SAFETY DATA SHEET
Brilliant III Ultra-Fast SYBR Green QPCR Master Mix Sample Size, Part Number 930882

Section 1. Identification

1.1 Product identifier

Product name : Brilliant III Ultra-Fast SYBR Green QPCR Master Mix Sample Size, Part Number 930882
Part no. (chemical kit) : 930882
Part no. : Brilliant III SYBR® Green QPCR Master Mix Sample Size
Reference Dye 600530-53

Validation date : 8/11/2020

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

Material uses : Analytical reagent.

1.3 Details of the supplier of the safety data sheet

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

1.4 Emergency telephone number

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

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status : Brilliant III SYBR® Green QPCR Master Mix Sample Size
Reference Dye

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

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

Classification of the substance or mixture

Brilliant III SYBR® Green QPCR Master Mix Sample Size
H320 EYE IRRITATION - Category 2B
Reference Dye

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 2.4%

2.2 GHS label elements

Signal word

Brilliant III SYBR® Green QPCR Master Mix Sample Size
Reference Dye

Warning
No signal word.
Section 2. Hazards identification

Hazard statements: Brilliant III SYBR® Green QPCR Master Mix Sample Size
H320 - Causes eye irritation.

Precautionary statements

Prevention : Brilliant III SYBR® Green QPCR Master Mix Sample Size
Not applicable.

Response : Brilliant III SYBR® Green QPCR Master Mix Sample Size
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 advice or attention.

Storage : Brilliant III SYBR® Green QPCR Master Mix Sample Size
Not applicable.

Disposal : Brilliant III SYBR® Green QPCR Master Mix Sample Size
Not applicable.

Supplemental label elements : Brilliant III SYBR® Green QPCR Master Mix Sample Size
None known.

2.3 Other hazards

Hazards not otherwise classified : Brilliant III SYBR® Green QPCR Master Mix Sample Size
None known.

Section 3. Composition/information on ingredients

Substance/mixture : Brilliant III SYBR® Green QPCR Master Mix Sample Size
Reference Dye
Mixture

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brilliant III SYBR® Green QPCR Master Mix Sample Size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>≥10 - ≤25</td>
<td>56-81-5</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td>≤10</td>
<td>67-68-5</td>
</tr>
<tr>
<td>Potassium chloride</td>
<td>≤3</td>
<td>7447-40-7</td>
</tr>
<tr>
<td>Reference Dye</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potassium chloride</td>
<td>≤5</td>
<td>7447-40-7</td>
</tr>
<tr>
<td>2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride</td>
<td>≤3</td>
<td>1185-53-1</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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.

Date of issue : 08/11/2020
### 4.1 Description of necessary first aid measures

#### Eye contact

- **Brilliant III SYBR® Green QPCR Master Mix Sample Size**
  
  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**

#### Inhalation

- **Brilliant III SYBR® Green QPCR Master Mix Sample Size**
  
  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**

#### Skin contact

- **Brilliant III SYBR® Green QPCR Master Mix Sample Size**
  
  Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Reference Dye**

#### Ingestion

- **Brilliant III SYBR® Green QPCR Master Mix Sample Size**
  
  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 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**

### Date of issue: 08/11/2020
Section 4. First aid measures

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

<table>
<thead>
<tr>
<th></th>
<th>Brilliant III SYBR® Green QPCR Master Mix Sample Size</th>
<th>Reference Dye</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
<td>Causes eye irritation.</td>
<td>No specific data.</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>No known significant effects or critical hazards.</td>
<td>No specific data.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>No known significant effects or critical hazards.</td>
<td>No specific data.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>No known significant effects or critical hazards.</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

Over-exposure signs/symptoms

<table>
<thead>
<tr>
<th></th>
<th>Brilliant III SYBR® Green QPCR Master Mix Sample Size</th>
<th>Reference Dye</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
<td>Adverse symptoms may include the following: irritation watering redness</td>
<td>No specific data.</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

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

Notes to physician

<table>
<thead>
<tr>
<th></th>
<th>Brilliant III SYBR® Green QPCR Master Mix Sample Size</th>
<th>Reference Dye</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
<td>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</td>
<td>No specific treatment.</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>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>
<td>No specific treatment.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

