SAFETY DATA SHEET
MARFAN MASTR

Section 1. Identification

Product identifier : MARFAN MASTR
Part no. (chemical kit) : MR-0110.008
Part no. :
AR 1 I-0792
PCR Mix Plex 1 I-0612
PCR Mix Plex 2 I-0613
PCR Mix Plex 3 I-0614
PCR Mix Plex 4 I-0615
Taq DNA Polymerase I-1357

Material uses :
Conforms to HPR 2015
AR 1
PCR Mix Plex 1
PCR Mix Plex 2
PCR Mix Plex 3
PCR Mix Plex 4
Taq DNA Polymerase

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

Emergency telephone number (with hours of operation) :
CHEMTREC®: 1-800-424-9300

Section 2. Hazard identification

Classification of the substance or mixture

Taq DNA Polymerase
H320 EYE IRRITATION - Category 2B
H412 AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements

Signal word :
AR 1 No signal word.
PCR Mix Plex 1 No signal word.
PCR Mix Plex 2 No signal word.
PCR Mix Plex 3 No signal word.
PCR Mix Plex 4 No signal word.
Taq DNA Polymerase Warning

Hazard statements :
AR 1 No known significant effects or critical hazards.
PCR Mix Plex 1 No known significant effects or critical hazards.
PCR Mix Plex 2 No known significant effects or critical hazards.
PCR Mix Plex 3 No known significant effects or critical hazards.
PCR Mix Plex 4 No known significant effects or critical hazards.
Taq DNA Polymerase
H320 - Causes eye irritation.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Date of issue/Date of revision : 11/02/2021
Date of previous issue : 06/21/2019
Version : 4
Section 2. Hazard identification

Prevention:
AR 1 Not applicable.
PCR Mix Plex 1 Not applicable.
PCR Mix Plex 2 Not applicable.
PCR Mix Plex 3 Not applicable.
PCR Mix Plex 4 Not applicable.
Taq DNA Polymerase P273 - Avoid release to the environment.

Response:
AR 1 Not applicable.
PCR Mix Plex 1 Not applicable.
PCR Mix Plex 2 Not applicable.
PCR Mix Plex 3 Not applicable.
PCR Mix Plex 4 Not applicable.
Taq DNA Polymerase P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.

Storage:
AR 1 Not applicable.
PCR Mix Plex 1 Not applicable.
PCR Mix Plex 2 Not applicable.
PCR Mix Plex 3 Not applicable.
PCR Mix Plex 4 Not applicable.
Taq DNA Polymerase Not applicable.

Disposal:
AR 1 Not applicable.
PCR Mix Plex 1 Not applicable.
PCR Mix Plex 2 Not applicable.
PCR Mix Plex 3 Not applicable.
PCR Mix Plex 4 Not applicable.
Taq DNA Polymerase P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements:
AR 1 None known.
PCR Mix Plex 1 None known.
PCR Mix Plex 2 None known.
PCR Mix Plex 3 None known.
PCR Mix Plex 4 None known.
Taq DNA Polymerase None known.

Other hazards which do not result in classification:
AR 1 None known.
PCR Mix Plex 1 None known.
PCR Mix Plex 2 None known.
PCR Mix Plex 3 None known.
PCR Mix Plex 4 None known.
Taq DNA Polymerase None known.

PCR Mix Plex 1 Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1.1%
PCR Mix Plex 2 Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1.1%
PCR Mix Plex 3 Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1.1%
PCR Mix Plex 4 Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1.1%
Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>Ingredient name</th>
<th>% (w/w)</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</td>
<td>Magnesium chloride</td>
<td>0.1 - 1</td>
<td>7786-30-3</td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>Magnesium chloride</td>
<td>0.1 - 1</td>
<td>7786-30-3</td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>Magnesium chloride</td>
<td>0.1 - 1</td>
<td>7786-30-3</td>
</tr>
<tr>
<td>PCR Mix Plex 4</td>
<td>Magnesium chloride</td>
<td>0.1 - 1</td>
<td>7786-30-3</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>Glycerol</td>
<td>10 - 30</td>
<td>56-81-5</td>
</tr>
<tr>
<td></td>
<td>Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-</td>
<td>0.1 - 1</td>
<td>9036-19-5</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.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

Eye contact:

- AR 1: 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.

- PCR Mix Plex 1: 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.

- PCR Mix Plex 2: 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.

- PCR Mix Plex 3: 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.

- PCR Mix Plex 4: 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. If irritation persists, get medical attention.
## Section 4. First-aid measures

| Inhalation | : | AR 1 | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| PCR Mix Plex 1 | 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. |
| PCR Mix Plex 2 | 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. |
| PCR Mix Plex 3 | 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. |
| PCR Mix Plex 4 | 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 | : | AR 1 | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| PCR Mix Plex 1 | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| PCR Mix Plex 2 | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| PCR Mix Plex 3 | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| PCR Mix Plex 4 | 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. |
Section 4. First-aid measures

**Ingestion**

AR 1: Wash out mouth with water. 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.

