

# SAFETY DATA SHEET

## Brilliant Multiplex QPCR Master Mix

### Section 1. Identification

#### 1.1 Product identifier

Product name	: Brilliant Multiplex QPCR Master Mix	
Part no. (chemical kit)	: 600553	
Part no.	: 2X Brilliant Multiplex QPCR Master Mix	600553-51
	Reference Dye	600530-53
Validation date	: 7/23/2024	

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

Identified uses	: Analytical reagent.	
	2X Brilliant Multiplex QPCR Master Mix	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
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#### 1.4 Emergency telephone number

In case of emergency	: CHEMTREC®: 1-800-424-9300
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### Section 2. Hazards identification

#### 2.1 Classification of the substance or mixture

OSHA/HCS status	: 2X Brilliant Multiplex 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.
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#### Classification of the substance or mixture

2X Brilliant Multiplex QPCR Master Mix H320	EYE IRRITATION - Category 2B
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#### 2.2 GHS label elements

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

## Section 2. Hazards identification

<b>Response</b>	: 2X Brilliant Multiplex 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.
<b>Storage</b>	: 2X Brilliant Multiplex QPCR Master Mix	Not applicable.
	Reference Dye	Not applicable.
<b>Disposal</b>	: 2X Brilliant Multiplex QPCR Master Mix	Not applicable.
	Reference Dye	Not applicable.
<b>Supplemental label elements</b>	: 2X Brilliant Multiplex QPCR Master Mix	None known.
	Reference Dye	None known.
<b>2.3 Other hazards</b>		
<b>Hazards not otherwise classified</b>	: 2X Brilliant Multiplex QPCR Master Mix	None known.
	Reference Dye	None known.

## Section 3. Composition/information on ingredients

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

Ingredient name	%	CAS number
<b>2X Brilliant Multiplex QPCR Master Mix</b>		
Glycerol	≥10 - ≤25	56-81-5
Magnesium chloride	<0.25	7786-30-3
<b>Reference Dye</b>		
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 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

<b>Eye contact</b>	: 2X Brilliant Multiplex 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

<b>Inhalation</b>	: 2X Brilliant Multiplex 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.
<b>Skin contact</b>	: 2X Brilliant Multiplex 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.
<b>Ingestion</b>	: 2X Brilliant Multiplex QPCR Master Mix	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.
	Reference Dye	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.

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

#### Potential acute health effects

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

## Section 4. First aid measures

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

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

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

<b>Suitable extinguishing media</b>	: 2X Brilliant Multiplex 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 Multiplex QPCR Master Mix Reference Dye	None known. None known.

### 5.2 Special hazards arising from the substance or mixture

## Section 5. Fire-fighting measures

<b>Specific hazards arising from the chemical</b>	: 2X Brilliant Multiplex 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 Multiplex 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

### 5.3 Advice for firefighters

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

<b>For non-emergency personnel</b>	: 2X Brilliant Multiplex 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.
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## Section 6. Accidental release measures

<b>For emergency responders</b>	: 2X Brilliant Multiplex QPCR Master Mix	
	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".
		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>6.2 Environmental precautions</b>	: 2X Brilliant Multiplex QPCR Master Mix	
	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).
		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

<b>Methods for cleaning up</b>	: 2X Brilliant Multiplex QPCR Master Mix	
	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.
		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

<b>Protective measures</b>	: 2X Brilliant Multiplex QPCR Master Mix	
	Reference Dye	
		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.
		Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	: 2X Brilliant Multiplex QPCR Master Mix	
	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.
		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

## Section 7. Handling and storage

### 7.2 Conditions for safe storage, including any incompatibilities

: 2X Brilliant Multiplex QPCR Master Mix

Reference Dye

contaminated clothing and protective equipment 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 Multiplex QPCR Master Mix  
Reference Dye

Industrial applications, Professional applications.

#### Industrial sector specific solutions

: 2X Brilliant Multiplex 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
<b>2X Brilliant Multiplex QPCR Master Mix</b> Glycerol          Magnesium chloride  <b>Reference Dye</b>	<b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>OSHA PEL (United States, 5/2018).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 15 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>CAL OSHA PEL (United States, 5/2018).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: respirable fraction TWA: 10 mg/m <sup>3</sup> 8 hours. Form: total dust None.



