

# SAFETY DATA SHEET

Brilliant II QPCR Master Mix 10-pack, Part Number 600815

## Section 1. Identification

**Product identifier** : Brilliant II QPCR Master Mix 10-pack, Part Number 600815  
**Part no. (chemical kit)** : 600815  
**Part no.** : 2X Brilliant II QPCR Master Mix 600804-51  
 Reference Dye 600530-53

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

**Identified uses** :  Analytical reagent.  
 Brilliant II QPCR Master Mix 20 x 2.5 ml  
 Reference Dye 0.1 ml (100 µl 1 mM)

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

**Emergency telephone number (with hours of operation)** : CHEMTREC®: 1-800-424-9300

## Section 2. Hazard identification

### Classification of the substance or mixture

Brilliant II QPCR Master  
 Mix  
 H320

EYE IRRITATION - Category 2B

### GHS label elements

**Signal word** : 2X Brilliant II QPCR Master Warning  
 Mix  
 Reference Dye No signal word.  
**Hazard statements** : 2X Brilliant II QPCR Master H320 - Causes eye irritation.  
 Mix  
 Reference Dye No known significant effects or critical hazards.

### Precautionary statements

**Prevention** : 2X Brilliant II QPCR Master Not applicable.  
 Mix  
 Reference Dye Not applicable.  
**Response** : 2X Brilliant II QPCR Master P305 + P351 + P338 - IF IN EYES: Rinse cautiously  
 Mix 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 QPCR Master Not applicable.  
 Mix  
 Reference Dye Not applicable.  
**Disposal** : 2X Brilliant II QPCR Master Not applicable.  
 Mix  
 Reference Dye Not applicable.

## Section 2. Hazard identification

<b>Supplemental label elements</b>	: 2X Brilliant II QPCR Master Mix	None known.
	Reference Dye	None known.
<b>Other hazards which do not result in classification</b>	: 2X Brilliant II QPCR Master Mix	None known.
	Reference Dye	None known.

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	: 2X Brilliant II QPCR Master Mix	Mixture
	Reference Dye	Mixture

Ingredient name	Synonyms	% (w/w)	CAS number
<b>2X Brilliant II QPCR Master Mix</b>			
Glycerol	Glycerol	≥10 - ≤30	56-81-5
Magnesium chloride	Magnesium chloride	≥0.1 - ≤1	7786-30-3
Polyoxyethylene octyl phenyl ether	Triton X-100	≤0.1	9002-93-1
<b>Reference Dye</b>			
Potassium chloride	Potassium Chloride	≥1 - ≤5	7447-40-7

Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First-aid measures

### Description of necessary first aid measures

<b>Eye contact</b>	: 2X Brilliant II 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.
<b>Inhalation</b>	: 2X Brilliant II 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

## Section 4. First-aid measures

<b>Skin contact</b>	: 2X Brilliant II QPCR Master Mix  Reference Dye	decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.  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. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	: 2X Brilliant II QPCR Master Mix  Reference Dye	Wash out mouth with water. Remove dentures if any. 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.  Wash out mouth with water. 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.

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

#### Potential acute health effects

<b>Eye contact</b>	: 2X Brilliant II QPCR Master Mix Reference Dye	Causes eye irritation.  No known significant effects or critical hazards.
<b>Inhalation</b>	: 2X Brilliant II QPCR Master Mix Reference Dye	No known significant effects or critical hazards.  No known significant effects or critical hazards.
<b>Skin contact</b>	: 2X Brilliant II QPCR Master Mix Reference Dye	No known significant effects or critical hazards.  No known significant effects or critical hazards.
<b>Ingestion</b>	: 2X Brilliant II QPCR Master Mix Reference Dye	No known significant effects or critical hazards.  No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

<b>Eye contact</b>	: 2X Brilliant II QPCR Master Mix  Reference Dye	Adverse symptoms may include the following:  irritation watering redness  No specific data.
<b>Inhalation</b>	: 2X Brilliant II QPCR Master Mix Reference Dye	No specific data.  No specific data.

