Section 1. Identification

1.1 Product identifier

Product name: QPCR Library Quantitation Kit - Custom - Illumina GA, Part Number 930901
Part No. (Chemical Kit): 930901
Part No.: 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix 930901-51
50× Illumina GA Primer Mix 5190-2375
Validation date: 08/03/2016

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

Material uses: Analytical reagent.
2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix 40 ml (2 ml / Tube)
50× Illumina GA Primer Mix 10 x 0.2 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: 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
50× Illumina GA Primer Mix
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

2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
H320 EYE IRRITATION - Category 2B

2.2 GHS label elements

Signal word: Warning

2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix

50× Illumina GA Primer Mix

No signal word.

Hazard statements: 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix

50× Illumina GA Primer Mix

H320 - Causes eye irritation.

Precautionary statements:

No known significant effects or critical hazards.
Section 2. Hazards identification

**Prevention**
- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
- 50× Illumina GA Primer Mix

P264 - Wash hands thoroughly after handling.

**Response**
- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
- 50× Illumina GA Primer 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.

**Storage**
- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
- 50× Illumina GA Primer Mix

Not applicable.

**Disposal**
- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
- 50× Illumina GA Primer Mix

Not applicable.

**Supplemental label elements**
- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
- 50× Illumina GA Primer Mix

None known.

2.3 Other hazards

Hazards not otherwise classified

- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
- 50× Illumina GA Primer Mix

None known.

Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix</td>
<td>Mixture</td>
</tr>
<tr>
<td>50× Illumina GA Primer Mix</td>
<td>Mixture</td>
</tr>
</tbody>
</table>

**Ingredient name** | % | CAS number |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix</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>
</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.

Section 4. First aid measures

4.1 Description of necessary first aid measures

**Eye contact**
- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.

- 50× Illumina GA Primer Mix

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
### Section 4. First aid measures

<table>
<thead>
<tr>
<th>Scenario</th>
<th>2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix</th>
<th>Additional Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inhalation</strong></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>50× Illumina GA Primer Mix</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>2× Brilliant III Ultra-Fast SYBR Green QPCR 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><strong>Ingestion</strong></td>
<td>2× Brilliant III Ultra-Fast SYBR Green QPCR 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. 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>
</tbody>
</table>

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

#### Potential acute health effects

<table>
<thead>
<tr>
<th>Scenario</th>
<th>2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix</th>
<th>50× Illumina GA Primer Mix</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
<td>Causes eye irritation.</td>
<td></td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>No known significant effects or critical hazards.</td>
<td></td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

---

Date of issue: 08/03/2016
Section 4. First aid measures

**Skin contact**
- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
- 50× Illumina GA Primer Mix

No known significant effects or critical hazards.

Ingestion
- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
- 50× Illumina GA Primer Mix

No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

Eye contact
- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
- 50× Illumina GA Primer Mix

Adverse symptoms may include the following:
- irritation
- watering
- redness

Inhalation
- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
- 50× Illumina GA Primer Mix

No specific data.

Skin contact
- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
- 50× Illumina GA Primer Mix

No specific data.

Ingestion
- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
- 50× Illumina GA Primer Mix

No specific data.

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

**Notes to physician**
- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
- 50× Illumina GA Primer Mix

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments
- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
- 50× Illumina GA Primer Mix

No specific treatment.

Protection of first-aiders
- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
- 50× Illumina GA Primer 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.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

**Suitable extinguishing media**
- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
- 50× Illumina GA Primer Mix

Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media**
- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
- 50× Illumina GA Primer Mix

None known.

5.2 Special hazards arising from the substance or mixture
Section 5. Fire-fighting measures

Specific hazards arising from the chemical: 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
50× Illumina GA Primer Mix

In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products: 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix

Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide
- sulfur oxides
- halogenated compounds
- metal oxide/oxides

50× Illumina GA Primer Mix
No specific data.

5.3 Advice for firefighters

Special protective actions for fire-fighters: 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
50× Illumina GA Primer 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.

Special protective equipment for fire-fighters: 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
50× Illumina GA Primer Mix

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: 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
50× Illumina GA Primer 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.

For emergency responders: 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
50× Illumina GA Primer 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". 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".

