**SAFETY DATA SHEET**

Brilliant II QPCR Master Mix, Part Number 600804

### Section 1. Identification

<table>
<thead>
<tr>
<th>Product identifier</th>
<th>Brilliant II QPCR Master Mix, Part Number 600804</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part no. (chemical kit)</td>
<td>600804</td>
</tr>
<tr>
<td>Part no.</td>
<td>2X Brilliant II QPCR Master Mix 600804-51</td>
</tr>
<tr>
<td>Reference Dye</td>
<td>600530-53</td>
</tr>
</tbody>
</table>

**Material uses**

- 2X Brilliant II QPCR Master Mix: Analytical reagent.
- Reference Dye: 2 x 2.5 ml
- Reference Dye: 0.1 ml (100 µl 1 mM)

**Supplier/Manufacturer**

Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

**Emergency telephone number (with hours of operation)**

CHEMTREC®: 1-800-424-9300

### Section 2. Hazard identification

**Classification of the substance or mixture**

- **2X Brilliant II QPCR Master Mix**
  - H320: EYE IRRITATION - Category 2B

**GHS label elements**

- **Signal word**
  - 2X Brilliant II QPCR Master Mix: Warning
  - Reference Dye: No signal word.

- **Hazard statements**
  - 2X Brilliant II QPCR Master Mix
  - Reference Dye
  - H320: Causes eye irritation.
  - No known significant effects or critical hazards.

**Precautionary statements**

- **Prevention**
  - 2X Brilliant II QPCR Master Mix
  - Reference Dye
  - P264: Wash hands thoroughly after handling.

- **Response**
  - 2X Brilliant II QPCR Master Mix
  - Reference Dye
  - P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P337 + P313: If eye irritation persists: Get medical attention.

- **Storage**
  - 2X Brilliant II QPCR Master Mix
  - Reference Dye
  - Not applicable.

- **Disposal**
  - 2X Brilliant II QPCR Master Mix
  - Reference Dye
  - Not applicable.

- **Supplemental label elements**
  - 2X Brilliant II QPCR Master Mix
  - Reference Dye
  - None known.

**Date of issue/Date of revision**: 04/16/2019

**Date of previous issue**: 12/19/2017

**Version**: 6
Section 2. Hazard identification

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>Ingredient name</th>
<th>% (w/w)</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Brilliant II QPCR Master Mix</td>
<td>Glycerol</td>
<td>≥10 - ≤25</td>
<td>56-81-5</td>
</tr>
<tr>
<td>Reference Dye</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2X Brilliant II QPCR Master Mix</td>
<td>Potassium chloride</td>
<td>≤5</td>
<td>7447-40-7</td>
</tr>
<tr>
<td>Reference Dye</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2X Brilliant II QPCR Master Mix</td>
<td>2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride</td>
<td>≤3</td>
<td>1185-53-1</td>
</tr>
<tr>
<td>Reference Dye</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other hazards which do not result in classification:
- 2X Brilliant II QPCR Master Mix: None known.
- Reference Dye: None known.

Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%
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%
Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 2.4%

Section 3. Composition/information on ingredients

Section 4. First-aid measures

**Description of necessary first aid measures**

**Eye contact**: 2X Brilliant II QPCR Master Mix
Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.

Reference Dye
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**: 2X Brilliant II QPCR Master Mix
Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Reference Dye
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if adverse health effects persist or are severe.
## Section 4. First-aid measures

### Skin contact

- **2X Brilliant II QPCR Master 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. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

- **Reference Dye**
  - 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.

### Ingestion

- **2X Brilliant II QPCR Master Mix**
  - Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. 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. 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.

- **Reference Dye**
  - 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. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if 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.

## Most important symptoms/effects, acute and delayed

### Potential acute health effects

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>2X Brilliant II QPCR Master Mix</th>
<th>Causes eye irritation.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reference Dye</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inhalation</th>
<th>2X Brilliant II QPCR Master Mix</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reference Dye</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Skin contact</th>
<th>2X Brilliant II QPCR Master Mix</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reference Dye</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingestion</th>
<th>2X Brilliant II QPCR Master Mix</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reference Dye</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

### Over-exposure signs/symptoms

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>2X Brilliant II QPCR Master Mix</th>
<th>Adverse symptoms may include the following: irritation, watering, redness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reference Dye</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>
**Section 4. First-aid measures**

### Inhalation
- 2X Brilliant II QPCR Master Mix
- Reference Dye
- No specific data.

### Skin contact
- 2X Brilliant II QPCR Master Mix
- Reference Dye
- No specific data.

### Ingestion
- 2X Brilliant II QPCR Master Mix
- Reference Dye
- No specific data.

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

#### Notes to physician
- 2X Brilliant II QPCR Master Mix
- Reference Dye
- Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. 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
- 2X Brilliant II QPCR Master Mix
- Reference Dye
- No specific treatment.

#### Protection of first-aiders
- 2X Brilliant II QPCR Master Mix
- Reference Dye
- No action shall be taken involving any personal risk or without suitable training.

