Conforms to Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals

SAFETY DATA SHEET

FMF MASTR Dx

Section 1. Identification

Product identifier : FMF MASTR Dx
Part No. (Chemical Kit) : MR-2071.024
Part No. : PCR Mix Plex 1 I-0880
PCR Mix Plex 2 I-0881
Taq DNA Polymerase I-0879
AR 2 I-1884

Supplier/Manufacturer : Agilent Technologies Belgium
De Kleetlaan 5 bus 9
1831 Diegem
Belgium

Emergency telephone number (with hours of operation) : CHEMTREC®: +(61)-290372994

Section 2. Hazard(s) identification

For In Vitro Diagnostic Use

PCR Mix Plex 1 : 0.080 ml
PCR Mix Plex 2 : 0.080 ml
Taq DNA Polymerase : 0.009 ml
AR 2 : 1 ml

Classified of the substance or mixture
Not classified.

PCR Mix Plex 1 : Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 10 - 30%
PCR Mix Plex 2 : Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 10 - 30%
Taq DNA Polymerase : Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 10 - 30%
AR 2 : Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 30 - 60%

GHS label elements

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

Hazard statements : PCR Mix Plex 1 No known significant effects or critical hazards.
PCR Mix Plex 2 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.

Precautionary statements

Prevention : PCR Mix Plex 1 Not applicable.
PCR Mix Plex 2 Not applicable.
Taq DNA Polymerase Not applicable.
AR 2 Not applicable.

Date of issue/Date of revision : 17/01/2018
Date of previous issue : 30/08/2017
Version : 2
Section 2. Hazard(s) identification

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

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

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

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

Supplemental label elements:
- Additional warning phrases:
  - PCR Mix Plex 1: Not applicable.
  - PCR Mix Plex 2: Not applicable.
  - Taq DNA Polymerase: Not applicable.
  - AR 2: Not applicable.

Section 3. Composition and ingredient information

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

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>% (w/w)</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td>≥30 - ≤60</td>
<td>56-81-5</td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

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

Section 4. First aid measures

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>Description of necessary first aid measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix Plex 1</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>
<tr>
<td>PCR Mix Plex 2</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>
<tr>
<td>Taq DNA Polymerase</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>
<tr>
<td>AR 2</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>
Section 4. First aid measures

**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.

- **Taq DNA Polymerase**: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

- **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.

**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.

- **Taq DNA Polymerase**: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

- **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.

- **Taq DNA Polymerase**: 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.

- **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.
Section 4. First aid measures

Most important symptoms/effects, acute and delayed

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

Over-exposure signs/symptoms

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

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

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

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.
- 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.
- Taq DNA Polymerase: No specific treatment.
Section 4. First aid measures

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.
- Taq DNA Polymerase: No action shall be taken involving any personal risk or without suitable training.
- AR 2: No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Firefighting measures

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.
  - Taq DNA Polymerase: Use an extinguishing agent suitable for the surrounding fire.
  - 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.
  - Taq DNA Polymerase: None known.
  - AR 2: None known.

Specific hazards arising from the chemical:
- 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.
- Taq DNA Polymerase: In a fire or if heated, a pressure increase will occur and the container may burst.
- AR 2: In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products:
- 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

- 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
Section 5. Firefighting measures

Special protective actions for fire-fighters

<table>
<thead>
<tr>
<th>PCR Mix Plex 1</th>
<th>Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.</th>
</tr>
</thead>
<tbody>
<tr>
<td>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>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.</td>
</tr>
<tr>
<td>AR 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>
</tr>
</tbody>
</table>

Special protective equipment for fire-fighters

<table>
<thead>
<tr>
<th>PCR Mix Plex 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 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>Taq DNA Polymerase</td>
<td>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</td>
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<tr>
<td>AR 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>
</tbody>
</table>

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

<table>
<thead>
<tr>
<th>PCR Mix Plex 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 spilt material. Put on appropriate personal protective equipment.</th>
</tr>
</thead>
<tbody>
<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 spilt material. Put on appropriate personal protective equipment.</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.</td>
</tr>
<tr>
<td>AR 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 spilt material. Put on appropriate personal protective equipment.</td>
</tr>
</tbody>
</table>
Section 6. Accidental release measures

For emergency responders:

PCR Mix Plex 1: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

PCR Mix Plex 2: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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

AR 2: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions:

PCR Mix Plex 1: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

PCR Mix Plex 2: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Taq DNA Polymerase: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

AR 2: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material 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.