Specific treatments

<table>
<thead>
<tr>
<th></th>
<th>Brilliant III SYBR® Green QPCR Master Mix Sample Size</th>
<th>Reference Dye</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
<td>No specific treatment.</td>
<td>No specific treatment.</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>No specific treatment.</td>
<td>No specific treatment.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>No specific treatment.</td>
<td>No specific treatment.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>No specific treatment.</td>
<td>No specific treatment.</td>
</tr>
</tbody>
</table>

Protection of first-aiders

<table>
<thead>
<tr>
<th></th>
<th>Brilliant III SYBR® Green QPCR Master Mix Sample Size</th>
<th>Reference Dye</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
<td>No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.</td>
<td>No specific treatment.</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>No specific treatment.</td>
<td>No specific treatment.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>No specific treatment.</td>
<td>No specific treatment.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>No specific treatment.</td>
<td>No specific treatment.</td>
</tr>
</tbody>
</table>

See toxicological information (Section 11)

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Section 5. Fire-fighting measures

5.1 Extinguishing media

| Suitable extinguishing media | Brilliant III SYBR® Green QPCR Master Mix Sample Size | Use an extinguishing agent suitable for the surrounding fire. |
| Unsuitable extinguishing media | Brilliant III SYBR® Green QPCR Master Mix Sample Size | None known. |

5.2 Special hazards arising from the substance or mixture

| Specific hazards arising from the chemical | Brilliant III SYBR® Green QPCR Master Mix Sample Size | In a fire or if heated, a pressure increase will occur and the container may burst. |
| Hazardous thermal decomposition products | Brilliant III SYBR® Green QPCR Master Mix Sample Size | Decomposition products may include the following materials: carbon dioxide, carbon monoxide, sulfur oxides, halogenated compounds, metal oxide/oxides. |

5.3 Advice for firefighters

| Special protective actions for fire-fighters | Brilliant III SYBR® Green QPCR Master Mix Sample Size | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| Special protective equipment for fire-fighters | Brilliant III SYBR® Green QPCR Master Mix Sample Size | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Section 6. Accidental release measures

For non-emergency personnel

Brilliant III SYBR® Green QPCR Master Mix Sample Size

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.

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 spilled material. Put on appropriate personal protective equipment.

For emergency responders

Brilliant III SYBR® Green QPCR Master Mix Sample Size

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

Reference Dye

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).

Reference Dye

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

6.2 Environmental precautions

Brilliant III SYBR® Green QPCR Master Mix Sample Size

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up

Brilliant III SYBR® Green QPCR Master Mix Sample Size

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

### 7.1 Precautions for safe handling

<table>
<thead>
<tr>
<th>Protective measures</th>
<th>Brilliant III SYBR® Green QPCR Master Mix Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>Reference Dye</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Advice on general occupational hygiene</th>
<th>Brilliant III SYBR® Green QPCR Master Mix Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</td>
<td></td>
</tr>
<tr>
<td>Reference Dye</td>
<td></td>
</tr>
</tbody>
</table>

### 7.2 Conditions for safe storage, including any incompatibilities

| : | Brilliant III SYBR® Green QPCR Master Mix Sample Size |
| : | 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 |

### 7.3 Specific end use(s)

<table>
<thead>
<tr>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brilliant III SYBR® Green QPCR Master Mix Sample Size</td>
</tr>
<tr>
<td>Industrial applications, Professional applications.</td>
</tr>
<tr>
<td>Reference Dye</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Industrial sector specific solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brilliant III SYBR® Green QPCR Master Mix Sample Size</td>
</tr>
<tr>
<td>Not applicable.</td>
</tr>
<tr>
<td>Reference Dye</td>
</tr>
</tbody>
</table>

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Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td>TWA: 10 mg/m³ 8 hours. Form: Total dust.</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td>TWA: 15 mg/m³ 8 hours. Form: Total dust.</td>
</tr>
<tr>
<td>Potassium chloride</td>
<td></td>
</tr>
<tr>
<td>Potassium chloride</td>
<td>None.</td>
</tr>
<tr>
<td>2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride</td>
<td>None.</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

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

Individual protection measures

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

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

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.

