Section 1. Identification

1.1 Product identifier

Product name : SOMATIC 1 MASTR Plus Dx
Part no. (chemical kit) : MR-2182.024
Part no. :
- PCR Mix Plex 1
- PCR Mix Plex 2
- PCR Mix Plex 3
- Taq DNA Polymerase
- AR 2

Validation date : 6/24/2019

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

Material uses : For In Vitro Diagnostic Use
- PCR Mix Plex 1 : 0.240 ml
- PCR Mix Plex 2 : 0.240 ml
- PCR Mix Plex 3 : 0.240 ml
- Taq DNA Polymerase : 0.013 ml
- AR 2 : 1 ml

1.3 Details of the supplier of the safety data sheet

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

1.4 Emergency telephone number

In case of emergency : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status :
- PCR Mix Plex 1
  While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
- PCR Mix Plex 2
  While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
- PCR Mix Plex 3
  While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
- Taq DNA Polymerase
  This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Date of issue : 06/24/2019
## Section 2. Hazards identification

While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

### Classification of the substance or mixture

**Taq DNA Polymerase**

<table>
<thead>
<tr>
<th>Signal word</th>
<th>Hazard statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>H320</td>
<td>EYE IRRITATION - Category 2B</td>
</tr>
<tr>
<td>H412</td>
<td>AQUATIC HAZARD (LONG-TERM) - Category 3</td>
</tr>
</tbody>
</table>

**AR 2**

### Ingredient of unknown toxicity

**PCR Mix Plex 1** Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 1 - 10%

**PCR Mix Plex 2** Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 1 - 10%

**PCR Mix Plex 3** Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 1 - 10%

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

**AR 2** Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%

### 2.2 GHS label elements

<table>
<thead>
<tr>
<th>Signal word</th>
<th>Hazard statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</td>
<td>No signal word.</td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>No signal word.</td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>No signal word.</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>Warning</td>
</tr>
<tr>
<td>AR 2</td>
<td>No signal word.</td>
</tr>
</tbody>
</table>

## Date of issue:

06/24/2019
Section 2. Hazards identification

Prevention:
- PCR Mix Plex 1: Not applicable.
- PCR Mix Plex 2: Not applicable.
- PCR Mix Plex 3: Not applicable.
- Taq DNA Polymerase: P273 - Avoid release to the environment.
- P264 - Wash hands thoroughly after handling.
- AR 2: Not applicable.

Response:
- PCR Mix Plex 1: Not applicable.
- PCR Mix Plex 2: Not applicable.
- PCR Mix Plex 3: 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 attention.
- AR 2: Not applicable.

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

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

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

2.3 Other hazards

Hazards not otherwise classified:
- PCR Mix Plex 1: None known.
- PCR Mix Plex 2: None known.
- PCR Mix Plex 3: None known.
- Taq DNA Polymerase: None known.
- AR 2: None known.

Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>PCR Mix Plex 1</th>
<th>PCR Mix Plex 2</th>
<th>PCR Mix Plex 3</th>
<th>Taq DNA Polymerase</th>
<th>AR 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td>Mixture</td>
<td>Mixture</td>
<td>Mixture</td>
<td>Mixture</td>
<td>Mixture</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
<td>56-81-5</td>
</tr>
<tr>
<td>Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-</td>
<td>≥25 - ≤50</td>
<td>9036-19-5</td>
</tr>
<tr>
<td></td>
<td>&lt;1</td>
<td></td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.
Section 3. Composition/information on ingredients

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

### 4.1 Description of necessary first aid measures

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>PCR Mix Plex 1</th>
<th>Immediate 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.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PCR Mix Plex 2</td>
<td>Immediate 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.</td>
</tr>
<tr>
<td></td>
<td>PCR Mix Plex 3</td>
<td>Immediate 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.</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>AR 2</td>
<td></td>
<td>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.</td>
</tr>
</tbody>
</table>

| Inhalation | 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. |
| 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 |
Section 4. First aid measures

Skin contact:

**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.

**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.

**AR 2**
Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion:

**PCR Mix Plex 1**
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.

**PCR Mix Plex 2**
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.

**PCR Mix Plex 3**
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...

**AR 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.

**Severe**
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.

Date of issue: 06/24/2019
Section 4. First aid measures

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.

AR 2
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.

