Section 1. Identification

Product identifier : SureMASTR HRR
Part no. (chemical kit) : MR-0390.024
Part no. : PCR Mix I-2158
Taq DNA Polymerase I-2159
AR 1 I-0792

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

1.732 ml
PCR Mix 0.720 ml
Taq DNA Polymerase 0.012 ml
AR 1 1 ml

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

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

Section 2. Hazard(s) identification

Classification of the substance or mixture
Not classified.

PCR Mix Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 1 - 10%
Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 1 - 10%
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 1 Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 2.4%

GHS label elements

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

Hazard statements : PCR Mix No known significant effects or critical hazards.
Taq DNA Polymerase No known significant effects or critical hazards.
AR 1 No known significant effects or critical hazards.

Precautionary statements

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

Response : PCR Mix Not applicable.
Taq DNA Polymerase Not applicable.
AR 1 Not applicable.
Section 2. Hazard(s) identification

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

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

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

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

Section 3. Composition and ingredient information

Substance/mixture:
- PCR Mix: Mixture
- Taq DNA Polymerase: Mixture
- AR 1: Mixture

CAS number/other identifiers:

<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></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>≥10 - ≤30</td>
<td>56-81-5</td>
</tr>
</tbody>
</table>

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

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

Section 4. First aid measures

Description of necessary first aid measures:

Eye contact:
- PCR Mix
  Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

- Taq DNA Polymerase
  Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

- AR 1
  Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation:
- PCR Mix
  Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

- Taq DNA Polymerase
  Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.

- AR 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.
Section 4. First aid measures

Skin contact

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

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

**AR 1**
- Flush contaminated skin with plenty of water.
- Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

**Ingestion**

**PCR Mix**
- Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

**Taq DNA Polymerase**
- Wash out mouth with water. Remove 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 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.

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

**Potential acute health effects**

**Eye contact**

**PCR Mix**
- No known significant effects or critical hazards.

**Taq DNA Polymerase**
- No known significant effects or critical hazards.

**AR 1**
- No known significant effects or critical hazards.

**Inhalation**

**PCR Mix**
- No specific data.

**Taq DNA Polymerase**
- No specific data.

**AR 1**
- No specific data.

**Skin contact**

**PCR Mix**
- No specific data.

**Taq DNA Polymerase**
- No specific data.

**AR 1**
- No specific data.

**Ingestion**

**PCR Mix**
- No specific data.

**Taq DNA Polymerase**
- No specific data.

**AR 1**
- No specific data.

**Over-exposure signs/symptoms**

**Eye contact**

**PCR Mix**
- No specific data.

**Taq DNA Polymerase**
- No specific data.

**AR 1**
- No specific data.

**Inhalation**

**PCR Mix**
- No specific data.

**Taq DNA Polymerase**
- No specific data.

**AR 1**
- No specific data.

**Skin contact**

**PCR Mix**
- No specific data.

**Taq DNA Polymerase**
- No specific data.

**AR 1**
- No specific data.
Section 4. First aid measures

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

Protection of first-aiders:
- PCR Mix: No action shall be taken involving any personal risk or without suitable training.
- Taq DNA Polymerase: No action shall be taken involving any personal risk or without suitable training.
- AR 1: No action shall be taken involving any personal risk or without suitable training.

Notes to physician:
- PCR Mix: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Taq DNA Polymerase: 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.
- AR 1: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments:
- PCR Mix: No specific treatment.
- Taq DNA Polymerase: No specific treatment.
- AR 1: No specific treatment.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media:
- PCR Mix: Use an extinguishing agent suitable for the surrounding fire.
- Taq DNA Polymerase: Use an extinguishing agent suitable for the surrounding fire.
- AR 1: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media:
- PCR Mix: None known.
- Taq DNA Polymerase: None known.
- AR 1: None known.

