SAFETY DATA SHEET
Brilliant II SYBR Green QRT-PCR High ROX Master Mix - 1-Step, Part Number 600836

Section 1. Identification

1.1 Product identifier
Product name: Brilliant II SYBR Green QRT-PCR High ROX Master Mix - 1-Step, Part Number 600836
Part no. (chemical kit): 600836
Part no.: 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix 600836-51
RT/RNase Block Enzyme Mixture 600825-52
Validation date: 4/25/2019

1.2 Relevant identified uses of the substance or mixture and uses advised against
Material uses: Analytical reagent.
2X Brilliant II SYBR® QRT-PCR High ROX Master Mix 2 × 2.5 ml
RT/RNase Block Enzyme Mixture 0.4 ml

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

Classification of the substance or mixture
2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
H320 EYE IRRITATION - Category 2B
RT/RNase Block Enzyme Mixture
H320 EYE IRRITATION - Category 2B

Ingredients of unknown toxicity: 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
2X Brilliant II SYBR® QRT-PCR RT/RNase Block Enzyme Mixture
Percentage of the mixture consisting of ingredient (s) of unknown acute inhalation toxicity: 10 - 30%

2.2 GHS label elements
Signal word: Warning

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Section 2. Hazards identification

Hazard statements
H320 - Causes eye irritation.

Precautionary statements
Prevention
P264 - Wash hands thoroughly after handling.

Response
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
Not applicable.

Disposal
Not applicable.

Supplemental label elements
None known.

2.3 Other hazards
Hazards not otherwise classified
None known.

Section 3. Composition/information on ingredients

Substance/mixture
2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
RT/RNase Block Enzyme Mixture

Ingredient name | % | CAS number
--- | --- | ---
2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
Glycerol | ≥10 - ≤25 | 56-81-5
Dimethyl sulfoxide | ≤10 | 67-68-5

RT/RNase Block Enzyme Mixture
Glycerol | ≥50 - ≤75 | 56-81-5

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.

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Section 4. First aid measures

4.1 Description of necessary first aid measures

<table>
<thead>
<tr>
<th>Condition</th>
<th>Substance</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye contact</td>
<td>2X Brilliant II SYBR® QRT-PCR High ROX 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. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.</td>
</tr>
<tr>
<td></td>
<td>RT/RNase Block Enzyme Mixture</td>
<td>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.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td>RT/RNase Block Enzyme Mixture</td>
<td>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.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td>RT/RNase Block Enzyme Mixture</td>
<td>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.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</td>
<td>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.</td>
</tr>
</tbody>
</table>
## Section 4. First aid measures

| RT/RNase Block Enzyme Mixture | 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. 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. |

### 4.2 Most important symptoms/effects, acute and delayed

#### Potential acute health effects

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>Causes eye irritation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingestion</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Inhalation</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>Adverse symptoms may include the following: irritation watering redness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

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Section 4. First aid measures

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

Notes to physician:
- **2X Brilliant II SYBR® QRT-PCR High ROX Master Mix**
  - Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

- **RT/RNase Block Enzyme Mixture**
  - Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Protection of first-aiders:
- **2X Brilliant II SYBR® QRT-PCR High ROX Master Mix**
  - 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.

- **RT/RNase Block Enzyme Mixture**
  - 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.

Specific treatments:
- **2X Brilliant II SYBR® QRT-PCR High ROX Master Mix**
  - No specific treatment.

- **RT/RNase Block Enzyme Mixture**
  - No specific treatment.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

<table>
<thead>
<tr>
<th>Suitable extinguishing media</th>
<th>Unsuitable extinguishing media</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</strong></td>
<td>None known.</td>
</tr>
<tr>
<td><strong>RT/RNase Block Enzyme Mixture</strong></td>
<td>None known.</td>
</tr>
</tbody>
</table>

5.2 Special hazards arising from the substance or mixture

<table>
<thead>
<tr>
<th>Specific hazards arising from the chemical</th>
<th>Hazardous thermal decomposition products</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</strong></td>
<td>Decomposition products may include the following materials:</td>
</tr>
<tr>
<td><strong>RT/RNase Block Enzyme Mixture</strong></td>
<td>carbon dioxide</td>
</tr>
<tr>
<td></td>
<td>carbon monoxide</td>
</tr>
<tr>
<td></td>
<td>sulfur oxides</td>
</tr>
</tbody>
</table>

5.3 Advice for firefighters

<table>
<thead>
<tr>
<th>Special protective actions for fire-fighters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</strong></td>
</tr>
</tbody>
</table>

| **RT/RNase Block Enzyme Mixture** | 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 |

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**Section 5. Fire-fighting measures**

**Special protective equipment for fire-fighters**
- 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
- RT/RNase Block Enzyme Mixture

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**

**For non-emergency personnel**
- 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
- RT/RNase Block Enzyme Mixture

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.