PCR Mix Plex 1: Wash out mouth with water. 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.

PCR Mix Plex 2: Wash out mouth with water. 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.

PCR Mix Plex 3: Wash out mouth with water. 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.

PCR Mix Plex 4: Wash out mouth with water. 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. 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.

**Most important symptoms/effects, acute and delayed**

**Potential acute health effects**

**Eye contact**

AR 1: No known significant effects or critical hazards.

PCR Mix Plex 1: No known significant effects or critical hazards.

PCR Mix Plex 2: No known significant effects or critical hazards.

PCR Mix Plex 3: No known significant effects or critical hazards.

PCR Mix Plex 4: No known significant effects or critical hazards.

Taq DNA Polymerase: Causes eye irritation.

**Inhalation**

AR 1: No known significant effects or critical hazards.

PCR Mix Plex 1: No known significant effects or critical hazards.

PCR Mix Plex 2: No known significant effects or critical hazards.

PCR Mix Plex 3: No known significant effects or critical hazards.

PCR Mix Plex 4: No known significant effects or critical hazards.

Taq DNA Polymerase: No known significant effects or critical hazards.
## Section 4. First-aid measures

<table>
<thead>
<tr>
<th>Skin contact</th>
<th>AR 1</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PCR Mix Plex 1</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>PCR Mix Plex 2</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>PCR Mix Plex 3</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>PCR Mix Plex 4</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>Taq DNA Polymerase</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

### Notes to physician

<table>
<thead>
<tr>
<th>Ingestion</th>
<th>AR 1</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PCR Mix Plex 1</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>PCR Mix Plex 2</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>PCR Mix Plex 3</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>PCR Mix Plex 4</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

### PCR Mix Plex 1

- No known significant effects or critical hazards.

### PCR Mix Plex 2

- No known significant effects or critical hazards.

### PCR Mix Plex 3

- No known significant effects or critical hazards.

### PCR Mix Plex 4

- No known significant effects or critical hazards.

### Taq DNA Polymerase

- No known significant effects or critical hazards.

### PCR Mix Plex 4

- No specific data.

### Taq DNA Polymerase

- Adverse symptoms may include the following:
  - Irritation
  - Watering
  - Redness

### Inhalation

<table>
<thead>
<tr>
<th>AR 1</th>
<th>No specific data.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</td>
<td>No specific data.</td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>No specific data.</td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>No specific data.</td>
</tr>
<tr>
<td>PCR Mix Plex 4</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

### Skin contact

<table>
<thead>
<tr>
<th>AR 1</th>
<th>No specific data.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</td>
<td>No specific data.</td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>No specific data.</td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>No specific data.</td>
</tr>
<tr>
<td>PCR Mix Plex 4</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

### Ingestion

<table>
<thead>
<tr>
<th>AR 1</th>
<th>No specific data.</th>
</tr>
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<tbody>
<tr>
<td>PCR Mix Plex 1</td>
<td>No specific data.</td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>No specific data.</td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>No specific data.</td>
</tr>
<tr>
<td>PCR Mix Plex 4</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

### Indication of immediate medical attention and special treatment needed, if necessary

<table>
<thead>
<tr>
<th>Notes to physician</th>
<th>AR 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</td>
<td></td>
</tr>
</tbody>
</table>

**PCR Mix Plex 1**

- 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.

**PCR Mix Plex 2**

- 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.

**PCR Mix Plex 3**

- 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.
Section 4. First-aid measures

Protection of first-aiders:
- AR 1: No action shall be taken involving any personal risk or without suitable training.
- PCR Mix Plex 1: No action shall be taken involving any personal risk or without suitable training.
- PCR Mix Plex 2: No action shall be taken involving any personal risk or without suitable training.
- PCR Mix Plex 3: No action shall be taken involving any personal risk or without suitable training.
- PCR Mix Plex 4: 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.

Specific treatments:
- AR 1: No specific treatment.
- PCR Mix Plex 1: No specific treatment.
- PCR Mix Plex 2: No specific treatment.
- PCR Mix Plex 3: No specific treatment.
- PCR Mix Plex 4: No specific treatment.
- Taq DNA Polymerase: No specific treatment.

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.

