

SAFETY DATA SHEET



Brilliant II SYBR Green QPCR Master Mix, Part Number 600828

Section 1. Identification

1.1 Product identifier

Product name : Brilliant II SYBR Green QPCR Master Mix, Part Number 600828
Part no. (chemical kit) : 600828
Part no. : 2X Brilliant II SYBR® Green QPCR Master Mix 600828-51
 Reference Dye 600530-53
Validation date : 7/15/2021

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

Material uses : Analytical reagent.
 2X Brilliant II SYBR® Green QPCR Master Mix 2 × 2.5 ml
 Reference Dye 0.1 ml (100 µl 1 mM)

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

Classification of the substance or mixture

2X Brilliant II SYBR® Green QPCR Master Mix
 H320 EYE IRRITATION - Category 2B

2.2 GHS label elements

Signal word : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye Warning
 No signal word.
Hazard statements : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye H320 - Causes eye irritation.
 No known significant effects or critical hazards.
Precautionary statements
Prevention : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye Not applicable.
 Not applicable.

Section 2. Hazards identification

| | | |
|---|--|---|
| Response | : 2X Brilliant II SYBR® Green QPCR 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 advice or attention. |
| | Reference Dye | Not applicable. |
| Storage | : 2X Brilliant II SYBR® Green QPCR Master Mix | Not applicable. |
| | Reference Dye | Not applicable. |
| Disposal | : 2X Brilliant II SYBR® Green QPCR Master Mix | Not applicable. |
| | Reference Dye | Not applicable. |
| Supplemental label elements | : 2X Brilliant II SYBR® Green QPCR Master Mix | None known. |
| | Reference Dye | None known. |
| 2.3 Other hazards | | |
| Hazards not otherwise classified | : 2X Brilliant II SYBR® Green QPCR Master Mix | None known. |
| | Reference Dye | None known. |

Section 3. Composition/information on ingredients

| | | |
|--------------------------|--|---------|
| Substance/mixture | : 2X Brilliant II SYBR® Green QPCR Master Mix | Mixture |
| | Reference Dye | Mixture |

| Ingredient name | % | CAS number |
|--|-----------|------------|
| 2X Brilliant II SYBR® Green QPCR Master Mix | | |
| Glycerol | ≥10 - ≤25 | 56-81-5 |
| Dimethyl sulfoxide | ≤10 | 67-68-5 |
| Magnesium chloride | <0.25 | 7786-30-3 |
| Reference Dye | | |
| Potassium chloride | ≤5 | 7447-40-7 |

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 | : 2X Brilliant II 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. |
| | Reference Dye | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. |

Section 4. First aid measures

| | | |
|---------------------|--|---|
| Inhalation | : 2X Brilliant II SYBR® Green QPCR Master Mix | Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| | Reference Dye | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |
| Skin contact | : 2X Brilliant II SYBR® Green QPCR Master Mix | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse. |
| | Reference Dye | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| Ingestion | : 2X Brilliant II SYBR® Green QPCR Master Mix | Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| | Reference Dye | Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. |

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

| | | |
|--------------------|---|---|
| Eye contact | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Causes eye irritation. |
| Inhalation | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | No known significant effects or critical hazards. |
| | | No known significant effects or critical hazards. |

Section 4. First aid measures

| | | |
|--|---|---|
| Skin contact | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | No known significant effects or critical hazards. |
| Ingestion | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | No known significant effects or critical hazards. No known significant effects or critical hazards. |
| <u>Over-exposure signs/symptoms</u> | | |
| Eye contact | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Adverse symptoms may include the following: irritation watering redness No specific data. |
| Inhalation | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | No specific data. |
| Skin contact | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | No specific data. |
| Ingestion | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | No specific data. No specific data. |

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

| | | |
|-----------------------------------|---|--|
| Notes to physician | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |
| Specific treatments | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | No specific treatment. No specific treatment. |
| Protection of first-aiders | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | 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. No action shall be taken involving any personal risk or without suitable training. |