## Section 4. First-aid measures

<b>Skin contact</b>	: 2X Brilliant II QPCR Master Mix Reference Dye	No specific data. No specific data.
<b>Ingestion</b>	: 2X Brilliant II QPCR Master Mix Reference Dye	No specific data. No specific data.

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

<b>Notes to physician</b>	: 2X Brilliant II 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.
<b>Specific treatments</b>	: 2X Brilliant II QPCR Master Mix Reference Dye	No specific treatment. No specific treatment.
<b>Protection of first-aiders</b>	: 2X Brilliant II 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

### Extinguishing media

<b>Suitable extinguishing media</b>	: 2X Brilliant II QPCR Master Mix Reference Dye	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: 2X Brilliant II QPCR Master Mix Reference Dye	None known. None known.
<b>Specific hazards arising from the chemical</b>	: 2X Brilliant II 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.
<b>Hazardous thermal decomposition products</b>	: 2X Brilliant II QPCR Master Mix Reference Dye	Decomposition products may include the following materials: carbon dioxide carbon monoxide Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides

## Section 5. Fire-fighting measures

<b>Special protective actions for fire-fighters</b>	: 2X Brilliant II QPCR 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.
	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.
<b>Special protective equipment for fire-fighters</b>	: 2X Brilliant II QPCR 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.
	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.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	: 2X Brilliant II QPCR 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.
	Reference Dye	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	: 2X Brilliant II 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".
<b>Environmental precautions</b>	: 2X Brilliant II 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).

### Methods and materials for containment and cleaning up

## Section 6. Accidental release measures

<b>Methods for cleaning up</b>	: 2X Brilliant II 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

### Precautions for safe handling

<b>Protective measures</b>	: 2X Brilliant II 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).
<b>Advice on general occupational hygiene</b>	: 2X Brilliant II 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 before entering eating areas. See also Section 8 for additional information on hygiene measures.
<b>Conditions for safe storage, including any incompatibilities</b>	: 2X Brilliant II QPCR 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.
	Reference Dye	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

## Section 7. Handling and storage

prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### [Control parameters](#)

### [Occupational exposure limits](#)

Ingredient name	Exposure limits
<b>2X Brilliant II QPCR Master Mix</b> Glycerol	<b>CA Alberta Provincial (Canada, 6/2018).</b> OEL: 10 mg/m <sup>3</sup> 8 hours. Form: Mist <b>CA Quebec Provincial (Canada, 6/2022).</b> TWAEV: 10 mg/m <sup>3</sup> 8 hours. Form: mist <b>CA Saskatchewan Provincial (Canada, 7/2013).</b> STEL: 20 mg/m <sup>3</sup> 15 minutes. Form: mist TWA: 10 mg/m <sup>3</sup> 8 hours. Form: mist <b>CA British Columbia Provincial (Canada, 6/2023).</b> TWA: 3 mg/m <sup>3</sup> 8 hours. Form: respirable mist TWA: 10 mg/m <sup>3</sup> 8 hours. Form: total mist

### [Biological exposure indices](#)

No exposure indices known.

- 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: safety glasses with side-shields.
- 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.
- 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.

## Section 8. Exposure controls/personal protection

- 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 and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance

- Physical state** : 2X Brilliant II QPCR Master Mix Liquid.  
Reference Dye Liquid.
- Color** : 2X Brilliant II QPCR Master Mix Not available.  
Reference Dye Not available.
- Odor** : 2X Brilliant II QPCR Master Mix Not available.  
Reference Dye Not available.
- Odor threshold** : 2X Brilliant II QPCR Master Mix Not available.  
Reference Dye Not available.
- pH** : 2X Brilliant II QPCR Master Mix 8  
Reference Dye 8
- Melting point/freezing point** : 2X Brilliant II QPCR Master Mix Not available.  
Reference Dye Not available.
- Boiling point, initial boiling point, and boiling range** : 2X Brilliant II QPCR Master Mix Not available.  
Reference Dye Not available.