Specific hazards arising from the chemical:
- PCR Mix: In a fire or if heated, a pressure increase will occur and the container may burst.
- Taq DNA Polymerase: In a fire or if heated, a pressure increase will occur and the container may burst.
- AR 1: In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products:
- PCR Mix: Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides.
- Taq DNA Polymerase: Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides, phosphorus oxides.
- AR 1: No specific data.
Section 5. Firefighting measures

Special protective actions for fire-fighters

<table>
<thead>
<tr>
<th>PCR Mix</th>
</tr>
</thead>
<tbody>
<tr>
<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>

<table>
<thead>
<tr>
<th>Taq DNA Polymerase</th>
</tr>
</thead>
<tbody>
<tr>
<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>

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

Special protective equipment for fire-fighters

<table>
<thead>
<tr>
<th>PCR Mix</th>
</tr>
</thead>
<tbody>
<tr>
<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>

<table>
<thead>
<tr>
<th>Taq DNA Polymerase</th>
</tr>
</thead>
<tbody>
<tr>
<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>

<table>
<thead>
<tr>
<th>AR 1</th>
</tr>
</thead>
<tbody>
<tr>
<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</th>
</tr>
</thead>
<tbody>
<tr>
<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>

<table>
<thead>
<tr>
<th>Taq DNA Polymerase</th>
</tr>
</thead>
<tbody>
<tr>
<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>

<table>
<thead>
<tr>
<th>AR 1</th>
</tr>
</thead>
<tbody>
<tr>
<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>

For emergency responders

<table>
<thead>
<tr>
<th>PCR Mix</th>
</tr>
</thead>
<tbody>
<tr>
<td>If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in &quot;For non-emergency personnel&quot;.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Taq DNA Polymerase</th>
</tr>
</thead>
<tbody>
<tr>
<td>If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in &quot;For non-emergency personnel&quot;.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AR 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in &quot;For non-emergency personnel&quot;.</td>
</tr>
</tbody>
</table>
Section 6. Accidental release measures

Environmental precautions:
- **PCR Mix**: 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 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).

Methods and material for containment and cleaning up:

Methods for cleaning up:
- **PCR Mix**: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- **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 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.

Section 7. Handling and storage

Precautions for safe handling:

Protective measures:
- **PCR Mix**: Put on appropriate personal protective equipment (see Section 8).
- **Taq DNA Polymerase**: Put on appropriate personal protective equipment (see Section 8).
- **AR 1**: Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene:
- **PCR Mix**: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- **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 1**: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face...
Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities:

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

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

- **AR 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.

Section 8. Exposure controls and personal protection

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td>Safe Work Australia (Australia, 4/2018). TWA: 10 mg/m³ 8 hours.</td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
</tr>
</tbody>
</table>

**Control parameters**

**Occupational exposure limits**

**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**

Date of issue/Date of revision: 09/10/2019  
Date of previous issue: No previous validation  
Version: 1
Section 8. Exposure controls and personal protection

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.

Section 9. Physical and chemical properties

Appearance

Physical state:
- PCR Mix: Liquid.
- Taq DNA Polymerase: Liquid. [Clear. / solution]
- AR 1: Liquid.

Colour: PCR Mix: Not available.
- Taq DNA Polymerase: Colourless.
- AR 1: Not available.

Odour: PCR Mix: Not available.
- Taq DNA Polymerase: Not available.
- AR 1: Not available.

Odour threshold: PCR Mix: Not available.
- Taq DNA Polymerase: Not available.
- AR 1: Not available.

pH: PCR Mix: Not available.
- Taq DNA Polymerase: Not available.
- AR 1: Not available.

Melting point: PCR Mix: Not available.
- Taq DNA Polymerase: Not available.
- AR 1: 0°C (32°F)

Boiling point: PCR Mix: Not available.
- Taq DNA Polymerase: Not available.
- AR 1: 100°C (212°F)

Flash point: PCR Mix: Not available.
- Taq DNA Polymerase: Not available.
- AR 1: Not available.

Evaporation rate: PCR Mix: Not available.
- Taq DNA Polymerase: Not available.
- AR 1: Not available.