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

| | | |
|---------------------------------------|---|--|
| Suitable extinguishing media | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. |
| Unsuitable extinguishing media | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | None known. None known. |

5.2 Special hazards arising from the substance or mixture

Section 5. Fire-fighting measures

| | | |
|---|--|---|
| Specific hazards arising from the chemical | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. |
| Hazardous thermal decomposition products | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides |

5.3 Advice for firefighters

| | | |
|---|--|--|
| Special protective actions for fire-fighters | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | 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. 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 | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. 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® Green QPCR Master Mix Reference Dye | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. |
|------------------------------------|--|---|

Section 6. Accidental release measures

| | | |
|--|--|---|
| For emergency responders | : 2X Brilliant II SYBR® Green QPCR 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". |
| | Reference Dye | 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® Green QPCR 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). |
| | Reference Dye | Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |
| 6.3 Methods and materials for containment and cleaning up | | |
| Methods for cleaning up | : 2X Brilliant II SYBR® Green QPCR Master Mix | Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |
| | Reference Dye | Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |

Section 7. Handling and storage

7.1 Precautions for safe handling

| | | |
|---|--|---|
| Protective measures | : 2X Brilliant II SYBR® Green QPCR Master Mix | Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. |
| | Reference Dye | Put on appropriate personal protective equipment (see Section 8). |
| Advice on general occupational hygiene | : 2X Brilliant II SYBR® Green QPCR Master Mix | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |
| | Reference Dye | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment |

Section 7. Handling and storage

7.2 Conditions for safe storage, including any incompatibilities

: 2X Brilliant II SYBR® Green QPCR Master Mix

Reference Dye

before entering eating areas. See also Section 8 for additional information on hygiene measures.

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.

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

: 2X Brilliant II SYBR® Green QPCR Master Mix
Reference Dye

Industrial applications, Professional applications.

Industrial sector specific solutions

: 2X Brilliant II SYBR® Green QPCR Master Mix
Reference Dye

Industrial applications, Professional applications.

Not available.

Not available.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|---|---|
| <input checked="" type="checkbox"/> 2X Brilliant II SYBR® Green QPCR Master Mix | <p>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</p> <p>OSHA PEL (United States, 5/2018). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust</p> <p>AIHA WEEL (United States, 7/2018). TWA: 250 ppm 8 hours.</p> |
| Glycerol | |
| Dimethyl sulfoxide | |
| Magnesium chloride | |
| Reference Dye Potassium chloride | |
| | None. |

8.2 Exposure controls

Section 8. Exposure controls/personal protection

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

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- 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® Green QPCR Master Mix | Liquid. |
| | Reference Dye | Liquid. |
| Color | : 2X Brilliant II SYBR® Green QPCR Master Mix | Not available. |
| | Reference Dye | Not available. |
| Odor | : 2X Brilliant II SYBR® Green QPCR Master Mix | Not available. |
| | Reference Dye | Not available. |
| Odor threshold | : 2X Brilliant II SYBR® Green QPCR Master Mix | Not available. |
| | Reference Dye | Not available. |
| pH | : 2X Brilliant II SYBR® Green QPCR Master Mix | Not available. |
| | Reference Dye | 8 |

Section 9. Physical and chemical properties

| | | |
|---|---|---|
| Melting point | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Not available. Not available. |
| Boiling point | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Not available. Not available. |
| Flash point | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Not available. Not available. |
| Evaporation rate | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Not available. Not available. |
| Flammability (solid, gas) | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Not applicable. Not applicable. |
| Lower and upper explosive (flammable) limits | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Not available. Not available. |
| Vapor pressure | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Not available. Not available. |
| Vapor density | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Not available. Not available. |
| Relative density | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Not available. Not available. |
| Solubility | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. |
| Partition coefficient: n-octanol/water | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Not available. Not available. |
| Auto-ignition temperature | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Not available. Not available. |
| Decomposition temperature | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Not available. Not available. |
| Viscosity | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Not available. Not available. |

