response: PCR Mix Not applicable.
Taq DNA Polymerase Not applicable.

Storage: PCR Mix Not applicable.
Taq DNA Polymerase Not applicable.

Disposal: PCR Mix Not applicable.
Taq DNA Polymerase P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients: Taq DNA Polymerase Not applicable.

Supplemental label elements:

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

Special packaging requirements:

Tactile warning of danger: PCR Mix Not applicable.
Taq DNA Polymerase Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII:

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:

PCR Mix None known.
Taq DNA Polymerase None known.

SECTION 3: Composition/information on ingredients

3.1 Substances:

<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>Taq DNA Polymerase</td>
<td></td>
<td></td>
<td></td>
<td></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>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></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.

Type
SECTION 3: Composition/information on ingredients

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[5] Substance of equivalent concern
[6] Additional disclosure due to company policy

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact

PCR Mix
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.

Taq DNA Polymerase
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.

Inhalation

PCR Mix
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 products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Taq 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.

Skin contact

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

Taq 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 thoroughly before reuse.

Ingestion

PCR Mix
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.

Taq DNA Polymerase
Wash out mouth with water. Remove dentures if any. 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. 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.
QC-Plex

**SECTION 4: First aid measures**

- **Protection of first-aiders**:
  - PCR Mix: No action shall be taken involving any personal risk or without suitable training.
  - Taq DNA Polymerase: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

- **4.2 Most important symptoms and effects, both acute and delayed**
  - **Potential acute health effects**
    - **Eye contact**:
      - PCR Mix: No specific data.
      - Taq DNA Polymerase: No specific data.
    - **Inhalation**:
      - PCR Mix: No specific data.
      - Taq DNA Polymerase: No specific data.
    - **Skin contact**:
      - PCR Mix: No specific data.
      - Taq DNA Polymerase: No specific data.
    - **Ingestion**:
      - PCR Mix: No specific data.
      - Taq DNA Polymerase: No specific data.

  - **Over-exposure signs/symptoms**
    - **Eye contact**:
      - PCR Mix: No specific data.
      - Taq DNA Polymerase: No specific data.
    - **Inhalation**:
      - PCR Mix: No specific data.
      - Taq DNA Polymerase: No specific data.
    - **Skin contact**:
      - PCR Mix: No specific data.
      - Taq DNA Polymerase: No specific data.
    - **Ingestion**:
      - PCR Mix: No specific data.
      - Taq DNA Polymerase: No specific data.

- **4.3 Indication of any immediate medical attention and special treatment needed**
  - **Notes to physician**:
    - PCR Mix: 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.
    - Taq DNA Polymerase: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
  - **Specific treatments**:
    - PCR Mix: No specific treatment.
    - Taq DNA Polymerase: No specific treatment.

**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
  - **Suitable extinguishing media**:
    - PCR Mix: Use an extinguishing agent suitable for the surrounding fire.
    - Taq DNA Polymerase: Use an extinguishing agent suitable for the surrounding fire.
  - **Unsuitable extinguishing media**:
    - PCR Mix: None known.
    - Taq DNA Polymerase: None known.

- **5.2 Special hazards arising from the substance or mixture**
  - **Hazards from the substance or mixture**:
    - PCR Mix: In a fire or if heated, a pressure increase will occur and the container may burst.
    - Taq 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.
**SECTION 5: Firefighting measures**

<table>
<thead>
<tr>
<th>Hazardous combustion products</th>
<th>PCR Mix</th>
<th>Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides, phosphorus oxides</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td>Decomposition products may include the following materials: carbon dioxide, carbon monoxide</td>
<td></td>
</tr>
</tbody>
</table>

### 5.3 Advice for firefighters

#### Special precautions for fire-fighters

<table>
<thead>
<tr>
<th>PCR Mix</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td>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.</td>
</tr>
</tbody>
</table>

#### Special protective equipment for fire-fighters

<table>
<thead>
<tr>
<th>PCR Mix</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td>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.</td>
</tr>
</tbody>
</table>