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Section 8. Exposure controls/personal protection

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

9.1 Information on basic physical and chemical properties

**Appearance**

**Physical state**
- Brilliant III SYBR® Green QPCR Master Mix Sample Size: Liquid.
- Reference Dye: Liquid.

**Color**
- Brilliant III SYBR® Green QPCR Master Mix Sample Size: Not available.
- Reference Dye: Not available.

**Odor**
- Brilliant III SYBR® Green QPCR Master Mix Sample Size: Not available.
- Reference Dye: Not available.

**Odor threshold**
- Brilliant III SYBR® Green QPCR Master Mix Sample Size: Not available.
- Reference Dye: Not available.

**pH**
- Brilliant III SYBR® Green QPCR Master Mix Sample Size: 7.8
- Reference Dye: 8

**Melting point**
- Brilliant III SYBR® Green QPCR Master Mix Sample Size: Not available.
- Reference Dye: Not available.

**Boiling point**
- Brilliant III SYBR® Green QPCR Master Mix Sample Size: Not available.
- Reference Dye: Not available.

**Flash point**
- Brilliant III SYBR® Green QPCR Master Mix Sample Size: Not available.
- Reference Dye: Not available.

**Evaporation rate**
- Brilliant III SYBR® Green QPCR Master Mix Sample Size: Not available.
- Reference Dye: Not available.

**Flammability (solid, gas)**
- Brilliant III SYBR® Green QPCR Master Mix Sample Size: Not applicable.
- Reference Dye: Not applicable.

**Lower and upper explosive (flammable) limits**
- Brilliant III SYBR® Green QPCR Master Mix Sample Size: Not available.
- Reference Dye: Not available.

**Vapor pressure**
- Brilliant III SYBR® Green QPCR Master Mix Sample Size: Not available.
- Reference Dye: Not available.

**Vapor density**
- Brilliant III SYBR® Green QPCR Master Mix Sample Size: Not available.
- Reference Dye: Not available.

**Relative density**
- Brilliant III SYBR® Green QPCR Master Mix Sample Size: Not available.
- Reference Dye: Not available.

**Solubility**
- Brilliant III SYBR® Green QPCR Master Mix Sample Size: Soluble in the following materials: cold water and hot water.
- Reference Dye: Easily soluble in the following materials: cold water and hot water.

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Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Brilliant III SYBR® Green QPCR Master Mix Sample Size</th>
<th>Reference Dye</th>
<th>Not available.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Partition coefficient: n-octanol/water</strong></td>
<td>Brilliant III SYBR® Green QPCR Master Mix Sample Size</td>
<td>Reference Dye</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature</strong></td>
<td>Brilliant III SYBR® Green QPCR Master Mix Sample Size</td>
<td>Reference Dye</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>Brilliant III SYBR® Green QPCR Master Mix Sample Size</td>
<td>Reference Dye</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td>Brilliant III SYBR® Green QPCR Master Mix Sample Size</td>
<td>Reference Dye</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Section 10. Stability and reactivity

### 10.1 Reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Brilliant III SYBR® Green QPCR Master Mix Sample Size</th>
<th>Reference Dye</th>
<th>No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.</th>
</tr>
</thead>
</table>

### 10.2 Chemical stability

<table>
<thead>
<tr>
<th>Property</th>
<th>Brilliant III SYBR® Green QPCR Master Mix Sample Size</th>
<th>Reference Dye</th>
<th>The product is stable.</th>
</tr>
</thead>
</table>

### 10.3 Possibility of hazardous reactions

<table>
<thead>
<tr>
<th>Property</th>
<th>Brilliant III SYBR® Green QPCR Master Mix Sample Size</th>
<th>Reference Dye</th>
<th>Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.</th>
</tr>
</thead>
</table>

### 10.4 Conditions to avoid

<table>
<thead>
<tr>
<th>Property</th>
<th>Brilliant III SYBR® Green QPCR Master Mix Sample Size</th>
<th>Reference Dye</th>
<th>No specific data.</th>
</tr>
</thead>
</table>