Section 10. Stability and reactivity

| | | |
|--------------------------------|---|--|
| 10.1 Reactivity | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. |
| 10.2 Chemical stability | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | The product is stable. The product is stable. |

Section 10. Stability and reactivity

| | | |
|--|---|--|
| 10.3 Possibility of hazardous reactions | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. |
| 10.4 Conditions to avoid | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | No specific data. No specific data. |
| 10.5 Incompatible materials | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. |
| 10.6 Hazardous decomposition products | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|--|-------------|-----------------------|-------------|----------|
| 2X Brilliant II SYBR® Green QPCR Master Mix | | | | |
| Glycerol | LD50 Oral | Rat | 12600 mg/kg | - |
| Dimethyl sulfoxide | LD50 Dermal | Rat | 40000 mg/kg | - |
| | LD50 Oral | Rat | 14500 mg/kg | - |
| Magnesium chloride | LD50 Dermal | Rat - Male, Female | >2000 mg/kg | - |
| | LD50 Oral | Rat | 2800 mg/kg | - |
| Reference Dye | | | | |
| Potassium chloride | LD50 Oral | Rat | 2600 mg/kg | - |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|--|----------------------|---------|-------|-----------------|-------------|
| 2X Brilliant II SYBR® Green QPCR Master Mix | | | | | |
| Glycerol | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| Dimethyl sulfoxide | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| | Eyes - Mild irritant | Rabbit | - | 100 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| | Skin - Mild irritant | Rabbit | - | 100 mg | - |
| Reference Dye | | | | | |
| Potassium chloride | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |

Sensitization

Section 11. Toxicological information

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 | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Routes of entry anticipated: Oral, Dermal, Inhalation. Not available. |
| <u>Potential acute health effects</u> | | |
| Eye contact | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Causes eye irritation. |
| Inhalation | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | No known significant effects or critical hazards. |
| Skin contact | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | No known significant effects or critical hazards. |
| Ingestion | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | No known significant effects or critical hazards. |

Symptoms related to the physical, chemical and toxicological characteristics

| | | |
|---------------------|---|---|
| Eye contact | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | Adverse symptoms may include the following: irritation watering redness No specific data. |
| Inhalation | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | No specific data. |
| Skin contact | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | No specific data. |
| Ingestion | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | No specific data. |

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

Section 11. Toxicological information

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® Green QPCR Master Mix Reference Dye | No known significant effects or critical hazards. |
| Carcinogenicity | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | No known significant effects or critical hazards. |
| Mutagenicity | : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | No known significant effects or critical hazards. |
| Reproductive toxicity | : <input checked="" type="checkbox"/> 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye | No known significant effects or critical hazards. |

Numerical measures of toxicity

Acute toxicity estimates

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|--|--------------|----------------|--------------------------|----------------------------|-------------------------------------|
| <input checked="" type="checkbox"/> 2X Brilliant II SYBR® Green QPCR Master Mix | | | | | |
| Glycerol | 12600 | N/A | N/A | N/A | N/A |
| Dimethyl sulfoxide | 14500 | 40000 | N/A | N/A | N/A |
| Magnesium chloride | 2800 | 2500 | N/A | N/A | N/A |
| Reference Dye | | | | | |
| Reference Dye | 70270.3 | N/A | N/A | N/A | N/A |
| Potassium chloride | 2600 | N/A | N/A | N/A | N/A |

Section 12. Ecological information

12.1 Toxicity

| Product/ingredient name | Result | Species | Exposure |
|--|--------------------------------------|---|----------|
| <input checked="" type="checkbox"/> 2X Brilliant II SYBR® Green QPCR Master Mix | | | |
| Glycerol | Acute LC50 54000 mg/l Fresh water | Fish - Oncorhynchus mykiss | 96 hours |
| Dimethyl sulfoxide | Acute LC50 25000 ppm Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 34000000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Chronic NOEC 100 ul/L Marine water | Algae - Ulva lactuca | 72 hours |
| | Chronic NOEC 100 ul/L Fresh water | Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling) | 21 days |
| Magnesium chloride | Acute EC50 >100 mg/l Fresh water | Algae - Desmodesmus subspicatus | 72 hours |

