SAFETY DATA SHEET

Brilliant III Ultra-Fast SYBR Green QRT-PCR Master Mix, Part Number 600886

Section 1. Identification

Product identifier : Brilliant III Ultra-Fast SYBR Green QRT-PCR Master Mix, Part Number 600886
Part No. (Chemical Kit) : 600886
Part No. : 2X Brilliant III SYBR® Green QRT-PCR Master Mix
RT/RNase Block : 600886-52
Reference Dye : 600530-53
100 mM DTT : 600089-53

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia
1800 802 402

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

Relevant identified uses of the substance or mixture and uses advised against
Analytical reagent.

2X Brilliant III SYBR® Green QRT-PCR Master Mix : 2 x 2 ml
RT/RNase Block : 0.4 ml
Reference Dye : 0.1 ml (100 µl 1 mM)
100 mM DTT : 0.1 ml (100 µl)

Section 2. Hazard(s) identification

Classification of the substance or mixture
Not classified.

GHS label elements

Signal word : No signal word.

Percentage of the mixture consisting of ingredient(s)
of unknown dermal toxicity:
2X Brilliant III SYBR® Green QRT-PCR Master Mix : 1 - 10%
RT/RNase Block : 1 - 10%
Reference Dye : 1 - 10%
100 mM DTT : 1 - 10%
Reference Dye : 1 - 10%

Percentage of the mixture consisting of ingredient(s)
of unknown inhalation toxicity:
2X Brilliant III SYBR® Green QRT-PCR Master Mix : 10 - 30%
RT/RNase Block : 30 - 60%
Reference Dye : 1 - 10%
100 mM DTT : 1 - 10%
Reference Dye : 1 - 10%

Percentage of the mixture consisting of ingredient(s)
of unknown oral toxicity:
2X Brilliant III SYBR® Green QRT-PCR Master Mix : 1 - 10%
RT/RNase Block : 1 - 10%
Reference Dye : 1 - 10%
100 mM DTT : 1 - 10%
Reference Dye : 1 - 10%

Reference Dye : 2.4% of unknown hazards to the aquatic environment.

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Section 2. Hazard(s) identification

Hazard statements:
- 2X Brilliant III SYBR® Green QRT-PCR Master Mix
- RT/RNase Block
- Reference Dye
- 100 mM DTT

No known significant effects or critical hazards.

Precautionary statements

Prevention:
- 2X Brilliant III SYBR® Green QRT-PCR Master Mix
- RT/RNase Block
- Reference Dye
- 100 mM DTT

Not applicable.

Response:
- 2X Brilliant III SYBR® Green QRT-PCR Master Mix
- RT/RNase Block
- Reference Dye
- 100 mM DTT

Not applicable.

Storage:
- 2X Brilliant III SYBR® Green QRT-PCR Master Mix
- RT/RNase Block
- Reference Dye
- 100 mM DTT

Not applicable.

Disposal:
- 2X Brilliant III SYBR® Green QRT-PCR Master Mix
- RT/RNase Block
- Reference Dye
- 100 mM DTT

Not applicable.

Supplemental label elements:
- 2X Brilliant III SYBR® Green QRT-PCR Master Mix
- RT/RNase Block
- Reference Dye
- 100 mM DTT

Not applicable.

Other hazards which do not result in classification:
- 2X Brilliant III SYBR® Green QRT-PCR Master Mix
- RT/RNase Block
- Reference Dye
- 100 mM DTT

None known.

Section 3. Composition and ingredient information

Substance/mixture:
- 2X Brilliant III SYBR® Green QRT-PCR Master Mix
- RT/RNase Block
- Reference Dye
- 100 mM DTT

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>2X Brilliant III SYBR® Green QRT-PCR Master Mix</td>
<td>≥10 - ≤30</td>
<td>56-81-5</td>
</tr>
<tr>
<td>Glycerol</td>
<td>≤10</td>
<td>67-68-5</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RT/RNase Block</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

## Description of necessary first aid measures

### Eye contact

<table>
<thead>
<tr>
<th>Substance</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Brilliant III SYBR® Green QRT-PCR Master Mix</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>RT/RNase Block</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>Reference Dye</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>100 mM DTT</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

<table>
<thead>
<tr>
<th>Substance</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Brilliant III SYBR® Green QRT-PCR Master Mix</td>
<td>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td>RT/RNase Block</td>
<td>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td>Reference Dye</td>
<td>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.</td>
</tr>
<tr>
<td>100 mM DTT</td>
<td>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.</td>
</tr>
</tbody>
</table>