**For emergency responders**
- 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
- RT/RNase Block Enzyme Mixture

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".

**6.2 Environmental precautions**
- 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
- RT/RNase Block Enzyme Mixture

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).

**6.3 Methods and materials for containment and cleaning up**

- 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
- RT/RNase Block Enzyme Mixture
Section 6. Accidental release measures

Methods for cleaning up  
- **2X Brilliant II SYBR® QRT-PCR High ROX 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 Enzyme Mixture**  
  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

#### Protective measures
- **2X Brilliant II SYBR® QRT-PCR High ROX 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.

- **RT/RNase Block Enzyme Mixture**  
  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.

#### Advice on general occupational hygiene
- **2X Brilliant II SYBR® QRT-PCR High ROX 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.

- **RT/RNase Block Enzyme Mixture**  
  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.

### 7.2 Conditions for safe storage, including any incompatibilities
- **2X Brilliant II SYBR® QRT-PCR High ROX 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.
Section 7. Handling and storage

RT/RNase Block Enzyme Mixture

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.

7.3 Specific end use(s)

Recommendations:

Industrial sector specific solutions:

2X Brilliant II SYBR® QRT-PCR High ROX Master Mix

TWA: 5 mg/m³ 8 hours. Form: Respirable fraction
TWA: 10 mg/m³ 8 hours. Form: Total dust
OSHA PEL (United States, 5/2018).
TWA: 5 mg/m³ 8 hours. Form: Respirable fraction
TWA: 15 mg/m³ 8 hours. Form: Total dust
AIHA WEEL (United States, 5/2018).
TWA: 250 ppm 8 hours.

Dimethyl sulfoxide

TWA: 5 mg/m³ 8 hours. Form: Respirable fraction
TWA: 10 mg/m³ 8 hours. Form: Total dust
OSHA PEL (United States, 5/2018).
TWA: 5 mg/m³ 8 hours. Form: Respirable fraction
TWA: 15 mg/m³ 8 hours. Form: Total dust

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>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</td>
<td>OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td></td>
</tr>
<tr>
<td>RT/RNase Block Enzyme Mixture</td>
<td>OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust</td>
</tr>
<tr>
<td>Glycerol</td>
<td>OSHA PEL (United States, 5/2018). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust</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.

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Section 8. Exposure controls/personal protection

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.

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: 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix Liquid.

Color: Liquid.

Odor: Not available.

Odor threshold: Not available.

pH: 8

Melting point: Not available.

Boiling point: Not available.

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Section 9. Physical and chemical properties

Flash point: Not available.
Evaporation rate: Not available.
Flammability (solid, gas): Not applicable.
Lower and upper explosive (flammable) limits: Not available.
Vapor pressure: Not available.
Vapor density: Not available.
Relative density: Not available.
Solubility: Soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water: Not available.
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: Not available.

Section 10. Stability and reactivity

10.1 Reactivity: No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability: The product is stable.
10.3 Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.
Section 10. Stability and reactivity

10.4 Conditions to avoid:

- 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
- RT/RNase Block Enzyme Mixture

No specific data.

10.5 Incompatible materials:

- 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
- RT/RNase Block Enzyme Mixture

No specific data.

May react or be incompatible with oxidizing materials.

10.6 Hazardous decomposition products:

- 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
- RT/RNase Block Enzyme Mixture

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

Section 11. Toxicological information

11.1 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 SYBR® QRT-PCR High ROX Master Mix Glycerol</td>
<td>LD50 Oral 12600 mg/kg</td>
<td>Rat</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td>LD50 Oral 14500 mg/kg</td>
<td>Rat</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>RT/RNase Block Enzyme Mixture Glycerol</td>
<td>LD50 Oral 12600 mg/kg</td>
<td>Rat</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Brilliant II SYBR® QRT-PCR High ROX 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>Dimethyl sulfoxide</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></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>100 milligrams</td>
<td>-</td>
</tr>
<tr>
<td>RT/RNase Block Enzyme Mixture Glycerol</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
</tbody>
</table>

Sensitization

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Not available.

**Mutagenicity**
- Conclusion/Summary : Not available.

**Carcinogenicity**
- Conclusion/Summary : Not available.

**Reproductive toxicity**
- Conclusion/Summary : Not available.

**Teratogenicity**
- Conclusion/Summary : Not available.

**Specific target organ toxicity (single exposure)**
- Not available.

**Specific target organ toxicity (repeated exposure)**
- Not available.

**Aspiration hazard**
- Not available.

**Information on the likely routes of exposure**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Routes of entry anticipated: Oral, Dermal, Inhalation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</td>
<td>Routes of entry anticipated: Oral, Dermal, Inhalation.</td>
</tr>
<tr>
<td>RT/RNase Block Enzyme Mixture</td>
<td>Routes of entry anticipated: Oral, Dermal, Inhalation.</td>
</tr>
</tbody>
</table>

**Potential acute health effects**

**Eye contact**
- 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
- RT/RNase Block Enzyme Mixture
  - Causes eye irritation.