Date of issue: 08/03/2016
### Section 6. Accidental release measures

#### 6.2 Environmental precautions

<table>
<thead>
<tr>
<th>Substance</th>
<th>Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix</td>
<td>Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).</td>
</tr>
<tr>
<td>50× Illumina GA Primer Mix</td>
<td>Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Substance</th>
<th>Methods for cleaning up</th>
</tr>
</thead>
<tbody>
<tr>
<td>2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix</td>
<td>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.</td>
</tr>
<tr>
<td>50× Illumina GA Primer Mix</td>
<td>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.</td>
</tr>
</tbody>
</table>

### Section 7. Handling and storage

#### 7.1 Precautions for safe handling

<table>
<thead>
<tr>
<th>Substance</th>
<th>Protective measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix</td>
<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>
</tr>
<tr>
<td>50× Illumina GA Primer Mix</td>
<td>Put on appropriate personal protective equipment (see Section 8).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>Advice on general occupational hygiene</th>
</tr>
</thead>
<tbody>
<tr>
<td>2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix</td>
<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>
</tr>
<tr>
<td>50× Illumina GA Primer Mix</td>
<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>
</tr>
</tbody>
</table>
Section 7. Handling and storage

7.2 Conditions for safe storage, including any incompatibilities

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Incompatibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix</td>
<td>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.</td>
</tr>
<tr>
<td>50× Illumina GA Primer Mix</td>
<td>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.</td>
</tr>
</tbody>
</table>

7.3 Specific end use(s)

**Recommendations**

- 50× Illumina GA Primer Mix: Industrial applications, Professional applications.

**Industrial sector specific solutions**

- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix: Not applicable.
- 50× Illumina GA Primer Mix: Not applicable.

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>OSHA PEL (United States, 2/2013). TWA: 10 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. None.</td>
</tr>
<tr>
<td>Potassium chloride</td>
<td></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.

Date of issue: 08/03/2016
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: 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix 50× Illumina GA Primer Mix

Color: 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix 50× Illumina GA Primer Mix

Odor: 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix 50× Illumina GA Primer Mix

Odor threshold: 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix 50× Illumina GA Primer Mix

pH: 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix 50× Illumina GA Primer Mix

Melting point: 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix 50× Illumina GA Primer Mix

Boiling point: 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix 50× Illumina GA Primer Mix

Date of issue: 08/03/2016
### Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix</th>
<th>50× Illumina GA Primer Mix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Lower and upper explosive (flammable) limits</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

### Section 10. Stability and reactivity

#### 10.1 Reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix</th>
<th>50× Illumina GA Primer Mix</th>
</tr>
</thead>
<tbody>
<tr>
<td>No specific test data related to reactivity available for this product or its ingredients.</td>
<td>No specific test data related to reactivity available for this product or its ingredients.</td>
<td></td>
</tr>
</tbody>
</table>

#### 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
- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
- 50× Illumina GA Primer Mix

No specific data.

10.5 Incompatible materials
- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
- 50× Illumina GA Primer Mix

May react or be incompatible with oxidizing materials.

10.6 Hazardous decomposition products
- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix
- 50× Illumina GA Primer Mix

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>2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix</td>
<td>Glycerol LD50 Oral</td>
<td>Rat</td>
<td>12600 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td>LD50 Dermal</td>
<td>Rat</td>
<td>40000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Potassium chloride</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>14500 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>2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix</td>
<td>Glycerol 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>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
<tr>
<td>Potassium chloride</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
Not available.

Mutagenicity
Not available.

Carcinogenicity
Not available.

Date of issue: 08/03/2016
## Section 11. Toxicological information

**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</th>
<th>Master Mixes</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix 50× Illumina GA Primer Mix</td>
<td>Routes of entry anticipated: Oral, Dermal, Inhalation.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix 50× Illumina GA Primer Mix</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Infection</td>
<td>2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix 50× Illumina GA Primer Mix</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

### Potential acute health effects

**Eye contact**

- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix 50× Illumina GA Primer Mix
- Causes eye irritation.

**Inhalation**

- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix 50× Illumina GA Primer Mix
- No known significant effects or critical hazards.