Section 12. Ecological information

| | | | |
|--|---|--|----------|
| Reference Dye Potassium chloride | Acute EC50 180000 µg/l Fresh water | Crustaceans - Eudiaptomus padanus ssp. padanus - Adult | 48 hours |
| | Acute IC50 6.8 mg/l Fresh water | Aquatic plants - Lemna aequinoctialis | 96 hours |
| | Acute LC50 32000 µg/l Fresh water | Daphnia - Daphnia hyalina - Adult | 48 hours |
| | Acute LC50 2120 mg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Acute NOEC 100 mg/l Fresh water | Algae - Desmodesmus subspicatus | 72 hours |
| | Chronic NOEC 0.1 mg/l Fresh water | Fish - Cyprinus carpio | 35 days |
| | Acute EC50 1337000 µg/l Fresh water | Algae - Navicula seminulum | 96 hours |
| Acute EC50 9.24 g/L Fresh water | Algae - Desmodesmus subspicatus | 72 hours | |
| Acute EC50 141.46 mg/l Fresh water | Daphnia - Daphnia magna | 48 hours | |
| Acute LC50 12.92 mg/l Fresh water | Crustaceans - Pseudosida ramosa - Neonate | 48 hours | |
| Acute LC50 880 mg/l Fresh water | Fish - Pimephales promelas | 96 hours | |

12.2 Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|--|---|------------------------------|------|----------|
| 2X Brilliant II SYBR® Green QPCR Master Mix Glycerol | 301D Ready Biodegradability - Closed Bottle Test | 93 % - 30 days | - | - |
| Dimethyl sulfoxide | OECD 301D Ready Biodegradability - Closed Bottle Test | 31 % - Not readily - 28 days | - | - |

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|--|-------------------|------------|------------------|
| 2X Brilliant II SYBR® Green QPCR Master Mix Dimethyl sulfoxide | - | - | Not readily |
| Reference Dye Potassium chloride | - | - | Readily |

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|--|--------------------|------|-----------|
| 2X Brilliant II SYBR® Green QPCR Master Mix Glycerol | -1.76 | - | low |
| Dimethyl sulfoxide | -1.35 | 3.16 | low |
| Reference Dye Potassium chloride | -0.46 | - | low |

12.4 Mobility in soil

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

Section 12. Ecological information

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

Section 13. Disposal considerations

13.1 Waste treatment methods

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

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

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

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

Section 14. Transport information

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

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

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

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

U.S. Federal regulations : **TSCA 8(a) 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

DEA List I Chemicals (Precursor Chemicals) : Not listed

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® Green EYE IRRITATION - Category 2B
 QPCR Master Mix
 Reference Dye Not applicable.

Composition/information on ingredients

| Name | % | Classification |
|--|-----------|--|
| 2X Brilliant II SYBR® Green QPCR Master Mix | | |
| Glycerol | ≥10 - ≤25 | EYE IRRITATION - Category 2B |
| Dimethyl sulfoxide | ≤10 | FLAMMABLE LIQUIDS - Category 4 EYE IRRITATION - Category 2B |
| Reference Dye | | |
| Potassium chloride | ≤5 | EYE IRRITATION - Category 2B |

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-

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 : Not determined.

China : All components are listed or exempted.

Europe : Not determined.

Japan : **Japan inventory (ENCS)**: Not determined.
Japan inventory (ISHL): Not determined.

Section 15. Regulatory information

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

Section 16. Other information

History

| | |
|-------------------------------|---|
| Date of issue | : 07/15/2021 |
| Date of previous issue | : 04/11/2019 |
| Version | : 7 |
| Key to abbreviations | : ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available UN = United Nations |

Procedure used to derive the classification

| Classification | Justification |
|--|--------------------|
| 2X Brilliant II SYBR® Green QPCR Master Mix EYE IRRITATION - Category 2B | Calculation method |

Indicates information that has changed from previously issued version.

Notice to reader

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.