**Inhalation**
- 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
- RT/RNase Block Enzyme Mixture
  - No known significant effects or critical hazards.

**Skin contact**
- 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
- RT/RNase Block Enzyme Mixture
  - No known significant effects or critical hazards.

**Ingestion**
- 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
- RT/RNase Block Enzyme Mixture
  - No known significant effects or critical hazards.

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

**Eye contact**
- 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
- RT/RNase Block Enzyme Mixture
  - Adverse symptoms may include the following:
    - irritation
    - watering
    - redness

**Inhalation**
- 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
- RT/RNase Block Enzyme Mixture
  - No specific data.

**Skin contact**
- 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
- RT/RNase Block Enzyme Mixture
  - No specific data.
Section 11. Toxicological information

Ingestion

2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
RT/RNase Block Enzyme Mixture
No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects

No known significant effects or critical hazards.

Potential delayed effects

No known significant effects or critical hazards.

Long term exposure

Potential immediate effects

No known significant effects or critical hazards.

Potential delayed effects

No known significant effects or critical hazards.

Potential chronic health effects

General

2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
RT/RNase Block Enzyme Mixture
No known significant effects or critical hazards.

Carcinogenicity

2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
RT/RNase Block Enzyme Mixture
No known significant effects or critical hazards.

Mutagenicity

2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
RT/RNase Block Enzyme Mixture
No known significant effects or critical hazards.

Teratogenicity

2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
RT/RNase Block Enzyme Mixture
No known significant effects or critical hazards.

Developmental effects

2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
RT/RNase Block Enzyme Mixture
No known significant effects or critical hazards.

Fertility effects

2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
RT/RNase Block Enzyme Mixture
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 SYBR® QRT-PCR High ROX Master Mix</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>12600</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td>14500</td>
<td>40000</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>RT/RNase Block Enzyme Mixture</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>12600</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Date of issue: 04/25/2019
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>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</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></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 3323 µg/l Marine water</td>
<td>Algae - Nitzschia pungens</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

12.2 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 SYBR® QRT-PCR High ROX Master Mix</td>
<td>301D Ready Biodegradability - Closed Bottle Test</td>
<td>93 % - 30 days</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RT/RNase Block Enzyme Mixture</td>
<td>301D Ready Biodegradability - Closed Bottle Test</td>
<td>93 % - 30 days</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.3 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 SYBR® QRT-PCR High ROX Master Mix</td>
<td>-1.76</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>Glycerol</td>
<td>-1.35</td>
<td>3.16</td>
<td>low</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RT/RNase Block Enzyme Mixture</td>
<td>-1.76</td>
<td></td>
<td>low</td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

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

Date of issue : 04/25/2019
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 Annex II of MARPOL and the IBC Code: 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
Clean Air Act Section 602 Class II Substances: Not listed

Date of issue: 04/25/2019
Section 15. Regulatory information

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 : 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
                   EYE IRRITATION - Category 2B
                   RT/RNase Block Enzyme Mixture
                   EYE IRRITATION - Category 2B

Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>≥10 - ≤25</td>
<td>EYE IRRITATION - Category 2A</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td>≤10</td>
<td>FLAMMABLE LIQUIDS - Category 4</td>
</tr>
<tr>
<td>RT/RNase Block Enzyme Mixture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>≥50 - ≤75</td>
<td>EYE IRRITATION - Category 2A</td>
</tr>
</tbody>
</table>

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, SULFINYLBI-S-
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
Not listed.

Inventory list
Australia : Not determined.
Canada : All components are listed or exempted.

Date of issue : 04/25/2019
Section 15. Regulatory information

<table>
<thead>
<tr>
<th>Country</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Europe</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Japan</td>
<td>Japan inventory (ENCS): Not determined.</td>
</tr>
<tr>
<td></td>
<td>Japan inventory (ISHL): Not determined.</td>
</tr>
<tr>
<td>New Zealand</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Philippines</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>Not determined.</td>
</tr>
<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>All components are listed or exempted.</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>Not determined.</td>
</tr>
</tbody>
</table>

Section 16. Other information

History
Date of issue: 04/25/2019
Date of previous issue: 10/27/2017
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
- 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 SYBR® QRT-PCR High ROX Master Mix</td>
<td>Calculation method</td>
</tr>
<tr>
<td>EYE IRRITATION - Category 2B</td>
<td></td>
</tr>
<tr>
<td>RT/RNase Block Enzyme Mixture</td>
<td>Calculation method</td>
</tr>
<tr>
<td>EYE IRRITATION - Category 2B</td>
<td></td>
</tr>
</tbody>
</table>

Indicates information that has changed from previously issued version.

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