### Skin contact

<table>
<thead>
<tr>
<th>Substance</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Brilliant III SYBR® Green QRT-PCR Master Mix</td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td>RT/RNase Block</td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td>Reference Dye</td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td>100 mM DTT</td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</td>
</tr>
</tbody>
</table>

### Ingestion

<table>
<thead>
<tr>
<th>Substance</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Brilliant III SYBR® Green QRT-PCR Master Mix</td>
<td>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.</td>
</tr>
<tr>
<td>RT/RNase Block</td>
<td>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.</td>
</tr>
<tr>
<td>Reference Dye</td>
<td>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.</td>
</tr>
</tbody>
</table>
Section 4. First aid measures

Water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

100 mM DTT
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: Brilliant III SYBR® Green QRT-PCR Master Mix
No known significant effects or critical hazards.
RT/RNase Block
No known significant effects or critical hazards.
Reference Dye
No known significant effects or critical hazards.
100 mM DTT
No known significant effects or critical hazards.

Inhalation: Brilliant III SYBR® Green QRT-PCR Master Mix
No known significant effects or critical hazards.
RT/RNase Block
No known significant effects or critical hazards.
Reference Dye
No known significant effects or critical hazards.
100 mM DTT
No known significant effects or critical hazards.

Skin contact: Brilliant III SYBR® Green QRT-PCR Master Mix
No known significant effects or critical hazards.
RT/RNase Block
No known significant effects or critical hazards.
Reference Dye
No known significant effects or critical hazards.
100 mM DTT
No known significant effects or critical hazards.

Ingestion: Brilliant III SYBR® Green QRT-PCR Master Mix
No known significant effects or critical hazards.
RT/RNase Block
No known significant effects or critical hazards.
Reference Dye
No known significant effects or critical hazards.
100 mM DTT
No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact: Brilliant III SYBR® Green QRT-PCR Master Mix
No specific data.
RT/RNase Block
No specific data.
Reference Dye
No specific data.
100 mM DTT
No specific data.

Inhalation: Brilliant III SYBR® Green QRT-PCR Master Mix
No specific data.
RT/RNase Block
No specific data.
Reference Dye
No specific data.
100 mM DTT
No specific data.

Skin contact: Brilliant III SYBR® Green QRT-PCR Master Mix
No specific data.
RT/RNase Block
No specific data.
Reference Dye
No specific data.
100 mM DTT
No specific data.

Ingestion: Brilliant III SYBR® Green QRT-PCR Master Mix
No specific data.
RT/RNase Block
No specific data.
Reference Dye
No specific data.
100 mM DTT
No specific data.

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

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Section 4. First aid measures

Notes to physician:
- **2X Brilliant III SYBR® Green QRT-PCR Master Mix**: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- **RT/RNase Block**: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- **Reference Dye**: 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.
- **100 mM DTT**: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Protection of first-aiders:
- **2X Brilliant III SYBR® Green QRT-PCR Master Mix**: No action shall be taken involving any personal risk or without suitable training.
- **RT/RNase Block**: No action shall be taken involving any personal risk or without suitable training.
- **Reference Dye**: No action shall be taken involving any personal risk or without suitable training.
- **100 mM DTT**: No action shall be taken involving any personal risk or without suitable training.

Specific treatments:
- **2X Brilliant III SYBR® Green QRT-PCR Master Mix**: No specific treatment.
- **RT/RNase Block**: No specific treatment.
- **100 mM DTT**: No specific treatment.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media:

Suitable extinguishing media:
- **2X Brilliant III SYBR® Green QRT-PCR Master Mix**: Use an extinguishing agent suitable for the surrounding fire.
- **RT/RNase Block**: Use an extinguishing agent suitable for the surrounding fire.
- **Reference Dye**: Use an extinguishing agent suitable for the surrounding fire.
- **100 mM DTT**: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media:
- **2X Brilliant III SYBR® Green QRT-PCR Master Mix**: None known.
- **RT/RNase Block**: None known.
- **Reference Dye**: None known.
- **100 mM DTT**: None known.

