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: 10/27/2017

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: 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
                    RT/RNase Block Enzyme Mixture 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
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 10 - 30%
2X Brilliant II SYBR® QRT-PCR RT/RNase Block Enzyme Mixture
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 30 - 60%

2.2 GHS label elements
Signal word: Warning
2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
Warning
2X Brilliant II SYBR® QRT-PCR RT/RNase Block Enzyme Mixture
Warning

Date of issue: 10/27/2017
Section 2. Hazards identification

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

H320 - Causes eye irritation.

Precautionary statements:

Prevention:
- 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
  - P264 - Wash hands thoroughly after handling.
- RT/RNase Block Enzyme Mixture
  - P264 - Wash hands thoroughly after handling.

Response:
- 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
  - 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.
- RT/RNase Block Enzyme Mixture
  - 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 SYBR® QRT-PCR High ROX Master Mix
  - Not applicable.
- RT/RNase Block Enzyme Mixture
  - Not applicable.

Disposal:
- 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
  - Not applicable.
- RT/RNase Block Enzyme Mixture
  - Not applicable.

Supplemental label elements:

None known.

Section 3. Composition/information on ingredients

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

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix Mixture</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>RT/RNase Block Enzyme Mixture Mixture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>≥50 - ≤75</td>
<td>56-81-5</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: 10/27/2017
## Section 4. First aid measures

### 4.1 Description of necessary first aid measures

<table>
<thead>
<tr>
<th><strong>Eye contact</strong></th>
<th><strong>Inhalation</strong></th>
<th><strong>Skin contact</strong></th>
<th><strong>Ingestion</strong></th>
</tr>
</thead>
<tbody>
<tr>
<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>
<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>
<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. If unconscious, place in recovery position and get medical attention immediately.</td>
</tr>
</tbody>
</table>

**RT/RNase Block Enzyme Mixture**

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.

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.

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.

Remove victim from contact with material if possible. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Date of issue:** 10/27/2017
Section 4. First aid measures

RT/RNase Block Enzyme Mixture

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

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.

Over-exposure signs/symptoms

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.

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

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

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Section 4. First aid measures

Notes to physician:
- 2X Brilliant 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
- Suitable extinguishing media:
  - 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
    - Use an extinguishing agent suitable for the surrounding fire.
  - RT/RNase Block Enzyme Mixture
    - Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media:
  - 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
    - None known.
  - RT/RNase Block Enzyme Mixture
    - None known.

5.2 Special hazards arising from the substance or mixture
- Specific hazards arising from the chemical:
  - 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
    - In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous thermal decomposition products:
  - 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
    - Decomposition products may include the following materials:
      - carbon dioxide
      - carbon monoxide
      - sulfur oxides
  - RT/RNase Block Enzyme Mixture
    - Decomposition products may include the following materials:
      - carbon dioxide
      - carbon monoxide

5.3 Advice for firefighters
- Special protective actions for fire-fighters:
  - 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix
    - 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.
  - 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 without suitable training.

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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 | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| 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 | 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. |
| 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). |

### For emergency responders

| 2X Brilliant II SYBR® QRT-PCR High ROX Master Mix | 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". |
| 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 | 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). |
| 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
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.
Brilliant II SYBR Green QRT-PCR High ROX Master Mix - 1-Step, Part Number 600836

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
Industrial applications, Professional applications.
RT/RNase Block Enzyme Mixture
Industrial applications, Professional applications.

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>Glycerol</td>
<td>OSHA PEL (United States, 6/2016). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td>AIHA WEEL (United States, 10/2011). TWA: 250 ppm 8 hours.</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, 6/2016). 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: Liquid.
Color: Not available.
Odor: Not available.
Odor threshold: Not available.
pH: Not available.
Melting point: 8
Boiling point: Not available.

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Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</th>
<th>RT/RNase Block Enzyme Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable.</td>
<td></td>
</tr>
<tr>
<td>Lower and upper explosive</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>(flammable) limits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in the following materials: cold water</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and hot water.</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available.</td>
<td></td>
</tr>
</tbody>
</table>

Section 10. Stability and reactivity

10.1 Reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</th>
<th>RT/RNase Block Enzyme Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No specific test data related to reactivity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>available for this product or its ingredients.</td>
<td></td>
</tr>
</tbody>
</table>

10.2 Chemical stability

<table>
<thead>
<tr>
<th>Property</th>
<th>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</th>
<th>RT/RNase Block Enzyme Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The product is stable.</td>
<td></td>
</tr>
</tbody>
</table>

10.3 Possibility of hazardous reactions

<table>
<thead>
<tr>
<th>Property</th>
<th>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</th>
<th>RT/RNase Block Enzyme Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Under normal conditions of storage and use,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>hazardous reactions will not occur.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Under normal conditions of storage and use,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>hazardous reactions will not occur.</td>
<td></td>
</tr>
</tbody>
</table>

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Section 10. Stability and reactivity

10.4 Conditions to avoid

- **2X Brilliant II SYBR® QRT-PCR High ROX Master Mix**
  - No specific data.