### Flash point

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
2X Brilliant II QPCR Master Mix						
Glycerol	-	-	-	177	350.6	-

- Evaporation rate** : 2X Brilliant II QPCR Master Mix Not available.  
Reference Dye Not available.
- Flammability** : 2X Brilliant II QPCR Master Mix Not applicable.  
Reference Dye Not applicable.
- Lower and upper explosion limit/flammability limit** : 2X Brilliant II QPCR Master Mix Not available.  
Reference Dye Not available.
- Vapor pressure** :



## Section 9. Physical and chemical properties and safety characteristics

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
<b>2X Brilliant II QPCR Master Mix</b>						
water	17.5	2.3	-	92.258	12.3	-
Glycerol	0.000075	0.00001	-	0.0025	0.00033	-
<b>Reference Dye</b>						
water	17.5	2.3	-	92.258	12.3	-

**Relative vapor density** : 2X Brilliant II QPCR Master Mix Not available.  
Reference Dye Not available.

**Relative density** : 2X Brilliant II QPCR Master Mix Not available.  
Reference Dye Not available.

**Solubility(ies)** :

Media	Result
<b>2X Brilliant II QPCR Master Mix</b>	
water	Soluble
<b>Reference Dye</b>	
water	Soluble

**Partition coefficient: n-octanol/water** : 2X Brilliant II QPCR Master Mix Not applicable.  
Reference Dye Not applicable.

**Auto-ignition temperature** :

Ingredient name	°C	°F	Method
<b>2X Brilliant II QPCR Master Mix</b>			
Glycerol	370	698	-

**Decomposition temperature** : 2X Brilliant II QPCR Master Mix Not available.  
Reference Dye Not available.

**Viscosity** : 2X Brilliant II QPCR Master Mix Not available.  
Reference Dye Not available.

### Particle characteristics

**Median particle size** : 2X Brilliant II QPCR Master Mix Not applicable.  
Reference Dye Not applicable.

## Section 10. Stability and reactivity

**Reactivity** : 2X Brilliant II QPCR Master Mix No specific test data related to reactivity available for this product or its ingredients.  
Reference Dye No specific test data related to reactivity available for this product or its ingredients.

## Section 10. Stability and reactivity

<b>Chemical stability</b>	: 2X Brilliant II QPCR Master Mix	The product is stable.
	Reference Dye	The product is stable.
<b>Possibility of hazardous reactions</b>	: 2X Brilliant II QPCR Master Mix	Under normal conditions of storage and use, hazardous reactions will not occur.
	Reference Dye	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: 2X Brilliant II QPCR Master Mix	No specific data.
	Reference Dye	No specific data.
<b>Incompatible materials</b>	: 2X Brilliant II QPCR Master Mix	May react or be incompatible with oxidizing materials.
	Reference Dye	May react or be incompatible with oxidizing materials.
<b>Hazardous decomposition products</b>	: 2X Brilliant II QPCR Master Mix	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Reference Dye	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<b>2X Brilliant II QPCR Master Mix</b>				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Magnesium chloride	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
Polyoxyethylene octyl phenyl ether	LD50 Oral	Rat	2800 mg/kg	-
	LD50 Oral	Rat	1800 mg/kg	-
<b>Reference Dye</b>				
Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>2X Brilliant II QPCR Master Mix</b>					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Polyoxyethylene octyl phenyl ether	Skin - Mild irritant	Rabbit	-	24 hours 500 uL	-
		Rabbit	-	24 hours 500 mg	-
<b>Reference Dye</b>					
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 QPCR Master Mix Reference Dye Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.  
Not available.

### Potential acute health effects

**Eye contact** : 2X Brilliant II QPCR Master Mix Reference Dye Causes eye irritation.  
No known significant effects or critical hazards.

**Inhalation** : 2X Brilliant II QPCR Master Mix Reference Dye No known significant effects or critical hazards.  
No known significant effects or critical hazards.

**Skin contact** : 2X Brilliant II QPCR Master Mix Reference Dye No known significant effects or critical hazards.  
No known significant effects or critical hazards.

**Ingestion** : 2X Brilliant II QPCR Master Mix Reference Dye No known significant effects or critical hazards.  
No known significant effects or critical hazards.

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

**Eye contact** : 2X Brilliant II QPCR Master Mix Adverse symptoms may include the following:  
irritation  
watering  
redness  
Reference Dye No specific data.