Specific hazards arising from the chemical:
- **2X Brilliant III SYBR® Green QRT-PCR Master Mix**: In a fire or if heated, a pressure increase will occur and the container may burst.
- **RT/RNase Block**: In a fire or if heated, a pressure increase will occur and the container may burst.
- **Reference Dye**: In a fire or if heated, a pressure increase will occur and the container may burst.
- **100 mM DTT**: In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products:
- **2X Brilliant III SYBR® Green QRT-PCR Master Mix**: Decomposition products may include the following materials:
  - Carbon dioxide
  - Carbon monoxide
  - Sulfur oxides
  - Halogenated compounds
  - Metal oxide/oxides
### Section 5. Firefighting measures

<table>
<thead>
<tr>
<th>Special protective actions for fire-fighters</th>
<th>Decomposition products may include the following materials:</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT/RNase Block</td>
<td>carbon dioxide</td>
</tr>
<tr>
<td>Reference Dye</td>
<td>carbon monoxide</td>
</tr>
<tr>
<td>100 mM DTT</td>
<td>carbon dioxide</td>
</tr>
<tr>
<td></td>
<td>carbon monoxide</td>
</tr>
<tr>
<td></td>
<td>nitrogen oxides</td>
</tr>
<tr>
<td></td>
<td>halogenated compounds</td>
</tr>
<tr>
<td></td>
<td>metal oxide/oxides</td>
</tr>
</tbody>
</table>

Special protective equipment for fire-fighters:

<table>
<thead>
<tr>
<th>Special protective equipment for fire-fighters</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>RT/RNase Block</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>Reference Dye</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>100 mM DTT</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:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>For non-emergency personnel</strong>:</td>
<td><strong>2X Brilliant III SYBR® Green QRT-PCR Master Mix</strong></td>
</tr>
<tr>
<td>RT/RNase Block</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>

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Section 6. Accidental release measures

Reference Dye
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.

100 mM DTT
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.

Methods for cleaning up

For emergency responders:
2X Brilliant III SYBR® Green QRT-PCR Master Mix
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".

RT/RNase Block
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".

Reference Dye
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".

100 mM DTT
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:
2X Brilliant III SYBR® Green QRT-PCR Master 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).

RT/RNase Block
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).

Reference Dye
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).

100 mM DTT
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:
2X Brilliant III SYBR® Green QRT-PCR Master 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.

RT/RNase Block
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
Section 6. Accidental release measures

Reference Dye
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.

100 mM DTT
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
- Brillant III SYBR® Green QRT-PCR Master Mix
- RT/RNase Block
- Reference Dye
- 100 mM DTT

Advice on general occupational hygiene
- Brillant III SYBR® Green QRT-PCR Master Mix
- RT/RNase Block
- Reference Dye
- 100 mM DTT

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.
Section 7. Handling and storage

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Conditions for safe storage, including any incompatibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Brilliant III SYBR® Green QRT-PCR Master Mix</td>
<td>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</td>
</tr>
<tr>
<td>RT/RNase Block</td>
<td>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</td>
</tr>
<tr>
<td>Reference Dye</td>
<td>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</td>
</tr>
<tr>
<td>100 mM DTT</td>
<td>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</td>
</tr>
</tbody>
</table>

Section 8. Exposure controls and personal protection

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Brilliant III SYBR® Green QRT-PCR Master Mix</td>
<td>Safe Work Australia (Australia, 1/2014). TWA: 10 mg/m³ 8 hours. DFG MAC-values list (Germany, 7/2015). Absorbed through skin. PEAK: 320 mg/m³, 4 times per shift, 15 minutes. TWA: 160 mg/m³ 8 hours. PEAK: 100 ppm, 4 times per shift, 15 minutes. TWA: 50 ppm 8 hours.</td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td></td>
</tr>
</tbody>
</table>
Section 8. Exposure controls and personal protection

| RT/RNase Block | Safe Work Australia (Australia, 1/2014).  
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td>TWA: 10 mg/m³ 8 hours.</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 hazard and potential for exposure, 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 the respirator protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

**Appearance**

**Physical state:** 2X Brilliant III SYBR® Green QRT-PCR Master Mix

- Liquid.
- RT/RNase Block: Liquid.
- Reference Dye: Liquid.
- 100 mM DTT: Liquid.

**Colour:** 2X Brilliant III SYBR® Green QRT-PCR Master Mix

- Not available.
- RT/RNase Block: Not available.
- Reference Dye: Not available.
- 100 mM DTT: Not available.