4.2 Most important symptoms/effects, acute and delayed

<table>
<thead>
<tr>
<th>Potential acute health effects</th>
<th>PCR Mix Plex 1</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></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>Taq DNA Polymerase</td>
<td>Causes eye irritation.</td>
</tr>
<tr>
<td></td>
<td>AR 2</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td><strong>Inhalation</strong></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>Taq DNA Polymerase</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>AR 2</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></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>Taq DNA Polymerase</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>AR 2</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></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>Taq DNA Polymerase</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>AR 2</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

Over-exposure signs/symptoms

| **Eye contact**                                                     | PCR Mix Plex 1                                                                | No specific data. |
|                                                                    | PCR Mix Plex 2                                                                | No specific data. |
|                                                                    | PCR Mix Plex 3                                                                | No specific data. |
|                                                                    | Taq DNA Polymerase                                                           | Adverse symptoms may include the following: irritation watering redness |
|                                                                    | AR 2                                                                          | No specific data. |
| **Inhalation**                                                      | PCR Mix Plex 1                                                                | No specific data. |
|                                                                    | PCR Mix Plex 2                                                                | No specific data. |
|                                                                    | PCR Mix Plex 3                                                                | No specific data. |
|                                                                    | Taq DNA Polymerase                                                           | No specific data. |
|                                                                    | AR 2                                                                          | No specific data. |
| **Skin contact**                                                    | PCR Mix Plex 1                                                                | No specific data. |
|                                                                    | PCR Mix Plex 2                                                                | No specific data. |
|                                                                    | PCR Mix Plex 3                                                                | No specific data. |
|                                                                    | Taq DNA Polymerase                                                           | No specific data. |
|                                                                    | AR 2                                                                          | No specific data. |
## Section 4. First aid measures

| Ingestion | PCR Mix Plex 1 | No specific data. |
| PCR Mix Plex 2 | No specific data. |
| PCR Mix Plex 3 | No specific data. |
| Taq DNA Polymerase | No specific data. |
| AR 2 | No specific data. |

| Notes to physician | 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. |
| Taq DNA Polymerase | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| AR 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. |

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

| Protection of first-aiders | 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. |
| 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. |
| AR 2 | No action shall be taken involving any personal risk or without suitable training. |

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### 5.1 Extinguishing media

| Suitable extinguishing media | 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. |
| Taq DNA Polymerase | Use an extinguishing agent suitable for the surrounding fire. |
Section 5. Fire-fighting measures

AR 2
Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media

PCR Mix Plex 1
None known.

PCR Mix Plex 2
None known.

PCR Mix Plex 3
None known.

Taq DNA Polymerase
None known.

PCR Mix Plex 1
In a fire or if heated, a pressure increase will occur and the container may burst.

PCR Mix Plex 2
In a fire or if heated, a pressure increase will occur and the container may burst.

PCR Mix Plex 3
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.

AR 2
In a fire or if heated, a pressure increase will occur and the container may burst.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical

PCR Mix Plex 1
Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
phosphorus oxides

PCR Mix Plex 2
Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
phosphorus oxides

PCR Mix Plex 3
Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
phosphorus oxides

Taq DNA Polymerase
Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

AR 2
Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

5.3 Advice for firefighters

Date of issue : 06/24/2019
Section 5. Fire-fighting measures

**Special protective actions for fire-fighters**

PCR Mix Plex 1

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.

PCR Mix Plex 2

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.

PCR Mix Plex 3

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.

AR 2

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**

PCR Mix Plex 1

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

PCR Mix Plex 2

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

PCR Mix Plex 3

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Taq DNA Polymerase

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

AR 2

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel**

PCR Mix Plex 1

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.

PCR Mix Plex 2

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.

PCR Mix Plex 3

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and
Section 6. Accidental release measures

6.2 Environmental precautions

For emergency responders:

**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).

**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).

**AR 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).

---

**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".

**Taq DNA Polymerase**
- 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".

**AR 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".
Section 6. Accidental release measures

AR 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).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up: 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.

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.

AR 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.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures: 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).

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
Section 7. Handling and storage

Advice on general occupational hygiene

7.2 Conditions for safe storage, including any incompatibilities

<table>
<thead>
<tr>
<th>Material</th>
<th>Conditions for Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</td>
<td>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. 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>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. 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.</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>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.</td>
</tr>
<tr>
<td>AR 2</td>
<td>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.</td>
</tr>
</tbody>
</table>
Section 7. Handling and storage

PCR Mix Plex 3
containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

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.