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media:
- AR 1: Use an extinguishing agent suitable for the surrounding fire.
- PCR Mix Plex 1: Use an extinguishing agent suitable for the surrounding fire.
- PCR Mix Plex 2: Use an extinguishing agent suitable for the surrounding fire.
- PCR Mix Plex 3: Use an extinguishing agent suitable for the surrounding fire.
- PCR Mix Plex 4: Use an extinguishing agent suitable for the surrounding fire.
- Taq DNA Polymerase: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media:
- AR 1: None known.
- PCR Mix Plex 1: None known.
- PCR Mix Plex 2: None known.
- PCR Mix Plex 3: None known.
- PCR Mix Plex 4: None known.
- Taq DNA Polymerase: None known.
## Section 5. Fire-fighting measures

<table>
<thead>
<tr>
<th>Specific hazards arising from the chemical</th>
<th>AR 1</th>
<th>Taq DNA Polymerase</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</td>
<td>In a fire or if heated, a pressure increase will occur and the container may burst.</td>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>In a fire or if heated, a pressure increase will occur and the container may burst.</td>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>In a fire or if heated, a pressure increase will occur and the container may burst.</td>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 4</td>
<td>In a fire or if heated, a pressure increase will occur and the container may burst.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous thermal decomposition products</th>
<th>AR 1</th>
<th>Taq DNA Polymerase</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</td>
<td>No specific data. Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides, phosphorus oxides.</td>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides, phosphorus oxides.</td>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides, phosphorus oxides.</td>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 4</td>
<td>Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides, phosphorus oxides.</td>
<td></td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>Decomposition products may include the following materials: carbon dioxide, carbon monoxide.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Special protective actions for fire-fighters</th>
<th>AR 1</th>
<th>Taq DNA Polymerase</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</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>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 2</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>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 3</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>
<td></td>
</tr>
</tbody>
</table>

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Date of previous issue     : 06/21/2019  
Version                     : 4  
8/26
Section 5. Fire-fighting measures

action shall be taken involving any personal risk or without suitable training.

**PCR Mix Plex 4**
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.

**Taq 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.

**Special protective equipment for fire-fighters**

<table>
<thead>
<tr>
<th>AR 1</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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</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.</td>
</tr>
<tr>
<td>PCR Mix Plex 2</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.</td>
</tr>
<tr>
<td>PCR Mix Plex 3</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.</td>
</tr>
<tr>
<td>PCR Mix Plex 4</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.</td>
</tr>
</tbody>
</table>

Section 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel**

<table>
<thead>
<tr>
<th>AR 1</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 spilled material. Put on appropriate personal protective equipment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</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 spilled material. Put on appropriate personal protective equipment.</td>
</tr>
<tr>
<td>PCR Mix Plex 2</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 spilled material. Put on appropriate personal protective equipment.</td>
</tr>
<tr>
<td>PCR Mix Plex 3</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 spilled material. Put on appropriate personal protective equipment.</td>
</tr>
</tbody>
</table>

Date of issue/Date of revision : 11/02/2021  Date of previous issue : 06/21/2019  Version : 4
Section 6. Accidental release measures

Environmental precautions

For emergency responders

PCR Mix Plex 4
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 spilled material. Put on appropriate personal protective equipment.

Taq 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 spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : AR 1
If specialized 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".

PCR Mix Plex 1
If specialized 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".

PCR Mix Plex 2
If specialized 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".

PCR Mix Plex 3
If specialized 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".

PCR Mix Plex 4
If specialized 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".

PCR Mix Plex 1
Avoid dispersal of spilled 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).

PCR Mix Plex 2
Avoid dispersal of spilled 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).

PCR Mix Plex 3
Avoid dispersal of spilled 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).

PCR Mix Plex 4
Avoid dispersal of spilled 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).
Section 6. Accidental release measures

caused environmental pollution (sewers, waterways, soil or air).

PCR Mix Plex 4
Avoid dispersal of spilled 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).

Taq DNA Polymerase
Avoid dispersal of spilled 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.

Methods and materials for containment and cleaning up

Methods for cleaning up : AR 1
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.

PCR Mix Plex 1
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.

PCR Mix Plex 2
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.

PCR Mix Plex 3
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.

PCR Mix Plex 4
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.

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. Dispose of via a licensed waste disposal contractor.
Section 7. Handling and storage

Precautions for safe handling

**Protective measures**
- AR 1
  - Put on appropriate personal protective equipment (see Section 8).
  - PCR Mix Plex 1
    - Put on appropriate personal protective equipment (see Section 8).
  - PCR Mix Plex 2
    - Put on appropriate personal protective equipment (see Section 8).
  - PCR Mix Plex 3
    - Put on appropriate personal protective equipment (see Section 8).
  - PCR Mix Plex 4
    - Put on appropriate personal protective equipment (see Section 8).
  - Taq DNA Polymerase
    - Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor 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**
- AR 1
  - 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.
  - PCR Mix Plex 1
    - 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.
  - PCR Mix Plex 2
    - 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.
  - PCR Mix Plex 3
    - 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.
  - PCR Mix Plex 4
    - 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.
  - 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...
## Section 7. Handling and storage