**Odour:** 2X Brilliant III SYBR® Green QRT-PCR Master Mix

- Not available.
- RT/RNase Block: Not available.
- Reference Dye: Not available.
- 100 mM DTT: Not available.
## Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>2X Brilliant III SYBR® Green QRT-PCR Master Mix</th>
<th>RT/RNase Block</th>
<th>Reference Dye</th>
<th>100 mM DTT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point</td>
<td>2X Brilliant III SYBR® Green QRT-PCR Master Mix</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Boiling point</td>
<td>2X Brilliant III SYBR® Green QRT-PCR Master Mix</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>2X Brilliant III SYBR® Green QRT-PCR Master Mix</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>2X Brilliant III SYBR® Green QRT-PCR Master Mix</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>2X Brilliant III SYBR® Green QRT-PCR Master Mix</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Lower and upper explosive (flammable) limits</td>
<td>2X Brilliant III SYBR® Green QRT-PCR Master Mix</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>2X Brilliant III SYBR® Green QRT-PCR Master Mix</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapour density</td>
<td>2X Brilliant III SYBR® Green QRT-PCR Master Mix</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>2X Brilliant III SYBR® Green QRT-PCR Master Mix</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>
Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>2X Brilliant III SYBR® Green QRT-PCR Master Mix</th>
<th>RT/RNase Block</th>
<th>Reference Dye</th>
<th>100 mM DTT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solubility</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
<td>Soluble in the following materials: cold water and hot water.</td>
<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>RT/RNase Block</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>100 mM DTT</td>
<td>Not available.</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>2X Brilliant III SYBR® Green QRT-PCR Master Mix</th>
<th>RT/RNase Block</th>
<th>Reference Dye</th>
<th>100 mM DTT</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**
- 2X Brilliant III SYBR® Green QRT-PCR Master Mix
- RT/RNase Block
- Reference Dye
- 100 mM DTT

May react or be incompatible with oxidising materials.

**Hazardous decomposition products**
- 2X Brilliant III SYBR® Green QRT-PCR Master Mix
- RT/RNase Block
- Reference Dye
- 100 mM DTT

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

**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>2X Brilliant III SYBR® Green QRT-PCR Master Mix</td>
<td>Glycerol</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>12600 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Dimethyl sulfoxide</td>
<td>LD50 Dermal</td>
<td>Rat</td>
<td>40000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Dimethyl sulfoxide</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>14500 mg/kg</td>
</tr>
<tr>
<td>RT/RNase Block</td>
<td>Glycerol</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>12600 mg/kg</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>2X Brilliant III SYBR® Green QRT-PCR Master Mix</td>
<td>Glycerol</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
</tr>
<tr>
<td></td>
<td>Glycerol</td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
</tr>
<tr>
<td></td>
<td>Dimethyl sulfoxide</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
</tr>
<tr>
<td></td>
<td>Dimethyl sulfoxide</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>100 milligrams</td>
</tr>
<tr>
<td></td>
<td>Dimethyl sulfoxide</td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
</tr>
<tr>
<td></td>
<td>Dimethyl sulfoxide</td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>100 milligrams</td>
</tr>
<tr>
<td>RT/RNase Block</td>
<td>Glycerol</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
</tr>
<tr>
<td></td>
<td>Glycerol</td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
</tr>
</tbody>
</table>

**Sensitisation**
Not available.

**Mutagenicity**
Not available.
Section 11. Toxicological information

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.

Information on likely routes of exposure

Eye contact: 2X Brilliant III SYBR® Green QRT-PCR Master Mix
No known significant effects or critical hazards.

RT/RNase Block
No known significant effects or critical hazards.

Reference Dye
No known significant effects or critical hazards.

100 mM DTT
No known significant effects or critical hazards.

Inhalation: 2X Brilliant III SYBR® Green QRT-PCR Master Mix
No known significant effects or critical hazards.

RT/RNase Block
No known significant effects or critical hazards.

Reference Dye
No known significant effects or critical hazards.

100 mM DTT
No known significant effects or critical hazards.

Skin contact: 2X Brilliant III SYBR® Green QRT-PCR Master Mix
No known significant effects or critical hazards.

RT/RNase Block
No known significant effects or critical hazards.

Reference Dye
No known significant effects or critical hazards.

100 mM DTT
No known significant effects or critical hazards.

Ingestion: 2X Brilliant III SYBR® Green QRT-PCR Master Mix
No known significant effects or critical hazards.

RT/RNase Block
No known significant effects or critical hazards.

Reference Dye
No known significant effects or critical hazards.

100 mM DTT
No known significant effects or critical hazards.

Potential acute health effects

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: 2X Brilliant III SYBR® Green QRT-PCR Master Mix
No specific data.

RT/RNase Block
No specific data.

Reference Dye
No specific data.

100 mM DTT
No specific data.

Inhalation: 2X Brilliant III SYBR® Green QRT-PCR Master Mix
No specific data.

RT/RNase Block
No specific data.

Reference Dye
No specific data.