### 10.5 Incompatible materials

<table>
<thead>
<tr>
<th>Property</th>
<th>Brilliant III SYBR® Green QPCR Master Mix Sample Size</th>
<th>Reference Dye</th>
<th>May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials.</th>
</tr>
</thead>
</table>

### 10.6 Hazardous decomposition products

<table>
<thead>
<tr>
<th>Property</th>
<th>Brilliant III SYBR® Green QPCR Master Mix Sample Size</th>
<th>Reference Dye</th>
<th>Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.</th>
</tr>
</thead>
</table>

Section 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

*Date of issue:* 08/11/2020
## Section 11. Toxicological information

### Product/ingredient name | Result | Species | Dose | Exposure
---|---|---|---|---
Brilliant III SYBR® Green QPCR Master Mix Sample Size
Glycerol | LD50 Oral | Rat | 12600 mg/kg | -
Dimethyl sulfoxide | LD50 Dermal | Rat | 40000 mg/kg | -
| LD50 Oral | Rat | 14500 mg/kg | -
Potassium chloride | LD50 Oral | Rat | 2600 mg/kg | -
Reference Dye
Potassium chloride | LD50 Oral | Rat | 2600 mg/kg | -

### Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
---|---|---|---|---|---|
Brilliant III SYBR® Green QPCR Master Mix Sample Size
Glycerol | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | -
| Skin - Mild irritant | Rabbit | - | 24 hours 500 mg | -
Dimethyl sulfoxide | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | -
| Eyes - Mild irritant | Rabbit | - | 100 mg | -
| Skin - Mild irritant | Rabbit | - | 24 hours 500 mg | -
Potassium chloride | Skin - Mild irritant | Rabbit | - | 100 mg | -
Reference Dye
Potassium chloride | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | -

### 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)

| Name | Category | Route of exposure | Target organs |
---|---|---|---|
Reference Dye
2-Amino-2-((hydroxymethyl)propane-1,3-diol hydrochloride | Category 3 | - | Respiratory tract irritation |

### Specific target organ toxicity (repeated exposure)
Not available.
Section 11. Toxicological information

Aspiration hazard
Not available.

Information on the likely routes of exposure
Inhalation: Brilliant III SYBR® Green QPCR Master Mix Sample Size, Reference Dye
No known significant effects or critical hazards.

Potential acute health effects
Eye contact: Brilliant III SYBR® Green QPCR Master Mix Sample Size, Reference Dye
Causes eye irritation.

Inhalation: Brilliant III SYBR® Green QPCR Master Mix Sample Size, Reference Dye
No known significant effects or critical hazards.

Skin contact: Brilliant III SYBR® Green QPCR Master Mix Sample Size, Reference Dye
No known significant effects or critical hazards.

Ingestion: Brilliant III SYBR® Green QPCR Master Mix Sample Size, Reference Dye
No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics
Eye contact: Brilliant III SYBR® Green QPCR Master Mix Sample Size, Reference Dye
Adverse symptoms may include the following:
- irritation
- watering
- redness
No specific data.

Inhalation: Brilliant III SYBR® Green QPCR Master Mix Sample Size, Reference Dye
No specific data.

Skin contact: Brilliant III SYBR® Green QPCR Master Mix Sample Size, Reference Dye
No specific data.

Ingestion: Brilliant III SYBR® Green QPCR Master Mix Sample Size, 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: Brilliant III SYBR® Green QPCR Master Mix Sample Size, Reference Dye
No known significant effects or critical hazards.

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Section 11. Toxicological information

Carcinogenicity: Brilliant III SYBR® Green QPCR Master Mix Sample Size
No known significant effects or critical hazards.
Reference Dye
No known significant effects or critical hazards.

Mutagenicity: Brilliant III SYBR® Green QPCR Master Mix Sample Size
No known significant effects or critical hazards.
Reference Dye
No known significant effects or critical hazards.