**SECTION 6: Accidental release measures**

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

#### For non-emergency personnel

<table>
<thead>
<tr>
<th>PCR Mix</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td>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.</td>
</tr>
</tbody>
</table>

#### For emergency responders

<table>
<thead>
<tr>
<th>PCR Mix</th>
<th>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 &quot;For non-emergency personnel&quot;.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td>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 &quot;For non-emergency personnel&quot;.</td>
</tr>
</tbody>
</table>

### 6.2 Environmental precautions

<table>
<thead>
<tr>
<th>PCR Mix</th>
<th>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).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td>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.</td>
</tr>
</tbody>
</table>
SECTION 6: Accidental release measures

6.3 Methods and material for containment and cleaning up

Methods for cleaning up: PCR Mix
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.

Methods for cleaning up: Taq 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.

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: PCR Mix
Put on appropriate personal protective equipment (see Section 8).

Protective measures: Taq 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 container.

Advice on general occupational hygiene: PCR Mix
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.

Advice on general occupational hygiene: Taq 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.

7.2 Conditions for safe storage, including any incompatibilities

Storage: PCR Mix
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.

Storage: Taq 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
QC-Plex

SECTION 7: Handling and storage

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

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Exposure limit values</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix</td>
<td>Industrial applications, Professional applications.</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>Industrial applications, Professional applications.</td>
</tr>
</tbody>
</table>

Industrial sector specific solutions

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Exposure limit values</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

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>Taq DNA Polymerase</td>
<td>EH40/2005 WELs (United Kingdom (UK), 8/2018).</td>
</tr>
<tr>
<td>Glycerol</td>
<td>TWA: 10 mg/m³ 8 hours. Form: Mist</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.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls

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
SECTION 8: Exposure controls/personal 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.

**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**

<table>
<thead>
<tr>
<th>Property</th>
<th>PCR Mix</th>
<th>Taq DNA Polymerase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid.</td>
<td>Liquid. [Clear. / solution]</td>
</tr>
<tr>
<td>Colour</td>
<td>PCR Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odour</td>
<td>PCR Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>PCR Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH</td>
<td>PCR Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>PCR Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>PCR Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>PCR Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>PCR Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>PCR Mix</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>PCR Mix</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>PCR Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapour density</td>
<td>PCR Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>PCR Mix</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>PCR Mix</th>
<th>Taq DNA Polymerase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solubility(ies)</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
<td>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>
<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

<table>
<thead>
<tr>
<th>Property</th>
<th>PCR Mix</th>
<th>Taq DNA Polymerase</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.1 Reactivity</td>
<td>No specific test data related to reactivity available for this product or its ingredients.</td>
<td>No specific test data related to reactivity available for this product or its ingredients.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The product is stable.</td>
</tr>
<tr>
<td>10.2 Chemical stability</td>
<td>The product is stable.</td>
<td></td>
</tr>
<tr>
<td>10.3 Possibility of hazardous reactions</td>
<td>Under normal conditions of storage and use, hazardous reactions will not occur.</td>
<td>Under normal conditions of storage and use, hazardous reactions will not occur.</td>
</tr>
<tr>
<td>10.4 Conditions to avoid</td>
<td>No specific data.</td>
<td></td>
</tr>
<tr>
<td>10.5 Incompatible materials</td>
<td>May react or be incompatible with oxidising materials.</td>
<td>May react or be incompatible with oxidising materials.</td>
</tr>
<tr>
<td>10.6 Hazardous decomposition products</td>
<td>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</td>
<td>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</td>
</tr>
</tbody>
</table>

SECTION 11: Toxicological information

11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Acute toxicity</th>
<th></th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase Poly(oxy-1,2-ethanediyl), .alpha.-[1,1,3,3-tetramethylbutyl] phenyl]-.omega.-hydroxy-</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2800 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Acute toxicity estimates

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QC-Plex

SECTION 11: Toxicological information

Carcinogenicity

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.

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>Taq 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.