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 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.

AR 2

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.

7.3 Specific end use(s)

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Industrial applications, Professional applications.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</td>
<td>Industrial applications, Professional applications.</td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>Industrial applications, Professional applications.</td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>Industrial applications, Professional applications.</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>Industrial applications, Professional applications.</td>
</tr>
<tr>
<td>AR 2</td>
<td>Industrial applications, Professional applications.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Industrial sector specific solutions</th>
<th>Not applicable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>AR 2</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits
### Ingredient name

<table>
<thead>
<tr>
<th>Taq DNA Polymerase</th>
<th>Exposure limits</th>
</tr>
</thead>
</table>

**OSHA PEL 1989 (United States, 3/1989).**
- TWA: 5 mg/m³ 8 hours. Form: Respirable fraction
- TWA: 10 mg/m³ 8 hours. Form: Total dust

**OSHA PEL (United States, 5/2018).**
- TWA: 5 mg/m³ 8 hours. Form: Respirable fraction
- TWA: 15 mg/m³ 8 hours. Form: Total dust

| Glycerol | None. |

Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-

### 8.2 Exposure controls

#### 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

#### Hand protection
- Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

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

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

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

### Date of issue: 06/24/2019
Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

**Appearance**

<table>
<thead>
<tr>
<th>Physical state</th>
<th>PCR Mix Plex 1</th>
<th>PCR Mix Plex 2</th>
<th>PCR Mix Plex 3</th>
<th>Taq DNA Polymerase</th>
<th>AR 2</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Color</th>
<th>PCR Mix Plex 1</th>
<th>PCR Mix Plex 2</th>
<th>PCR Mix Plex 3</th>
<th>Taq DNA Polymerase</th>
<th>AR 2</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Odor</th>
<th>PCR Mix Plex 1</th>
<th>PCR Mix Plex 2</th>
<th>PCR Mix Plex 3</th>
<th>Taq DNA Polymerase</th>
<th>AR 2</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Odor threshold</th>
<th>PCR Mix Plex 1</th>
<th>PCR Mix Plex 2</th>
<th>PCR Mix Plex 3</th>
<th>Taq DNA Polymerase</th>
<th>AR 2</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>pH</th>
<th>PCR Mix Plex 1</th>
<th>PCR Mix Plex 2</th>
<th>PCR Mix Plex 3</th>
<th>Taq DNA Polymerase</th>
<th>AR 2</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Melting point</th>
<th>PCR Mix Plex 1</th>
<th>PCR Mix Plex 2</th>
<th>PCR Mix Plex 3</th>
<th>Taq DNA Polymerase</th>
<th>AR 2</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Boiling point</th>
<th>PCR Mix Plex 1</th>
<th>PCR Mix Plex 2</th>
<th>PCR Mix Plex 3</th>
<th>Taq DNA Polymerase</th>
<th>AR 2</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Flash point</th>
<th>PCR Mix Plex 1</th>
<th>PCR Mix Plex 2</th>
<th>PCR Mix Plex 3</th>
<th>Taq DNA Polymerase</th>
<th>AR 2</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Evaporation rate</th>
<th>PCR Mix Plex 1</th>
<th>PCR Mix Plex 2</th>
<th>PCR Mix Plex 3</th>
<th>Taq DNA Polymerase</th>
<th>AR 2</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Flammability (solid, gas)</th>
<th>PCR Mix Plex 1</th>
<th>PCR Mix Plex 2</th>
<th>PCR Mix Plex 3</th>
<th>Taq DNA Polymerase</th>
<th>AR 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not applicable.</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

Date of issue: 06/24/2019
## Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>PCR Mix Plex 1</th>
<th>PCR Mix Plex 2</th>
<th>PCR Mix Plex 3</th>
<th>Taq DNA Polymerase</th>
<th>AR 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lower and upper explosive (flammable) limits</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Vapor pressure</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Vapor density</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Solubility</strong></td>
<td>Partially soluble in the following materials: cold water and hot water.</td>
<td>Partially soluble in the following materials: cold water and hot water.</td>
<td>Partially soluble in the following materials: cold water and hot water.</td>
<td>Not available.</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
</tr>
</tbody>
</table>
## 10. Stability and reactivity