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

<table>
<thead>
<tr>
<th>Product</th>
<th>Storage Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR 1</td>
<td>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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</td>
</tr>
<tr>
<td>PCR Mix Plex 1</td>
<td>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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</td>
</tr>
<tr>
<td>PCR Mix Plex 4</td>
<td>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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</td>
</tr>
</tbody>
</table>
Section 7. Handling and storage

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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

**Control parameters**

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td>CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 10 mg/m³ 8 hours. Form: Mist</td>
</tr>
<tr>
<td></td>
<td>CA Quebec Provincial (Canada, 7/2019). TWAEV: 10 mg/m³ 8 hours. Form: mist</td>
</tr>
<tr>
<td></td>
<td>CA Saskatchewan Provincial (Canada, 7/2013). STEL: 20 mg/m³ 15 minutes. Form: mist</td>
</tr>
<tr>
<td></td>
<td>CA British Columbia Provincial (Canada, 1/2021). TWA: 3 mg/m³ 8 hours. Form: respirable mist</td>
</tr>
<tr>
<td></td>
<td>TWA: 10 mg/m³ 8 hours. Form: total mist</td>
</tr>
<tr>
<td>Glycerol</td>
<td>CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 10 mg/m³ 8 hours. Form: Mist</td>
</tr>
</tbody>
</table>

**Appropriate engineering controls**

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

**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.

**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**

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.
Section 8. Exposure controls/personal protection

**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.

Section 9. Physical and chemical properties and safety characteristics

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

**Appearance**

**Physical state**

- AR 1: Liquid.
- PCR Mix Plex 1: Liquid.
- PCR Mix Plex 2: Liquid.
- PCR Mix Plex 3: Liquid.
- PCR Mix Plex 4: Liquid.
- Taq DNA Polymerase: Liquid. [Clear. / solution]

**Color**

- AR 1: Not available.
- PCR Mix Plex 1: Not available.
- PCR Mix Plex 2: Not available.
- PCR Mix Plex 3: Not available.
- PCR Mix Plex 4: Not available.
- Taq DNA Polymerase: Colorless.

**Odor**

- AR 1: Not available.
- PCR Mix Plex 1: Not available.
- PCR Mix Plex 2: Not available.
- PCR Mix Plex 3: Not available.
- PCR Mix Plex 4: Not available.
- Taq DNA Polymerase: Not available.

**Odor threshold**

- AR 1: Not available.
- PCR Mix Plex 1: Not available.
- PCR Mix Plex 2: Not available.
- PCR Mix Plex 3: Not available.
- PCR Mix Plex 4: Not available.
- Taq DNA Polymerase: Not available.

**pH**

- AR 1: Not available.
- PCR Mix Plex 1: Not available.
- PCR Mix Plex 2: Not available.
- PCR Mix Plex 3: Not available.
- PCR Mix Plex 4: Not available.
- Taq DNA Polymerase: Not available.

**Melting point/freezing point**

- AR 1: 0°C (32°F)
- PCR Mix Plex 1: Not available.
- PCR Mix Plex 2: Not available.
- PCR Mix Plex 3: Not available.
- PCR Mix Plex 4: Not available.
- Taq DNA Polymerase: Not available.
## Section 9. Physical and chemical properties and safety characteristics

### Boiling point, initial boiling point, and boiling range

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Closed cup</th>
<th>Open cup</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>°C</td>
<td>°F</td>
</tr>
<tr>
<td>AR 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| PCR Mix Plex 1   | 100°C (212°F) | Not available. |
| PCR Mix Plex 2   | Not available. |
| PCR Mix Plex 3   | Not available. |
| PCR Mix Plex 4   | Not available. |
| Taq DNA Polymerase | Not available. |

### Flash point

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Closed cup</th>
<th>Open cup</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>°C</td>
<td>°F</td>
</tr>
<tr>
<td>PCR Mix Plex 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| PCR Mix Plex 1   | Not available. |
| PCR Mix Plex 2   | Not available. |
| PCR Mix Plex 3   | Not available. |
| PCR Mix Plex 4   | Not available. |
| Taq DNA Polymerase | Not available. |

### Evaporation rate

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Closed cup</th>
<th>Open cup</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>°C</td>
<td>°F</td>
</tr>
<tr>
<td>PCR Mix Plex 1</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 4</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>Not available.</td>
<td></td>
</tr>
</tbody>
</table>