## Section 8. Exposure controls/personal protection

Potassium chloride

None.

### Biological exposure indices

No exposure indices known.

### 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.

### 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.

#### **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 Multiplex QPCR Master Mix      Liquid.

#### **Color**

Reference Dye      Liquid.

: 2X Brilliant Multiplex QPCR Master Mix      Not available.

Reference Dye      Not available.

#### **Odor**

: 2X Brilliant Multiplex QPCR Master Mix      Not available.

Reference Dye      Not available.



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

**Odor threshold** : 2X Brilliant Multiplex QPCR Master Mix Not available.

Reference Dye Not available.

**pH** : 2X Brilliant Multiplex QPCR Master Mix 8

Reference Dye 8

**Melting point/freezing point** : 2X Brilliant Multiplex QPCR Master Mix Not available.

Reference Dye Not available.

**Boiling point, initial boiling point, and boiling range** : 2X Brilliant Multiplex 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 Multiplex QPCR Master Mix						
Glycerol	-	-	-	177	350.6	-

**Evaporation rate** : 2X Brilliant Multiplex QPCR Master Mix Not available.

Reference Dye Not available.

**Flammability** : 2X Brilliant Multiplex QPCR Master Mix Not applicable.

Reference Dye Not applicable.

**Lower and upper explosion limit/flammability limit** : 2X Brilliant Multiplex QPCR Master Mix Not available.

Reference Dye Not available.

**Vapor pressure** :

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

**Relative vapor density** : 2X Brilliant Multiplex QPCR Master Mix Not available.

Reference Dye Not available.

**Relative density** : 2X Brilliant Multiplex QPCR Master Mix Not available.

Reference Dye Not available.

**Solubility(ies)** :

Media	Result
2X Brilliant Multiplex QPCR Master Mix	
water	Soluble
Reference Dye	
water	Soluble

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

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

<b>Auto-ignition temperature</b> :	<b>Ingredient name</b>	<b>°C</b>	<b>°F</b>	<b>Method</b>
	2X Brilliant Multiplex QPCR Master Mix			
	Glycerol	370	698	-

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

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

### Particle characteristics

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

## Section 10. Stability and reactivity

**10.1 Reactivity** : 2X Brilliant Multiplex 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.

**10.2 Chemical stability** : 2X Brilliant Multiplex QPCR Master Mix The product is stable.  
Reference Dye The product is stable.

**10.3 Possibility of hazardous reactions** : 2X Brilliant Multiplex 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.

**10.4 Conditions to avoid** : 2X Brilliant Multiplex QPCR Master Mix No specific data.  
Reference Dye No specific data.

**10.5 Incompatible materials** : 2X Brilliant Multiplex QPCR Master Mix May react or be incompatible with oxidizing materials.  
Reference Dye May react or be incompatible with oxidizing materials.

**10.6 Hazardous decomposition products** : 2X Brilliant Multiplex 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

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<b>2X Brilliant Multiplex QPCR Master Mix</b>				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Magnesium chloride	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat	2800 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 Multiplex QPCR Master Mix</b>					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
<b>Reference Dye</b>					
Potassium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-

#### Sensitization

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 Multiplex QPCR Master Mix  
Reference Dye

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.  
Not available.

#### Potential acute health effects

**Eye contact** : 2X Brilliant Multiplex QPCR Master Mix  
Reference Dye

Causes eye irritation.

No known significant effects or critical hazards.

## Section 11. Toxicological information

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

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

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

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

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Potential chronic health effects

<b>General</b>	: 2X Brilliant Multiplex QPCR Master Mix	No known significant effects or critical hazards.
	Reference Dye	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: 2X Brilliant Multiplex QPCR Master Mix	No known significant effects or critical hazards.
	Reference Dye	No known significant effects or critical hazards.
<b>Mutagenicity</b>	: 2X Brilliant Multiplex QPCR Master Mix	No known significant effects or critical hazards.
	Reference Dye	No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	: 2X Brilliant Multiplex QPCR Master Mix	No known significant effects or critical hazards.
	Reference Dye	No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