100 mM DTT
No specific data.
## Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Skin contact</th>
<th>2X Brilliant III SYBR® Green QRT-PCR Master Mix</th>
<th>No specific data.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RT/RNase Block</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>Reference Dye</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>100 mM DTT</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

### Ingestion

| 2X Brilliant III SYBR® Green QRT-PCR Master Mix | No specific data. |
| RT/RNase Block                                | No specific data.  |
| Reference Dye                                 | No specific data.  |
| 100 mM DTT                                    | No specific data.  |

### Toxicological effects

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

#### Short term exposure

<table>
<thead>
<tr>
<th>Potential immediate effects</th>
<th>2X Brilliant III SYBR® Green QRT-PCR Master Mix</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RT/RNase Block</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>Reference Dye</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>100 mM DTT</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

#### Potential delayed effects: Not available.

#### Long term exposure

<table>
<thead>
<tr>
<th>Potential immediate effects</th>
<th>2X Brilliant III SYBR® Green QRT-PCR Master Mix</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RT/RNase Block</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>Reference Dye</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>100 mM DTT</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

#### Potential delayed effects: Not available.

### Potential chronic health effects

Not available.

### General

| 2X Brilliant III SYBR® Green QRT-PCR Master Mix | No known significant effects or critical hazards. |
| RT/RNase Block                                | No known significant effects or critical hazards. |
| Reference Dye                                 | No known significant effects or critical hazards. |
| 100 mM DTT                                    | No known significant effects or critical hazards. |

### Carcinogenicity

| 2X Brilliant III SYBR® Green QRT-PCR Master Mix | No known significant effects or critical hazards. |
| RT/RNase Block                                | No known significant effects or critical hazards. |
| Reference Dye                                 | No known significant effects or critical hazards. |
| 100 mM DTT                                    | No known significant effects or critical hazards. |

### Mutagenicity

| 2X Brilliant III SYBR® Green QRT-PCR Master Mix | No known significant effects or critical hazards. |
| RT/RNase Block                                | No known significant effects or critical hazards. |
| Reference Dye                                 | No known significant effects or critical hazards. |
| 100 mM DTT                                    | No known significant effects or critical hazards. |

### Teratogenicity

| 2X Brilliant III SYBR® Green QRT-PCR Master Mix | No known significant effects or critical hazards. |
| RT/RNase Block                                | No known significant effects or critical hazards. |
| Reference Dye                                 | No known significant effects or critical hazards. |
| 100 mM DTT                                    | No known significant effects or critical hazards. |

### Developmental effects

| 2X Brilliant III SYBR® Green QRT-PCR Master Mix | No known significant effects or critical hazards. |
| RT/RNase Block                                | No known significant effects or critical hazards. |
| Reference Dye                                 | No known significant effects or critical hazards. |
| 100 mM DTT                                    | No known significant effects or critical hazards. |

### Fertility effects

| 2X Brilliant III SYBR® Green QRT-PCR Master Mix | No known significant effects or critical hazards. |
| RT/RNase Block                                | No known significant effects or critical hazards. |
| Reference Dye                                 | No known significant effects or critical hazards. |
| 100 mM DTT                                    | No known significant effects or critical hazards. |

### Numerical measures of toxicity

#### Acute toxicity estimates

---

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**Date of previous issue**: 21/01/2016  
**Version**: 6  
15/18
### Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 mM DTT</td>
<td>33333.3 mg/kg</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>2X Brilliant III SYBR®</td>
<td>Acute LC50 54000 mg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td>Green QRT-PCR Master</td>
<td>Acute LC50 25000 ppm Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td>Mix</td>
<td>Acute LC50 34000000 μg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
<tr>
<td>Glycerol</td>
<td>Chronic NOEC 100 ul/L Marine water</td>
<td>Algae - Ulva lactuca</td>
<td>72 hours</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</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>2X Brilliant III SYBR®</td>
<td>301D Ready Biodegradability - Closed Bottle Test</td>
<td>93 % - 30 days</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Green QRT-PCR Master</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mix</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RT/RNase Block</td>
<td></td>
<td></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>2X Brilliant III SYBR®</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green QRT-PCR Master</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mix</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>-1.76</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td>-1.35</td>
<td>3.16</td>
<td>low</td>
</tr>
<tr>
<td>RT/RNase Block</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>-1.76</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

#### Mobillity 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 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
6

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: All components are listed or exempted.
Europe: Not determined.
Japan: Japan inventory (ENCS): Not determined.
Japan inventory (ISHL): 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>
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</table>

Section 16. Any other relevant information

**History**

<table>
<thead>
<tr>
<th>Date of issue/Date of revision</th>
<th>21/08/2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of previous issue</td>
<td>21/01/2016</td>
</tr>
<tr>
<td>Version</td>
<td>6</td>
</tr>
</tbody>
</table>

**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>
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</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.