### 10.1 Reactivity

<table>
<thead>
<tr>
<th>Product</th>
<th>Reactivity Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</td>
<td>No specific test data related to reactivity available for this product or its ingredients.</td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>No specific test data related to reactivity available for this product or its ingredients.</td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>No specific test data related to reactivity available for this product or its ingredients.</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>No specific test data related to reactivity available for this product or its ingredients.</td>
</tr>
<tr>
<td>AR 2</td>
<td>No specific test data related to reactivity available for this product or its ingredients.</td>
</tr>
</tbody>
</table>

### 10.2 Chemical stability

<table>
<thead>
<tr>
<th>Product</th>
<th>Stability Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</td>
<td>The product is stable.</td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>The product is stable.</td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>The product is stable.</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>The product is stable.</td>
</tr>
<tr>
<td>AR 2</td>
<td>The product is stable.</td>
</tr>
</tbody>
</table>

### 10.3 Possibility of hazardous reactions

<table>
<thead>
<tr>
<th>Product</th>
<th>Hazardous Reactions Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</td>
<td>Under normal conditions of storage and use, hazardous reactions will not occur.</td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>Under normal conditions of storage and use, hazardous reactions will not occur.</td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>Under normal conditions of storage and use, hazardous reactions will not occur.</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>Under normal conditions of storage and use, hazardous reactions will not occur.</td>
</tr>
<tr>
<td>AR 2</td>
<td>Under normal conditions of storage and use, hazardous reactions will not occur.</td>
</tr>
</tbody>
</table>

### 10.4 Conditions to avoid

<table>
<thead>
<tr>
<th>Product</th>
<th>Conditions to Avoid</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>Taq DNA Polymerase</td>
<td>No specific data.</td>
</tr>
<tr>
<td>AR 2</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

### 10.5 Incompatible materials

<table>
<thead>
<tr>
<th>Product</th>
<th>Incompatible Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</td>
<td>May react or be incompatible with oxidizing materials.</td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>May react or be incompatible with oxidizing materials.</td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>May react or be incompatible with oxidizing materials.</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>May react or be incompatible with oxidizing materials.</td>
</tr>
<tr>
<td>AR 2</td>
<td>May react or be incompatible with oxidizing materials.</td>
</tr>
</tbody>
</table>

### 10.6 Hazardous decomposition products

<table>
<thead>
<tr>
<th>Product</th>
<th>Hazardous Decomposition Products Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</td>
<td>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</td>
</tr>
<tr>
<td>PCR Mix Plex 2</td>
<td>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</td>
</tr>
<tr>
<td>PCR Mix Plex 3</td>
<td>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</td>
</tr>
</tbody>
</table>
Section 10. Stability and reactivity

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

Section 11. Toxicological information

11.1 Information on toxicological effects

**Acute toxicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>12600 mg/kg</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Glycerol</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2800 mg/kg</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Poly(oxy-1,2-ethanediyl), .alpha.-[ (1,1,3,3-tetramethylbutyl) phenyl].omega.-hydroxy-</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>12600 mg/kg</td>
<td>-</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 milligrams</td>
<td>-</td>
</tr>
<tr>
<td>Glycerol</td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
<tr>
<td>Poly(oxy-1,2-ethanediyl), .alpha.-[ (1,1,3,3-tetramethylbutyl) phenyl].omega.-hydroxy-</td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>1 Percent</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.

**Aspiration hazard**

Not available.

**Date of issue :** 06/24/2019
### Section 11. Toxicological information

#### Information on the likely routes of exposure

- **Inhalation**: PCR Mix Plex 1, PCR Mix Plex 2, PCR Mix Plex 3, Taq DNA Polymerase, AR 2. Routes of entry anticipated: Oral, Dermal, Inhalation. Not available.

#### Potential acute health effects

**Eye contact**
- 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.
- Taq DNA Polymerase: Causes eye irritation.
- AR 2: No known significant effects or critical hazards.

**Inhalation**
- 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.
- Taq DNA Polymerase: No known significant effects or critical hazards.
- AR 2: No known significant effects or critical hazards.

**Skin contact**
- 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.
- Taq DNA Polymerase: No known significant effects or critical hazards.
- AR 2: No known significant effects or critical hazards.