### Flammability

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Closed cup</th>
<th>Open cup</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>°C</td>
<td>°F</td>
</tr>
<tr>
<td>PCR Mix Plex 1</td>
<td>Not applicable.</td>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>Not applicable.</td>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>Not applicable.</td>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 4</td>
<td>Not applicable.</td>
<td></td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>Not applicable.</td>
<td></td>
</tr>
</tbody>
</table>

### Lower and upper explosion limit/flammability limit

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Closed cup</th>
<th>Open cup</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>°C</td>
<td>°F</td>
</tr>
<tr>
<td>PCR Mix Plex 1</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>PCR Mix Plex 4</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>Not available.</td>
<td></td>
</tr>
</tbody>
</table>

### Vapor pressure

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Vapor pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</td>
<td>Not available.</td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>Not available.</td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>Not available.</td>
</tr>
<tr>
<td>PCR Mix Plex 4</td>
<td>Not available.</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

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Section 9. Physical and chemical properties and safety characteristics

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Vapor Pressure at 20°C</th>
<th>Vapor Pressure at 50°C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mm Hg</td>
<td>kPa</td>
</tr>
<tr>
<td>AR 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>23.8</td>
<td>3.2</td>
</tr>
<tr>
<td>PCR Mix Plex 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>23.8</td>
<td>3.2</td>
</tr>
<tr>
<td>N-(ri(Hydroxymethyl)methyl)glycine</td>
<td>&lt;0.000015001</td>
<td>&lt;0.000002</td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>23.8</td>
<td>3.2</td>
</tr>
<tr>
<td>N-(ri(Hydroxymethyl)methyl)glycine</td>
<td>&lt;0.000015001</td>
<td>&lt;0.000002</td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>23.8</td>
<td>3.2</td>
</tr>
<tr>
<td>N-(ri(Hydroxymethyl)methyl)glycine</td>
<td>&lt;0.000015001</td>
<td>&lt;0.000002</td>
</tr>
<tr>
<td>PCR Mix Plex 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>23.8</td>
<td>3.2</td>
</tr>
<tr>
<td>N-(ri(Hydroxymethyl)methyl)glycine</td>
<td>&lt;0.000015001</td>
<td>&lt;0.000002</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Relative vapor density: AR 1 Not available. PCR Mix Plex 1 Not available. PCR Mix Plex 2 Not available. PCR Mix Plex 3 Not available. PCR Mix Plex 4 Not available. Taq DNA Polymerase Not available.

Relative density: AR 1 Not available. PCR Mix Plex 1 Not available. PCR Mix Plex 2 Not available. PCR Mix Plex 3 Not available. PCR Mix Plex 4 Not available. Taq DNA Polymerase Not available.

Solubility: AR 1 Easily soluble in the following materials: cold water and hot water. PCR Mix Plex 1 Not available. PCR Mix Plex 2 Not available. PCR Mix Plex 3 Not available. PCR Mix Plex 4 Not available. Taq DNA Polymerase Not available.
Section 9. Physical and chemical properties and safety characteristics

Partition coefficient: n-octanol/water:
- AR 1: Not applicable.
- PCR Mix Plex 1: Not applicable.
- PCR Mix Plex 2: Not applicable.
- PCR Mix Plex 3: Not applicable.
- PCR Mix Plex 4: Not applicable.
- Taq DNA Polymerase: Not applicable.

Auto-ignition temperature:
- AR 1: Not applicable.
- PCR Mix Plex 1: Not applicable.
- PCR Mix Plex 2: Not applicable.
- PCR Mix Plex 3: Not applicable.
- PCR Mix Plex 4: Not applicable.
- Taq DNA Polymerase: Not applicable.

Decomposition temperature:
- AR 1: Not available.
- PCR Mix Plex 1: Not available.
- PCR Mix Plex 2: Not available.
- PCR Mix Plex 3: Not available.
- PCR Mix Plex 4: Not available.
- Taq DNA Polymerase: Not available.

Viscosity:
- AR 1: Not available.
- PCR Mix Plex 1: Not available.
- PCR Mix Plex 2: Not available.
- PCR Mix Plex 3: Not available.
- PCR Mix Plex 4: Not available.
- Taq DNA Polymerase: Not available.

Particle characteristics:
- Median particle size:
  - AR 1: Not applicable.
  - PCR Mix Plex 1: Not applicable.
  - PCR Mix Plex 2: Not applicable.
  - PCR Mix Plex 3: Not applicable.
  - PCR Mix Plex 4: Not applicable.
  - Taq DNA Polymerase: Not applicable.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>°C</th>
<th>°F</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td>370</td>
<td>698</td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section 10. Stability and reactivity

Reactivity:
- AR 1: No specific test data related to reactivity available for this product or its ingredients.
- PCR Mix Plex 1: No specific test data related to reactivity available for this product or its ingredients.
- PCR Mix Plex 2: No specific test data related to reactivity available for this product or its ingredients.
- PCR Mix Plex 3: No specific test data related to reactivity available for this product or its ingredients.
- PCR Mix Plex 4: No specific test data related to reactivity available for this product or its ingredients.
- Taq DNA Polymerase: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability:
- AR 1: The product is stable.
- PCR Mix Plex 1: The product is stable.
- PCR Mix Plex 2: The product is stable.
- PCR Mix Plex 3: The product is stable.
- PCR Mix Plex 4: The product is stable.
- Taq DNA Polymerase: The product is stable.