## Section 11. Toxicological information

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 Multiplex QPCR Master Mix</b> Glycerol Magnesium chloride	12600 2800	N/A 2500	N/A N/A	N/A N/A	N/A N/A
<b>Reference Dye</b> Reference Dye Potassium chloride	70270.3 2600	N/A N/A	N/A N/A	N/A N/A	N/A N/A

## Section 12. Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
<b>2X Brilliant Multiplex QPCR Master Mix</b> Glycerol Magnesium chloride	Acute LC50 54000 mg/l Fresh water Acute EC50 >100 mg/l Fresh water  Acute EC50 180000 µg/l Fresh water  Acute IC50 6.8 mg/l Fresh water  Acute LC50 32000 µg/l Fresh water Acute LC50 2120 mg/l Fresh water Acute NOEC 100 mg/l Fresh water  Chronic NOEC 0.1 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i> Algae - <i>Desmodesmus subspicatus</i> Crustaceans - <i>Eudiaptomus padanus</i> ssp. <i>padanus</i> - Adult Aquatic plants - <i>Lemna aequinoctialis</i> Daphnia - <i>Daphnia hyalina</i> - Adult Fish - <i>Pimephales promelas</i> Algae - <i>Desmodesmus subspicatus</i> Fish - <i>Cyprinus carpio</i>	96 hours 72 hours  48 hours  96 hours  48 hours 96 hours 72 hours  35 days
<b>Reference Dye</b> Potassium chloride	Acute EC50 9.24 g/L Fresh water  Acute EC50 1337000 µg/l Fresh water Acute LC50 9.68 mg/l Fresh water  Acute LC50 93000 µg/l Fresh water Acute LC50 509.65 mg/l Fresh water	Algae - <i>Desmodesmus subspicatus</i> Algae - <i>Navicula seminulum</i> Crustaceans - <i>Pseudosida ramosa</i> - Neonate Daphnia - <i>Daphnia magna</i> Fish - <i>Danio rerio</i>	72 hours  96 hours 48 hours  48 hours 96 hours

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<b>2X Brilliant Multiplex QPCR Master Mix</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability	
<b>Reference Dye</b> Potassium chloride	-	-	Readily	

## Section 12. Ecological information

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>2X Brilliant Multiplex QPCR Master Mix</b>			
Glycerol	-1.76	-	Low
<b>Reference Dye</b>			
Potassium chloride	-0.46	-	Low

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : 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. 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) PAIR: Polyoxyethylene octyl phenyl ether  
 TSCA 8(a) CDR Exempt/Partial exemption: Not determined  
 Clean Water Act (CWA) 311: EDTA

Clean Air Act Section 112 : Not listed

(b) Hazardous Air Pollutants (HAPs)

Clean Air Act Section 602 : Not listed  
 Class I Substances

Clean Air Act Section 602 : Not listed  
 Class II Substances

DEA List I Chemicals : Not listed  
 (Precursor Chemicals)

DEA List II Chemicals : Not listed  
 (Essential Chemicals)

#### SARA 302/304

##### Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

#### SARA 311/312

**Classification** : 2X Brilliant Multiplex QPCR Master Mix EYE IRRITATION - Category 2B  
 Reference Dye Not applicable.

##### Composition/information on ingredients

Name	%	Classification
2X Brilliant Multiplex QPCR Master Mix		
Glycerol	≥10 - ≤25	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

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)



## Section 15. Regulatory information

Not listed.

### [UNECE Aarhus Protocol on POPs and Heavy Metals](#)


Not listed.

### [Inventory list](#)

<b>Australia</b>	: Not determined.
<b>Canada</b>	: Not determined.
<b>China</b>	:  Not determined.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : Not determined. <b>Japan inventory (ISHL)</b> : Not determined.
<b>New Zealand</b>	: Not determined.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: Not determined.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: Not determined.
<b>Viet Nam</b>	: Not determined.

## Section 16. Other information

### [Procedure used to derive the classification](#)

Classification	Justification
 <b>Brilliant Multiplex QPCR Master Mix</b> EYE IRRITATION - Category 2B	Calculation method

### [History](#)

<b>Date of issue/Date of revision</b>	: 07/23/2024
<b>Date of previous issue</b>	: 07/15/2021
<b>Version</b>	: 8
<b>Key to abbreviations</b>	: 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

 Indicates information that has changed from previously issued version.

### [Notice to reader](#)

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