**Inhalation** : 2X Brilliant II QPCR Master Mix Reference Dye No specific data.  
No specific data.

**Skin contact** : 2X Brilliant II QPCR Master Mix Reference Dye No specific data.  
No specific data.

**Ingestion** : 2X Brilliant II QPCR Master Mix Reference Dye No specific data.  
No specific data.

## Section 11. Toxicological information

### 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

<b>General</b>	: 2X Brilliant II QPCR Master Mix Reference Dye	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: 2X Brilliant II QPCR Master Mix Reference Dye	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Mutagenicity</b>	: 2X Brilliant II QPCR Master Mix Reference Dye	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	: 2X Brilliant II QPCR Master Mix Reference Dye	No known significant effects or critical hazards. 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)
<b>2X Brilliant II QPCR Master Mix</b>					
Glycerol	12600	N/A	N/A	N/A	N/A
Magnesium chloride	2800	2500	N/A	N/A	N/A
Polyoxyethylene octyl phenyl ether	1800	N/A	N/A	N/A	N/A
<b>Reference Dye</b>					
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

### Toxicity

Product/ingredient name	Result	Species	Exposure
<b>2X Brilliant II QPCR Master Mix</b>			
Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
Magnesium chloride	Acute EC50 >100 mg/l Fresh water	Algae - <i>Desmodesmus subspicatus</i>	72 hours
	Acute EC50 180000 µg/l Fresh water	Crustaceans - <i>Eudiaptomus padanus</i> ssp. <i>padanus</i> - Adult	48 hours
	Acute IC50 6.8 mg/l Fresh water	Aquatic plants - <i>Lemna aequinoctialis</i>	96 hours

## Section 12. Ecological information

Polyoxyethylene octyl phenyl ether	Acute LC50 32000 µg/l Fresh water	Daphnia - <i>Daphnia hyalina</i> - Adult	48 hours
	Acute LC50 2120 mg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
	Acute NOEC 100 mg/l Fresh water	Algae - <i>Desmodesmus subspicatus</i>	72 hours
	Chronic NOEC 0.1 mg/l Fresh water	Fish - <i>Cyprinus carpio</i>	35 days
	Acute LC50 5.85 mg/l Fresh water	Crustaceans - <i>Ceriodaphnia rigaudi</i> - Neonate	48 hours
	Acute LC50 11.2 mg/l Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	48 hours
<b>Reference Dye</b> Potassium chloride	Acute LC50 4500 µg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
	Chronic NOEC 0.004 mg/l Fresh water	Fish - <i>Gambusia holbrooki</i>	28 days
	Acute EC50 9.24 g/L Fresh water	Algae - <i>Desmodesmus subspicatus</i>	72 hours
	Acute EC50 1337000 µg/l Fresh water	Algae - <i>Navicula seminulum</i>	96 hours
	Acute LC50 9.68 mg/l Fresh water	Crustaceans - <i>Pseudosida ramosa</i> - Neonate	48 hours
	Acute LC50 93000 µg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 509.65 mg/l Fresh water	Fish - <i>Danio rerio</i>	96 hours

### Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<b>2X Brilliant II QPCR Master Mix</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<b>2X Brilliant II QPCR Master Mix</b> Polyoxyethylene octyl phenyl ether	-	-	Readily
<b>Reference Dye</b> Potassium chloride	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>2X Brilliant II QPCR Master Mix</b> Glycerol	-1.76	-	Low
Polyoxyethylene octyl phenyl ether	4.86	-	High
<b>Reference Dye</b> Potassium chloride	-0.46	-	Low

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

## Section 12. Ecological information

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

## Section 13. Disposal considerations

**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. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

**TDG / 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

### Canadian lists

**Canadian NPRI** : None of the components are listed.

**CEPA Toxic substances** : None of the components are listed.

### 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

**Canada** : Not determined.

**United States** : Not determined.

## Section 16. Other information

### History

**Date of issue/Date of revision** : 04/29/2024

**Date of previous issue** : 03/29/2021

**Version** : 6

### Key to abbreviations

: ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 HPR = Hazardous Products Regulations  
 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
<input checked="" type="checkbox"/> Brilliant II 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.