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Version: 4
Section 10. Stability and reactivity

**Possibility of hazardous reactions**

- **AR 1**: Under normal conditions of storage and use, hazardous reactions will not occur.
- PCR Mix Plex 1: Under normal conditions of storage and use, hazardous reactions will not occur.
- PCR Mix Plex 2: Under normal conditions of storage and use, hazardous reactions will not occur.
- PCR Mix Plex 3: Under normal conditions of storage and use, hazardous reactions will not occur.
- PCR Mix Plex 4: Under normal conditions of storage and use, hazardous reactions will not occur.
- Taq DNA Polymerase: Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid**

- **AR 1**: No specific data.
- PCR Mix Plex 1: No specific data.
- PCR Mix Plex 2: No specific data.
- PCR Mix Plex 3: No specific data.
- PCR Mix Plex 4: No specific data.
- Taq DNA Polymerase: No specific data.

**Incompatible materials**

- **AR 1**: May react or be incompatible with oxidizing materials.
- PCR Mix Plex 1: May react or be incompatible with oxidizing materials.
- PCR Mix Plex 2: May react or be incompatible with oxidizing materials.
- PCR Mix Plex 3: May react or be incompatible with oxidizing materials.
- PCR Mix Plex 4: May react or be incompatible with oxidizing materials.
- Taq DNA Polymerase: May react or be incompatible with oxidizing materials.

**Hazardous decomposition products**

- **AR 1**: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- PCR Mix Plex 1: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- PCR Mix Plex 2: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- PCR Mix Plex 3: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- PCR Mix Plex 4: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Taq DNA Polymerase: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

**Information on toxicological effects**

**Acute toxicity**

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Date of previous issue: 06/21/2019
Version: 4
## Section 11. Toxicological information

<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>PCR Mix Plex 1</td>
<td>LD50 Dermal</td>
<td>Rat - Male, Female Rat</td>
<td>&gt;2000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2800 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>LD50 Dermal</td>
<td>Rat - Male, Female Rat</td>
<td>&gt;2000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2800 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>LD50 Dermal</td>
<td>Rat - Male, Female Rat</td>
<td>&gt;2000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2800 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>PCR Mix Plex 4</td>
<td>LD50 Dermal</td>
<td>Rat - Male, Female Rat</td>
<td>&gt;2000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2800 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>12600 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

### 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 - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>1 %</td>
<td>-</td>
</tr>
</tbody>
</table>

### Sensitization
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.
Section 11. Toxicological information

**Aspiration hazard**
Not available.

**Information on the likely routes of exposure**

- **Inhalation**
  - AR 1: No known significant effects or critical hazards.
  - PCR Mix Plex 1: Not available.
  - PCR Mix Plex 2: Not available.
  - PCR Mix Plex 3: Not available.
  - PCR Mix Plex 4: Not available.
  - Taq DNA Polymerase: Routes of entry anticipated: Oral, Dermal, Inhalation.

**Potential acute health effects**

- **Eye contact**
  - AR 1: No known significant effects or critical hazards.
  - PCR Mix Plex 1: No known significant effects or critical hazards.
  - PCR Mix Plex 2: No known significant effects or critical hazards.
  - PCR Mix Plex 3: No known significant effects or critical hazards.
  - PCR Mix Plex 4: No known significant effects or critical hazards.
  - Taq DNA Polymerase: Causes eye irritation.

- **Inhalation**
  - AR 1: No known significant effects or critical hazards.
  - PCR Mix Plex 1: No known significant effects or critical hazards.
  - PCR Mix Plex 2: No known significant effects or critical hazards.
  - PCR Mix Plex 3: No known significant effects or critical hazards.
  - PCR Mix Plex 4: No known significant effects or critical hazards.
  - Taq DNA Polymerase: Routes of entry anticipated: Oral, Dermal, Inhalation.

- **Skin contact**
  - AR 1: No known significant effects or critical hazards.
  - PCR Mix Plex 1: No known significant effects or critical hazards.
  - PCR Mix Plex 2: No known significant effects or critical hazards.
  - PCR Mix Plex 3: No known significant effects or critical hazards.
  - PCR Mix Plex 4: No known significant effects or critical hazards.
  - Taq DNA Polymerase: Routes of entry anticipated: Oral, Dermal, Inhalation.