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 6. Accidental release measures

Section 7. Handling and storage

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).

Taq DNA Polymerase
Put on appropriate personal protective equipment (see Section 8).

AR 2
Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene:

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.

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

AR 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.

Conditions for safe storage, including any incompatibilities:

PCR Mix Plex 1
Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Store in accordance with local regulations.

PCR Mix Plex 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Section 7. Handling and storage

**Taq DNA Polymerase**
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 unlabelled 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls and personal protection

<table>
<thead>
<tr>
<th>Control parameters</th>
<th>Occupational exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ingredient name</strong></td>
<td><strong>Exposure limits</strong></td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>Safe Work Australia (Australia, 1/2014). TWA: 10 mg/m³ 8 hours.</td>
</tr>
<tr>
<td>Glycerol</td>
<td></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**

**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.
### Section 8. Exposure controls and personal protection

**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

<table>
<thead>
<tr>
<th>Property</th>
<th>PCR Mix Plex 1</th>
<th>PCR Mix Plex 2</th>
<th>Taq DNA Polymerase</th>
<th>AR 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Physical state</strong></td>
<td>Liquid.</td>
<td>Liquid.</td>
<td>Liquid. [Clear. / solution]</td>
<td></td>
</tr>
<tr>
<td><strong>Colour</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Colourless.</td>
<td></td>
</tr>
<tr>
<td><strong>Odour</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td><strong>Odour threshold</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td><strong>Melting point</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td><strong>Boiling point</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>Not applicable.</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
<td></td>
</tr>
<tr>
<td><strong>Lower and upper explosive (flammable) limits</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td><strong>Vapour pressure</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td><strong>Vapour density</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## 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>Taq DNA Polymerase</th>
<th>AR 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative density</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Solubility</td>
<td>PCR Mix Plex 1 Not available.</td>
<td>PCR Mix Plex 2 Not available.</td>
<td>Taq DNA Polymerase Not available.</td>
<td>AR 2 Not available.</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>PCR Mix Plex 1 Not available.</td>
<td>PCR Mix Plex 2 Not available.</td>
<td>Taq DNA Polymerase Not available.</td>
<td>AR 2 Not available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>PCR Mix Plex 1 Not available.</td>
<td>PCR Mix Plex 2 Not available.</td>
<td>Taq DNA Polymerase Not available.</td>
<td>AR 2 Not available.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>PCR Mix Plex 1 Not available.</td>
<td>PCR Mix Plex 2 Not available.</td>
<td>Taq DNA Polymerase Not available.</td>
<td>AR 2 Not available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>PCR Mix Plex 1 Not available.</td>
<td>PCR Mix Plex 2 Not available.</td>
<td>Taq DNA Polymerase Not available.</td>
<td>AR 2 Not available.</td>
</tr>
</tbody>
</table>

### Section 10. Stability and reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>PCR Mix Plex 1</th>
<th>PCR Mix Plex 2</th>
<th>Taq DNA Polymerase</th>
<th>AR 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>No specific test data related to reactivity available for this product or its ingredients.</td>
<td>No specific test data related to reactivity available for this product or its ingredients.</td>
<td>No specific test data related to reactivity available for this product or its ingredients.</td>
<td>No specific test data related to reactivity available for this product or its ingredients.</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>The product is stable.</td>
<td>The product is stable.</td>
<td>The product is stable.</td>
<td>The product is stable.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>Under normal conditions of storage and use, hazardous reactions will not occur.</td>
<td>Under normal conditions of storage and use, hazardous reactions will not occur.</td>
<td>Under normal conditions of storage and use, hazardous reactions will not occur.</td>
<td>Under normal conditions of storage and use, hazardous reactions will not occur.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>No specific data.</td>
<td>No specific data.</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>
Section 10. Stability and reactivity