**Ingestion**
- 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.
- Taq DNA Polymerase: No known significant effects or critical hazards.
- AR 2: No known significant effects or critical hazards.

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

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

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

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

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

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

**Short term exposure**

- Adverse symptoms may include the following: irritation, watering, redness.

**Date of issue:** 06/24/2019
Section 11. Toxicological information

Potential immediate effects
- 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.
- Taq DNA Polymerase: No known significant effects or critical hazards.
- AR 2: No known significant effects or critical hazards.

Potential delayed effects
- PCR Mix Plex 1: Not available.
- PCR Mix Plex 2: Not available.
- PCR Mix Plex 3: Not available.
- Taq DNA Polymerase: Not available.
- AR 2: Not available.

Long term exposure

Potential immediate effects
- PCR Mix Plex 1: Not available.
- PCR Mix Plex 2: Not available.
- PCR Mix Plex 3: Not available.
- Taq DNA Polymerase: Not available.
- AR 2: Not available.

Potential delayed effects
- PCR Mix Plex 1: Not available.
- PCR Mix Plex 2: Not available.
- PCR Mix Plex 3: Not available.
- Taq DNA Polymerase: Not available.
- AR 2: Not available.

Carcinogenicity
- 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.
- Taq DNA Polymerase: No known significant effects or critical hazards.
- AR 2: No known significant effects or critical hazards.

Mutagenicity
- 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.
- Taq DNA Polymerase: No known significant effects or critical hazards.
- AR 2: No known significant effects or critical hazards.

Teratogenicity
- 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.
- Taq DNA Polymerase: No known significant effects or critical hazards.
- AR 2: No known significant effects or critical hazards.

Developmental effects
- 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.
- Taq DNA Polymerase: No known significant effects or critical hazards.
- AR 2: No known significant effects or critical hazards.

Fertility effects
- 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.
- Taq DNA Polymerase: No known significant effects or critical hazards.
- AR 2: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

<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>Taq DNA Polymerase</td>
<td>12600</td>
<td>2800</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Glycerol</td>
<td>N/A</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>

Date of issue: 06/24/2019
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 LC50 54000 mg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td>Glycerol</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

<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</td>
<td>301D Ready Biodegradability - Closed Bottle Test</td>
<td>93 % - 30 days</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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>-1.76</td>
<td>78.67</td>
<td>low</td>
</tr>
<tr>
<td>Glycerol</td>
<td>3.77</td>
<td>-</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.

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

Section 13. Disposal considerations

13.1 Waste treatment methods

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.

Date of issue : 06/24/2019
Section 13. Disposal considerations

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

DOT / TDG / Mexico / 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 Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

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

U.S. Federal regulations : TSCA 8(a) PAIR: Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl] .omega.-hydroxy-

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Not applicable.

PCR Mix Plex 1 Not applicable.

PCR Mix Plex 2 Not applicable.

PCR Mix Plex 3 Not applicable.

Taq DNA Polymerase EYE IRRITATION - Category 2B

AR 2 Not applicable.

Date of issue : 06/24/2019
Section 15. Regulatory information

Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 3</td>
<td>≥25 - ≤50</td>
<td>COMBUSTIBLE DUSTS</td>
</tr>
<tr>
<td>Betaine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>≥25 - ≤50</td>
<td>EYE IRRITATION - Category 2A</td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AR 2</td>
<td>≥50 - ≤75</td>
<td>COMBUSTIBLE DUSTS</td>
</tr>
<tr>
<td>Betaine</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

State regulations

Massachusetts: The following components are listed: GLYCERINE MIST
New York: None of the components are listed.
New Jersey: The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL
Pennsylvania: The following components are listed: 1,2,3-PROPANETRIOL
California Prop. 65
This product does not require a Safe Harbor warning under California Prop. 65.

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.
## Section 16. Other information

### History
- **Date of issue**: 06/24/2019
- **Date of previous issue**: 01/17/2018
- **Version**: 3

### Key to abbreviations
- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- 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>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td></td>
</tr>
<tr>
<td>EYE IRRITATION - Category 2B</td>
<td>Calculation method</td>
</tr>
<tr>
<td>AQUATIC HAZARD (LONG-TERM) - Category 3</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

*Indicates information that has changed from previously issued version.*

### Notice to reader

Disclaimer: The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.