**Skin contact**

- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix 50× Illumina GA Primer Mix
- No known significant effects or critical hazards.

**Ingestion**

- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix 50× Illumina GA Primer Mix
- No known significant effects or critical hazards.

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

**Eye contact**

- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix 50× Illumina GA Primer Mix
- Adverse symptoms may include the following:
  - irritation
  - watering
  - redness
- No specific data.

**Inhalation**

- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix 50× Illumina GA Primer Mix
- No specific data.

**Skin contact**

- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix 50× Illumina GA Primer Mix
- No specific data.

**Ingestion**

- 2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix 50× Illumina GA Primer Mix
- 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.
Section 11. Toxicological information

Long term exposure

Potential immediate effects: Not available.

Potential delayed effects: Not available.

Potential chronic health effects

General:

Carcinogenicity:

Mutagenicity:

Teratogenicity:

Developmental effects:

Fertility effects:

No known significant effects or critical hazards.

No known significant effects or critical hazards.

No known significant effects or critical hazards.

No known significant effects or critical hazards.

No known significant effects or critical hazards.

No known significant effects or critical hazards.

No known significant effects or critical hazards.

No known significant effects or critical hazards.

No known significant effects or critical hazards.

Potential immediate effects:

Not available.

Potential delayed effects:

Not available.

Numerical measures of toxicity

Acute toxicity estimates

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>183805.5 mg/kg</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>2× Brilliant III Ultra-Fast SYBR Green QPCR 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>Glycerol</td>
<td>Acute LC50 34000000 µg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td>Chronic NOEC 100 ul/L Marine water</td>
<td>Algae - Ulva lactuca</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 133700 µg/l Fresh water</td>
<td>Algae - Navicula seminulum</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 9.24 g/L Fresh water</td>
<td>Algae - Desmodesmus subspicatus</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 141460 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 880000 µg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability

Not available.

Date of issue: 08/03/2016
Section 12. Ecological information

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 III Ultra-Fast SYBR Green QPCR 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>-0.46</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>Potassium chloride</td>
<td>-0.46</td>
<td>-</td>
<td>low</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

Regulatory information

DOT / IMDG / IATA : Not regulated.
# Section 15. Regulatory information

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

**U.S. Federal regulations**

- **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
- **DEA List I Chemicals (Precursor Chemicals)**: Not listed
- **DEA List II Chemicals (Essential Chemicals)**: Not listed
- **TSCA 8(a) PAIR**: Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-
- **Clean Water Act (CWA) 311**: Edetic acid
- **Clean Water 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
- **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**: 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>
<tbody>
<tr>
<td>2× Brilliant III Ultra-Fast SYBR Green QPCR Master Mix</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td>≤10</td>
<td>Yes.</td>
<td>No.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</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, SULFINYLbis-
- **Pennsylvania**: The following components are listed: 1,2,3-PROPANETRIOL
- **California Prop. 65**: No products were found.
- **Canada inventory**: All components are listed or exempted.

### International regulations

None of the components are listed.

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**Date of issue**: 08/03/2016

**Page**: 14/15
## Section 15. Regulatory information

| International lists | Australia inventory (AICS): Not determined. |
| : | China inventory (IECSC): All components are listed or exempted. |
| : | Japan inventory (ENCS): All components are listed or exempted. |
| : | Japan inventory (ISHL): All components are listed or exempted. |
| : | Korea inventory: Not determined. |
| : | Malaysia Inventory (EHS Register): Not determined. |
| : | New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted. |
| : | Philippines inventory (PICCS): All components are listed or exempted. |
| : | Taiwan Chemical Substances Inventory (TCSI): All components are listed or exempted. |
| : | Turkey inventory: Not determined. |

- **Chemical Weapons Convention List Schedule I Chemicals**: Not listed
- **Chemical Weapons Convention List Schedule II Chemicals**: Not listed
- **Chemical Weapons Convention List Schedule III Chemicals**: Not listed

## Section 16. Other information

### History

| Date of issue | 08/03/2016 |
| Date of previous issue | 03/12/2013 |
| Version | 3 |

> Indicates information that has changed from previously issued version.

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