Incompatible materials:

- PCR Mix Plex 1
- PCR Mix Plex 2
- Taq DNA Polymerase
- AR 2

Hazardous decomposition products:

- PCR Mix Plex 1
- PCR Mix Plex 2
- Taq DNA Polymerase
- AR 2

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

PCR Mix Plex 1
May react or be incompatible with oxidising materials.

PCR Mix Plex 2
May react or be incompatible with oxidising materials.

Taq DNA Polymerase
May react or be incompatible with oxidising materials.

AR 2
May react or be incompatible with oxidising materials.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>12600 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
<td></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></td>
<td></td>
<td></td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>

Sensitisation
Not available.

Mutagenicity
Not available.

Carcinogenicity
Not available.

Reproductive toxicity
Not available.

Teratogenicity
Not available.

Specific target organ toxicity (single exposure)
Not available.

Specific target organ toxicity (repeated exposure)
Not available.

Aspiration hazard
Not available.
## Section 11. Toxicological information

### Information on likely routes of exposure

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

### 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.
- Taq DNA Polymerase: No known significant effects or critical hazards.
- 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.
- 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.
- 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.
- 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.
- Taq DNA Polymerase: No specific data.
- AR 2: No specific data.

#### Inhalation

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

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

#### Short term exposure

- Potential immediate effects: Not available.
- Potential delayed effects: Not available.

#### Long term exposure

- Potential immediate effects: Not available.
- Potential delayed effects: Not available.

#### Potential chronic health effects

Not available.

### General

- PCR Mix Plex 1: No known significant effects or critical hazards.
- PCR Mix Plex 2: 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.

### Date of issue/Date of revision: 17/01/2018  Date of previous issue: 30/08/2017  Version: 2
Section 11. Toxicological information

Carcinogenicity:
- PCR Mix Plex 1: No known significant effects or critical hazards.
- PCR Mix Plex 2: 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.
- 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.
- 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.
- 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.
- 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
Not available.

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>Taq DNA Polymerase</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>Acute LC50 54000 mg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</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</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>

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP_{ow}</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td>-1.76</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mobility in soil

Soil/water partition coefficient (K_{oc}): 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 minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

ADG / IMDG / IATA : Not regulated as Dangerous Goods according to the ADG Code.

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

Standard Uniform Schedule of Medicine and Poisons
Not regulated.

Model Work Health and Safety Regulations - Scheduled Substances
No listed substance

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals
Not listed.

Montreal Protocol (Annexes A, B, C, E)
Not listed.

Stockholm Convention on Persistent Organic Pollutants
Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)
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.
Malaysia : Not determined.
New Zealand : Not determined.
Philippines : Not determined.
Republic of Korea : Not determined.
Section 15. Regulatory information

<table>
<thead>
<tr>
<th>Country</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taiwan</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Thailand</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Turkey</td>
<td>Not determined.</td>
</tr>
<tr>
<td>United States</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>Not determined.</td>
</tr>
</tbody>
</table>

Section 16. Any other relevant information

**History**
- **Date of issue/Date of revision**: 17/01/2018
- **Date of previous issue**: 30/08/2017.
- **Version**: 2

**Key to abbreviations**
- ADG = Australian Dangerous Goods
- 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
- NOHSC = National Occupational Health and Safety Commission
- SUSMP = Standard Uniform Schedule of Medicine and Poisons
- UN = United Nations

**Procedure used to derive the classification**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not classified.</td>
<td></td>
</tr>
</tbody>
</table>

**References**
- Not available.

▲ Indicates information that has changed from previously issued version.

**Notice to reader**

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