**See toxicological information (Section 11)**

**Section 5. Fire-fighting measures**

### Extinguishing media

#### Suitable extinguishing media
- 2X Brilliant II QPCR Master Mix
- Reference Dye
- Use an extinguishing agent suitable for the surrounding fire.

#### Unsuitable extinguishing media
- 2X Brilliant II QPCR Master Mix
- Reference Dye
- None known.

### Specific hazards arising from the chemical
- 2X Brilliant II QPCR Master Mix
- Reference Dye
- In a fire or if heated, a pressure increase will occur and the container may burst.

### Hazardous thermal decomposition products
- 2X Brilliant II QPCR Master Mix
- Reference Dye
- Decomposition products may include the following materials:
  - carbon dioxide
  - carbon monoxide


### Section 5. Fire-fighting measures

<table>
<thead>
<tr>
<th>Special protective actions for fire-fighters</th>
<th>2X Brilliant II QPCR Master Mix</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>Reference Dye</td>
<td></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>

<table>
<thead>
<tr>
<th>Special protective equipment for fire-fighters</th>
<th>2X Brilliant II QPCR Master Mix</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>Reference Dye</td>
<td></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

<table>
<thead>
<tr>
<th>For non-emergency personnel</th>
<th>2X Brilliant II QPCR Master Mix</th>
<th>No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference Dye</td>
<td></td>
<td>No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>For emergency responders</th>
<th>2X Brilliant II QPCR Master Mix</th>
<th>If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in &quot;For non-emergency personnel&quot;.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference Dye</td>
<td></td>
<td>If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in &quot;For non-emergency personnel&quot;.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Environmental precautions</th>
<th>2X Brilliant II QPCR Master Mix</th>
<th>Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference Dye</td>
<td></td>
<td>Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).</td>
</tr>
</tbody>
</table>

### Methods and materials for containment and cleaning up
Section 6. Accidental release measures

Methods for cleaning up

2X Brilliant II QPCR 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.

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.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

2X Brilliant II QPCR Master Mix Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Reference Dye Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene

2X Brilliant II QPCR Master 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.

Reference Dye 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

2X Brilliant II QPCR Master 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Reference Dye 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
Section 7. Handling and storage

must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

**Control parameters**

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brilliant II QPCR Master Mix</td>
<td>CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 10 mg/m³ 8 hours. Form: Mist</td>
</tr>
<tr>
<td>Glycerol</td>
<td>CA British Columbia Provincial (Canada, 6/2017). TWA: 10 mg/m³ 8 hours. Form: Mist</td>
</tr>
<tr>
<td></td>
<td>CA Quebec Provincial (Canada, 1/2014). TWAEV: 10 mg/m³ 8 hours. Form: mist</td>
</tr>
<tr>
<td></td>
<td>CA Saskatchewan Provincial (Canada, 7/2013). STEL: 20 mg/m³ 15 minutes. Form: mist</td>
</tr>
<tr>
<td></td>
<td>CA Ontario Provincial (Canada, 1/2018). TWA: 10 mg/m³ 8 hours. Form: mist</td>
</tr>
</tbody>
</table>

**Appropriate engineering controls**

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

**Environmental exposure controls**

- Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures**

**Hygiene measures**

- Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**

- Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

**Skin protection**

**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/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

**Appearance**

<table>
<thead>
<tr>
<th>Physical state</th>
<th>2X Brilliant II QPCR Master Mix</th>
<th>Liquid.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>2X Brilliant II QPCR Master Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odor</td>
<td>2X Brilliant II QPCR Master Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>2X Brilliant II QPCR Master Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH</td>
<td>2X Brilliant II QPCR Master Mix</td>
<td>8</td>
</tr>
<tr>
<td>Melting point</td>
<td>2X Brilliant II QPCR Master Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Boiling point</td>
<td>2X Brilliant II QPCR Master Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>2X Brilliant II QPCR Master Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>2X Brilliant II QPCR Master Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>2X Brilliant II QPCR Master Mix</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Lower and upper explosive (flammable) limits</td>
<td>2X Brilliant II QPCR Master Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>2X Brilliant II QPCR Master Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor density</td>
<td>2X Brilliant II QPCR Master Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>2X Brilliant II QPCR Master Mix</td>
<td>Not available.</td>
</tr>
</tbody>
</table>
Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>2X Brilliant II QPCR Master Mix</th>
<th>Reference Dye</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solubility</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
<td></td>
</tr>
<tr>
<td>Reference Dye</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity</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 II QPCR Master Mix</th>
<th>Reference Dye</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></td>
</tr>
<tr>
<td>Chemical stability</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></td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>May react or be incompatible with oxidizing materials.</td>
<td></td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</td>
<td></td>
</tr>
</tbody>
</table>

Date of issue/Date of revision : 04/16/2019
Date of previous issue : 12/19/2017
Version : 6
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 II QPCR Master Mix Glycerol</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>12600 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Reference Dye Potassium chloride</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2600 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>2X Brilliant II QPCR Master Mix Glycerol</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
<tr>
<td>Reference Dye Potassium chloride</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
</tbody>
</table>