Teratogenicity: Brilliant III SYBR® Green QPCR Master Mix Sample Size
No known significant effects or critical hazards.
Reference Dye
No known significant effects or critical hazards.

Developmental effects: Brilliant III SYBR® Green QPCR Master Mix Sample Size
No known significant effects or critical hazards.
Reference Dye
No known significant effects or critical hazards.

Fertility effects: Brilliant III SYBR® Green QPCR Master Mix Sample Size
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>Brilliant III SYBR® Green QPCR Master Mix Sample Size</td>
<td>185614.8</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Brilliant III SYBR® Green QPCR Master Mix Sample Size</td>
<td>12600</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Brilliant III SYBR® Green QPCR Master Mix Sample Size</td>
<td>14500</td>
<td>40000</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Brilliant III SYBR® Green QPCR Master Mix Sample Size</td>
<td>2600</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>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>Reference Dye</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

12.1 Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brilliant III SYBR® Green QPCR Master Mix Sample Size</td>
<td>Acute LC50 54000 mg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 25000 ppm Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td>Glycerol</td>
<td>Acute LC50 34000000 µg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 100 ul/L Marine water</td>
<td>Algae - Ulva lactuca</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 100 ul/L Fresh water</td>
<td>Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)</td>
<td>21 days</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</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>
</tbody>
</table>

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**Section 12. Ecological information**

<table>
<thead>
<tr>
<th>Reference Dye</th>
<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>Potassium chloride</td>
<td>Glycerol</td>
<td>-1.76</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td></td>
<td>Dimethyl sulfoxide</td>
<td>-1.35</td>
<td>3.16</td>
<td>low</td>
</tr>
<tr>
<td></td>
<td>Potassium chloride</td>
<td>-0.46</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td></td>
<td>Reference Dye</td>
<td>-0.46</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

**12.3 Bioaccumulative potential**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brilliant III SYBR® Green QPCR Master Mix Sample Size</td>
<td>Glycerol</td>
<td>-1.76</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Dimethyl sulfoxide</td>
<td>-1.35</td>
<td>3.16</td>
</tr>
<tr>
<td></td>
<td>Potassium chloride</td>
<td>-0.46</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Reference Dye</td>
<td>-0.46</td>
<td>-</td>
</tr>
</tbody>
</table>

**12.4 Mobility in soil**

- **Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.
Section 12. Ecological information

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

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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

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

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

Section 14. Transport information

DOT / TDG / Mexico / IMDG / IATA : Not regulated.

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

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

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

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

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

Clean Water Act (CWA) 311: Edetic acid

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

Clean Air Act Section 602 Class I Substances : Not listed

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Section 15. Regulatory information

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304 Composition/information on ingredients
No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312 Classification : Brilliant III SYBR® Green QPCR Master Mix Sample Size EYE IRRITATION - Category 2B Not applicable.

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

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

Montreal Protocol
Not listed.

Stockholm Convention on Persistent Organic Pollutants
Not listed.

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

UNECE Aarhus Protocol on POPs and Heavy Metals

Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brilliant III SYBR® Green QPCR Master Mix Sample Size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>≥10 - ≤25</td>
<td>EYE IRRITATION - Category 2B</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td>≤10</td>
<td>FLAMMABLE LIQUIDS - Category 4</td>
</tr>
<tr>
<td>Potassium chloride</td>
<td>≤3</td>
<td>EYE IRRITATION - Category 2B</td>
</tr>
<tr>
<td>Reference Dye</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potassium chloride</td>
<td>≤5</td>
<td>EYE IRRITATION - Category 2B</td>
</tr>
<tr>
<td>2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride</td>
<td>≤3</td>
<td>SKIN IRRITATION - Category 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3</td>
</tr>
</tbody>
</table>

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Section 15. Regulatory information

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

Date of issue : 08/11/2020
Date of previous issue : 04/30/2018
Version : 6
Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973
as modified by the Protocol of 1978. ("Marpol" = marine pollution)
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>Brilliant III SYBR® Green QPCR Master Mix Sample Size EYE IRRITATION - Category 2B</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

Indicates information that has changed from previously issued version.

Notice to reader

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Date of issue : 08/11/2020