- **Ingestion**
  - AR 1: No known significant effects or critical hazards.
  - PCR Mix Plex 1: No known significant effects or critical hazards.
  - PCR Mix Plex 2: No known significant effects or critical hazards.
  - PCR Mix Plex 3: No known significant effects or critical hazards.
  - PCR Mix Plex 4: No known significant effects or critical hazards.
  - Taq DNA Polymerase: Routes of entry anticipated: Oral, Dermal, Inhalation.

**Symptoms related to the physical, chemical and toxicological characteristics**

- **Eye contact**
  - AR 1: No specific data.
  - PCR Mix Plex 1: No specific data.
  - PCR Mix Plex 2: No specific data.
  - PCR Mix Plex 3: No specific data.
  - PCR Mix Plex 4: No specific data.
  - Taq DNA Polymerase: Adverse symptoms may include the following:
    - irritation
    - watering
    - redness

- **Inhalation**
  - AR 1: No specific data.
  - PCR Mix Plex 1: No specific data.
  - PCR Mix Plex 2: No specific data.
  - PCR Mix Plex 3: No specific data.
  - PCR Mix Plex 4: No specific data.
### Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Skin contact</th>
<th>AR 1</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PCR Mix Plex 1</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>PCR Mix Plex 2</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>PCR Mix Plex 3</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>PCR Mix Plex 4</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>Taq DNA Polymerase</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>AR 1</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>PCR Mix Plex 1</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>PCR Mix Plex 2</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>PCR Mix Plex 3</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>PCR Mix Plex 4</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>Taq DNA Polymerase</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure**

<table>
<thead>
<tr>
<th>Potential immediate effects</th>
<th>Not available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential delayed effects</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Long term exposure**

<table>
<thead>
<tr>
<th>Potential immediate effects</th>
<th>Not available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential delayed effects</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Potential chronic health effects**

**General**

<table>
<thead>
<tr>
<th>AR 1</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>PCR Mix Plex 4</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

**Carcinogenicity**

<table>
<thead>
<tr>
<th>AR 1</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>PCR Mix Plex 4</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

**Mutagenicity**

<table>
<thead>
<tr>
<th>AR 1</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>PCR Mix Plex 4</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

**Reproductive toxicity**

<table>
<thead>
<tr>
<th>AR 1</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>PCR Mix Plex 4</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

**Numerical measures of toxicity**

**Acute toxicity estimates**
### Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Oral (mg/kg)</th>
<th>Dermal (mg/kg)</th>
<th>Inhalation (gases) (ppm)</th>
<th>Inhalation (vapors) (mg/l)</th>
<th>Inhalation (dusts and mists) (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnesium chloride</td>
<td>2800</td>
<td>2500</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnesium chloride</td>
<td>2800</td>
<td>2500</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnesium chloride</td>
<td>2800</td>
<td>2500</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>PCR Mix Plex 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnesium chloride</td>
<td>2800</td>
<td>2500</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>12600</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Poly(oxy-1,2-ethanediyl) , alpha-{ (1,1,3,3-tetramethylbutyl)phenyl}-omega-hydroxy-</td>
<td>2800</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Section 12. Ecological information

#### Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</td>
<td>Acute EC50 &gt;100 mg/l Fresh water</td>
<td>Algae - Desmodesmus subspicatus</td>
<td>72 hours</td>
</tr>
<tr>
<td>Magnesium chloride</td>
<td>Acute EC50 180000 µg/l Fresh water</td>
<td>Crustaceans - Eudiaptomus padanus ssp. padanus - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute IC50 6.8 mg/l Fresh water</td>
<td>Aquatic plants - Lemna aequinoctialis</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 32000 µg/l Fresh water</td>
<td>Daphnia - Daphnia hyalina - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 2120 mg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute NOEC 100 mg/l Fresh water</td>
<td>Algae - Desmodesmus subspicatus</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 0.1 mg/l Fresh water</td>
<td>Fish - Cyprinus carpio</td>
<td>35 days</td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>Acute EC50 &gt;100 mg/l Fresh water</td>
<td>Algae - Desmodesmus subspicatus</td>
<td>72 hours</td>
</tr>
<tr>
<td>Magnesium chloride</td>
<td>Acute EC50 180000 µg/l Fresh water</td>
<td>Crustaceans - Eudiaptomus padanus ssp. padanus - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute IC50 6.8 mg/l Fresh water</td>
<td>Aquatic plants - Lemna aequinoctialis</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 32000 µg/l Fresh water</td>
<td>Daphnia - Daphnia hyalina - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 2120 mg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute NOEC 100 mg/l Fresh water</td>
<td>Algae - Desmodesmus subspicatus</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 0.1 mg/l Fresh water</td>
<td>Fish - Cyprinus carpio</td>
<td>35 days</td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>Acute EC50 &gt;100 mg/l Fresh water</td>
<td>Algae - Desmodesmus subspicatus</td>
<td>72 hours</td>
</tr>
<tr>
<td>Magnesium chloride</td>
<td>Acute EC50 180000 µg/l Fresh water</td>
<td>Crustaceans - Eudiaptomus padanus ssp. padanus - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute IC50 6.8 mg/l Fresh water</td>
<td>Aquatic plants - Lemna aequinoctialis</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 32000 µg/l Fresh water</td>
<td>Daphnia - Daphnia hyalina - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 2120 mg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute NOEC 100 mg/l Fresh water</td>
<td>Algae - Desmodesmus subspicatus</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 0.1 mg/l Fresh water</td>
<td>Fish - Cyprinus carpio</td>
<td>35 days</td>
</tr>
</tbody>
</table>
### Section 12. Ecological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
<th>Dose</th>
<th>Inoculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 4 Magnesium chloride</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taq DNA Polymerase Glycerol Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl].omega.-hydroxy-subspicatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>Acute EC50 &gt;100 mg/l Fresh water</td>
<td>Algae - Desmodesmus subspicatus</td>
<td>72 hours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute EC50 180000 µg/l Fresh water</td>
<td>Crustaceans - Eudiaptomus padanus ssp. padanus - Adult</td>
<td>48 hours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute LC50 32000 µg/l Fresh water</td>
<td>Aquatic plants - Lemna aequinoctialis</td>
<td>96 hours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute LC50 2120 mg/l Fresh water</td>
<td>Daphnia - Daphnia hyalina - Adult</td>
<td>48 hours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute NOEC 100 mg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 0.1 mg/l Fresh water</td>
<td>Algae - Desmodesmus subspicatus</td>
<td>72 hours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute LC50 54000 mg/l Fresh water</td>
<td>Fish - Cyprinus carpio</td>
<td>35 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute LC50 10800 µg/l Marine water</td>
<td>Crustaceans - Pandalus montagui - Adult</td>
<td>48 hours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute LC50 8600 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute LC50 7200 µg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
<td></td>
</tr>
</tbody>
</table>

### Persistence and degradability

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
<th>Dose</th>
<th>Inoculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase Glycerol</td>
<td>301D Ready Biodegradability - Closed Bottle Test</td>
<td>93 % - 30 days</td>
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<td>-</td>
</tr>
</tbody>
</table>

### 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 Glycerol Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl].omega.-hydroxy-subspicatus</td>
<td>-1.76 3.77</td>
<td>78.67</td>
<td>low low</td>
</tr>
</tbody>
</table>

### Mobility in soil

<table>
<thead>
<tr>
<th>Date of issue/Date of revision</th>
<th>Date of previous issue</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/02/2021</td>
<td>06/21/2019</td>
<td>4</td>
</tr>
</tbody>
</table>
Section 12. Ecological information

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

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

Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

**TDG / IMDG / IATA** : Not regulated.

**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.

**Transport in bulk according to IMO instruments** : Not available.

Section 15. Regulatory information

**Canadian lists**
- **Canadian NPR** : None of the components are listed.
- **CEPA Toxic substances** : None of the components are listed.

**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.
Section 15. Regulatory information

<table>
<thead>
<tr>
<th>Country</th>
<th>Inventory (CSCL)</th>
<th>Inventory (ISHL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>Not determined.</td>
<td>Not determined.</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Not determined.</td>
<td></td>
</tr>
<tr>
<td>Philippines</td>
<td>Not determined.</td>
<td></td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>Not determined.</td>
<td></td>
</tr>
<tr>
<td>Taiwan</td>
<td>Not determined.</td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td>Not determined.</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>Not determined.</td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>Not determined.</td>
<td></td>
</tr>
<tr>
<td>Viet Nam</td>
<td>Not determined.</td>
<td></td>
</tr>
</tbody>
</table>

Section 16. Other information

History

| Date of issue/Date of revision | 11/02/2021 |
| Date of previous issue        | 06/21/2019 |
| Version                       | 4          |

Key to abbreviations

ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
HPR = Hazardous Products Regulations  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
N/A = Not available  
UN = United Nations

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Taq DNA Polymerase</th>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>EYE IRRITATION - Category 2B</td>
<td>Calculation method</td>
<td></td>
</tr>
<tr>
<td>AQUATIC HAZARD (LONG-TERM) - Category 3</td>
<td>Calculation method</td>
<td></td>
</tr>
</tbody>
</table>

References

Not available.

Notice to reader

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