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

10.5 Incompatible materials

- **2X Brilliant II SYBR® QRT-PCR High ROX Master Mix**
  - May react or be incompatible with oxidizing materials.

- **RT/RNase Block Enzyme Mixture**
  - May react or be incompatible with oxidizing materials.

10.6 Hazardous decomposition products

- **2X Brilliant II SYBR® QRT-PCR High ROX Master Mix**
  - Under normal conditions of storage and use, hazardous decomposition products should not be produced.

- **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><strong>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>12600 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>14500 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rat</td>
<td>40000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td><strong>RT/RNase Block Enzyme Mixture</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>12600 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

**Irritation/Corrosion**

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

**Sensitization**

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Section 11. Toxicological information

Not available.

**Mutagenicity**
Not available.

**Carcinogenicity**
Not available.

**Reproductive toxicity**
Not available.

**Teratogenicity**
Not available.

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

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

**Aspiration hazard**
Not available.

Information on the likely routes of exposure

<table>
<thead>
<tr>
<th>Route of Exposure</th>
<th>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</th>
<th>Routes of entry anticipated: Oral, Dermal, Inhalation.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<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**

<table>
<thead>
<tr>
<th>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</th>
<th>Causes eye irritation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT/RNase Block Enzyme Mixture</td>
<td>Causes eye irritation.</td>
</tr>
</tbody>
</table>

**Inhalation**

<table>
<thead>
<tr>
<th>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT/RNase Block Enzyme Mixture</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

**Skin contact**

<table>
<thead>
<tr>
<th>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT/RNase Block Enzyme Mixture</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

**Ingestion**

<table>
<thead>
<tr>
<th>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT/RNase Block Enzyme Mixture</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

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

**Eye contact**

<table>
<thead>
<tr>
<th>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</th>
<th>Adverse symptoms may include the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT/RNase Block Enzyme Mixture</td>
<td>irritation</td>
</tr>
<tr>
<td></td>
<td>watering</td>
</tr>
<tr>
<td></td>
<td>redness</td>
</tr>
</tbody>
</table>

**Inhalation**

<table>
<thead>
<tr>
<th>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</th>
<th>No specific data.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT/RNase Block Enzyme Mixture</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

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Section 11. Toxicological information

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

**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**
  - 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 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**
  
Not available.

Section 12. Ecological information

12.1 Toxicity
### Section 12. Ecological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</strong></td>
<td>Acute LC50 54000 mg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td>Glycerol</td>
<td>Acute LC50 25000 ppm Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td>Acute LC50 34000000 µg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
<tr>
<td>Chronic NOEC 100 µl/L Marine water</td>
<td>Algae - Ulva lactuca</td>
<td>72 hours</td>
<td></td>
</tr>
<tr>
<td><strong>RT/RNase Block Enzyme Mixture</strong></td>
<td>Acute LC50 54000 mg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 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><strong>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</strong></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><strong>RT/RNase Block Enzyme Mixture</strong></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><strong>2X Brilliant II SYBR® QRT-PCR High ROX Master Mix</strong></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><strong>RT/RNase Block Enzyme Mixture</strong></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.
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):

Clean Air Act Section 602 Class I Substances: Not listed
Clean Air Act Section 602 Class II Substances: Not listed
DEA List I Chemicals (Precursor Chemicals): Not listed

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Section 15. Regulatory information

**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
  - Immediate (acute) health hazard
- RT/RNase Block Enzyme Mixture
  - Immediate (acute) health hazard

**Composition/information on ingredients**

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Fire hazard</th>
<th>Sudden release of pressure</th>
<th>Reactive</th>
<th>Immediate (acute) health hazard</th>
<th>Delayed (chronic) health hazard</th>
</tr>
</thead>
</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, SULFINYL BIS-

**Pennsylvania**
- The following components are listed: 1,2,3-PROPANETRIOL

**International regulations**

**Chemical Weapon Convention List Schedules I, II & III Chemicals**
- Not listed.

**Montreal Protocol (Annexes A, B, C, E)**
- Not listed.

**Stockholm Convention on Persistent Organic Pollutants**
- Not listed.

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

**UNECE Aarhus Protocol on POPs and Heavy Metals**
- Not listed.

**Inventory list**

**Australia**
- Not determined.

**Canada**
- All components are listed or exempted.

**China**
- All components are listed or exempted.

**Europe**
- Not determined.
Section 15. Regulatory information

<table>
<thead>
<tr>
<th>Country</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<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>Malaysia</td>
<td>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>All components are listed or exempted.</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

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of issue</td>
<td>10/27/2017</td>
</tr>
<tr>
<td>Date of previous issue</td>
<td>05/28/2015.</td>
</tr>
<tr>
<td>Version</td>
<td>5</td>
</tr>
</tbody>
</table>

Notice to reader

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