Flammability (solid, gas): PCR Mix: Not applicable.
- Taq DNA Polymerase: Not applicable.
- AR 1: Not applicable.
Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>PCR Mix</th>
<th>Taq DNA Polymerase</th>
<th>AR 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower and upper explosive (flammable) limits</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in the following materials: cold water and hot water.</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Section 10. Stability and reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>PCR Mix</th>
<th>Taq DNA Polymerase</th>
<th>AR 1</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>
</tr>
<tr>
<td>Chemical stability</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>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>No specific data.</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>May react or be incompatible with oxidising materials.</td>
<td>May react or be incompatible with oxidising materials.</td>
<td>May react or be incompatible with oxidising materials.</td>
</tr>
</tbody>
</table>
Section 10. Stability and reactivity

Hazardous decomposition products

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix</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>
<tr>
<td>AR 1</td>
<td>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</td>
</tr>
</tbody>
</table>

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>
</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></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
</tbody>
</table>

Sensitisation

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.

Information on likely routes of exposure

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>Routes of entry anticipated: Oral, Dermal, Inhalation.</td>
</tr>
<tr>
<td>AR 1</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Potential acute health effects

Eye contact

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>AR 1</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

Inhalation

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR Mix</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Taq DNA Polymerase</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>AR 1</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>
Section 11. Toxicological information

Skin contact:
- PCR Mix: No known significant effects or critical hazards.
- Taq DNA Polymerase: No known significant effects or critical hazards.
- AR 1: No known significant effects or critical hazards.

Ingestion:
- PCR Mix: No known significant effects or critical hazards.
- Taq DNA Polymerase: No known significant effects or critical hazards.
- AR 1: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

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

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

Skin contact:
- PCR Mix: No specific data.
- Taq DNA Polymerase: No specific data.
- AR 1: No specific data.

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

General:
- PCR Mix: No known significant effects or critical hazards.
- Taq DNA Polymerase: No known significant effects or critical hazards.
- AR 1: No known significant effects or critical hazards.

Carcinogenicity:
- PCR Mix: No known significant effects or critical hazards.
- Taq DNA Polymerase: No known significant effects or critical hazards.
- AR 1: No known significant effects or critical hazards.

Mutagenicity:
- PCR Mix: No known significant effects or critical hazards.
- Taq DNA Polymerase: No known significant effects or critical hazards.
- AR 1: No known significant effects or critical hazards.

Teratogenicity:
- PCR Mix: No known significant effects or critical hazards.
- Taq DNA Polymerase: No known significant effects or critical hazards.
- AR 1: No known significant effects or critical hazards.

Developmental effects:
- PCR Mix: No known significant effects or critical hazards.
- Taq DNA Polymerase: No known significant effects or critical hazards.
- AR 1: No known significant effects or critical hazards.

Fertility effects:
- PCR Mix: No known significant effects or critical hazards.
- Taq DNA Polymerase: No known significant effects or critical hazards.
- AR 1: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates
Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Oral (mg/kg)</th>
<th>Dermal (mg/kg)</th>
<th>Inhalation (gases) (ppm)</th>
<th>Inhalation (vapours) (mg/l)</th>
<th>Inhalation (dusts and mists) (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</td>
<td>12600</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section 12. Ecological information

**Toxicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>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></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Persistence and degradability**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
<th>Dose</th>
<th>Inoculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taq DNA Polymerase</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&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>-</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<sub>oc</sub>) | Not available. |

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

Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or 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 spill 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.
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. Any other relevant information

History

| Date of issue/Date of revision | : 09/10/2019 |
| Date of previous issue | : No previous validation |
| Version | : 1 |

Key to abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADG</td>
<td>Australian Dangerous Goods</td>
</tr>
<tr>
<td>ADR</td>
<td>The European Agreement concerning the International Carriage of Dangerous Goods by Road</td>
</tr>
<tr>
<td>ATE</td>
<td>Acute Toxicity Estimate</td>
</tr>
<tr>
<td>BCF</td>
<td>Bioconcentration Factor</td>
</tr>
<tr>
<td>GHS</td>
<td>Globally Harmonized System of Classification and Labelling of Chemicals</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IBC</td>
<td>Intermediate Bulk Container</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods</td>
</tr>
<tr>
<td>LogPow</td>
<td>Logarithm of the octanol/water partition coefficient</td>
</tr>
<tr>
<td>N/A</td>
<td>Not available</td>
</tr>
<tr>
<td>SUSMP</td>
<td>Standard Uniform Schedule of Medicine and Poisons</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
</tbody>
</table>

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

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.