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference Dye 2-Amino-2-((hydroxymethyl)propane-1,3-diol hydrochloride</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
</tbody>
</table>

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

<table>
<thead>
<tr>
<th>Name</th>
<th>Routes of entry anticipated</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Brilliant II QPCR Master Mix Reference Dye</td>
<td>Oral, Dermal, Inhalation. Routes of entry anticipated: Oral, Dermal, Inhalation.</td>
</tr>
</tbody>
</table>

Potential acute health effects
## Section 11. Toxicological information

### Eye contact
- **2X Brilliant II QPCR Master Mix**
- **Reference Dye**
  - Causes eye irritation.
  - No known significant effects or critical hazards.

### Inhalation
- **2X Brilliant II QPCR Master Mix**
- **Reference Dye**
  - No known significant effects or critical hazards.

### Skin contact
- **2X Brilliant II QPCR Master Mix**
- **Reference Dye**
  - No known significant effects or critical hazards.

### Ingestion
- **2X Brilliant II QPCR Master Mix**
- **Reference Dye**
  - No known significant effects or critical hazards.

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

#### Eye contact
- **2X Brilliant II QPCR Master Mix**
- **Reference Dye**
  - Adverse symptoms may include the following:
    - irritation
    - watering
    - redness
  - No specific data.

#### Inhalation
- **2X Brilliant II QPCR Master Mix**
- **Reference Dye**
  - No specific data.

#### Skin contact
- **2X Brilliant II QPCR Master Mix**
- **Reference Dye**
  - No specific data.

#### Ingestion
- **2X Brilliant II QPCR Master Mix**
- **Reference Dye**
  - No specific data.

### Delayed and immediate effects and also 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
- **2X Brilliant II QPCR Master Mix**
- **Reference Dye**
  - No known significant effects or critical hazards.

#### Carcinogenicity
- **2X Brilliant II QPCR Master Mix**
- **Reference Dye**
  - No known significant effects or critical hazards.

#### Mutagenicity
- **2X Brilliant II QPCR Master Mix**
- **Reference Dye**
  - No known significant effects or critical hazards.

#### Teratogenicity
- **2X Brilliant II QPCR Master Mix**
- **Reference Dye**
  - No known significant effects or critical hazards.
Section 11. Toxicological information

**Developmental effects**
- 2X Brilliant II QPCR Master Mix: No known significant effects or critical hazards.
- Reference Dye: No known significant effects or critical hazards.

**Fertility effects**
- 2X Brilliant II QPCR Master Mix: No known significant effects or critical hazards.
- Reference Dye: No known significant effects or critical hazards.

### Numerical measures of toxicity
#### Acute toxicity estimates

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Oral (mg/kg)</th>
<th>Dermal (mg/kg)</th>
<th>Inhalation (gases) (ppm)</th>
<th>Inhalation (vapors) (mg/l)</th>
<th>Inhalation (dusts and mists) (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Brilliant II QPCR Master Mix Glycerol</td>
<td>12600</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Reference Dye Reference Dye</td>
<td>70270.3</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Potassium chloride</td>
<td>2600</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Section 12. Ecological information

### Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Brilliant II QPCR Master Mix Glycerol</td>
<td>Acute LC50 54000 mg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td>Reference Dye Reference Dye</td>
<td>Acute EC50 1337000 µg/l Fresh water</td>
<td>Algae - Navicula seminulum</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 9.24 g/L Fresh water</td>
<td>Algae - Desmodesmus subspicatus</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 141.46 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 12.92 mg/l Fresh water</td>
<td>Crustaceans - Pseudosida ramosa - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 880 mg/l Fresh water</td>
<td>Fish - Pimephales promelas</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>2X Brilliant II QPCR Master Mix Glycerol</td>
<td>301D Ready Biodegradability - Closed Bottle Test</td>
<td>93 % - 30 days</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### Aquatic half-life

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference Dye Potassium chloride</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
</tbody>
</table>

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Section 12. Ecological information

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>2X Brilliant II QPCR Master 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>Reference Dye</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potassium chloride</td>
<td>-0.46</td>
<td>-</td>
<td>low</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 minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

TDG / IMDG / IATA : Not regulated.

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

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Section 15. Regulatory information

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)
Not listed.

UNEP 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.
New Zealand: Not determined.
Philippines: Not determined.
Republic of Korea: Not determined.
Taiwan: Not determined.
Thailand: Not determined.
Turkey: Not determined.
United States: Not determined.
Viet Nam: Not determined.

Section 16. Other information

History
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Version: 6

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

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Brilliant II QPCR Master Mix</td>
<td></td>
</tr>
<tr>
<td>EYE IRRITATION - Category 2B</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

References: Not available.

Indicates information that has changed from previously issued version.

Notice to reader
Section 16. Other information

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