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>Taq DNA Polymerase</td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>1 %</td>
<td>-</td>
</tr>
</tbody>
</table>

Potential acute health effects

Inhalation

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

Ingestion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

Skin contact

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

Eye contact

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

Ingestion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td>No specific data.</td>
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Skin contact

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<td>No specific data.</td>
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Eye contact

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<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

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
**SECTION 11: Toxicological information**

**Potential chronic health effects**
- **PCR Mix**: No known significant effects or critical hazards.
- **Taq DNA Polymerase**: No known significant effects or critical hazards.

**Carcinogenicity**
- **PCR Mix**: No known significant effects or critical hazards.
- **Taq DNA Polymerase**: No known significant effects or critical hazards.

**Mutagenicity**
- **PCR Mix**: No known significant effects or critical hazards.
- **Taq DNA Polymerase**: No known significant effects or critical hazards.

**Teratogenicity**
- **PCR Mix**: No known significant effects or critical hazards.
- **Taq DNA Polymerase**: No known significant effects or critical hazards.

**Potential immediate effects**: Not available.

**Potential delayed effects**: Not available.

**Developmental effects**
- **PCR Mix**: No known significant effects or critical hazards.
- **Taq DNA Polymerase**: No known significant effects or critical hazards.

**Fertility effects**
- **PCR Mix**: No known significant effects or critical hazards.
- **Taq DNA Polymerase**: No known significant effects or critical hazards.

**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>Taq DNA Polymerase</td>
<td>Acute EC50 210 µg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>96 hours</td>
</tr>
<tr>
<td>Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-</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 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>Taq DNA Polymerase</td>
<td>3.77</td>
<td>78.67</td>
<td>low</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>
</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**

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**

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

**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.

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

<table>
<thead>
<tr>
<th>14.1 UN number</th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2 UN proper shipping name</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.3 Transport hazard class(es)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.4 Packing group</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.5 Environmental hazards</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
</tbody>
</table>

Additional 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**

None of the components are listed.

**Substances of very high concern**

None of the components are listed.
SECTION 15: Regulatory information

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

Label: PCR Mix Not applicable.
            Taq DNA Polymerase Not applicable.

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
Not listed.

Stockholm Convention on Persistent Organic Pollutants
Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)
Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals
Not listed.

Inventory list

Australia : Not determined.
Canada : Not determined.
China : Not determined.
Europe : Not determined.
Japan : Japan inventory (ENCS): Not determined.
                Japan inventory (ISHL): Not determined.
New Zealand : Not determined.
Philippines : Not determined.
Republic of Korea : Not determined.
Taiwan : Not determined.
Thailand : Not determined.
Turkey : Not determined.
United States : Not determined.
Viet Nam : Not determined.

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]

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase Aquatic Chronic 3, H412</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

Full text of abbreviated H statements

<table>
<thead>
<tr>
<th>Taq DNA Polymerase</th>
</tr>
</thead>
<tbody>
<tr>
<td>H319</td>
</tr>
<tr>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>H400</td>
</tr>
<tr>
<td>Very toxic to aquatic life.</td>
</tr>
<tr>
<td>H410</td>
</tr>
<tr>
<td>Very toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>H412</td>
</tr>
<tr>
<td>Harmful to aquatic life with long lasting effects.</td>
</tr>
</tbody>
</table>

Full text of classifications [CLP/GHS]

<table>
<thead>
<tr>
<th>Taq DNA Polymerase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic Acute 1</td>
</tr>
<tr>
<td>SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1</td>
</tr>
<tr>
<td>Aquatic Chronic 1</td>
</tr>
<tr>
<td>LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1</td>
</tr>
<tr>
<td>Aquatic Chronic 3</td>
</tr>
<tr>
<td>LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3</td>
</tr>
<tr>
<td>Eye Irrit. 2</td>
</tr>
<tr>
<td>SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2</td>
</tr>
</tbody>
</table>

Date of issue/ Date of revision : 24/02/2020
Date of previous issue : 30/08/2017
Version : 2

Notice to reader

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