

SAFETY DATA SHEET

Brilliant II SYBR Green QPCR Master Mix - 10-pack, Part Number 600831

Section 1. Identification

1.1 Product identifier

Product name : Brilliant II SYBR Green QPCR Master Mix - 10-pack, Part Number 600831
Part no. (chemical kit) : 600831
Part no. : 2X Brilliant II SYBR® Green QPCR Master Mix 600828-51
 Reference Dye 600530-53
Validation date : 7/20/2023

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

Identified uses : Analytical reagent.
 Brilliant II SYBR® Green QPCR Master Mix 2 x 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

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 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

Section 4. First aid measures

Inhalation	: 2X Brilliant II SYBR® Green QPCR Master Mix	medical attention if irritation occurs. 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. 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

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

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.
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.
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Section 6. Accidental release measures

<p>For emergency responders : 2X Brilliant II SYBR® Green QPCR Master Mix</p> <p>Reference Dye</p>	<p>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".</p>
<p>6.2 Environmental precautions : 2X Brilliant II SYBR® Green QPCR Master Mix</p> <p>Reference Dye</p>	<p>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).</p> <p>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).</p>
<p>6.3 Methods and materials for containment and cleaning up</p>	
<p>Methods for cleaning up : 2X Brilliant II SYBR® Green QPCR Master Mix</p> <p>Reference Dye</p>	<p>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.</p> <p>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.</p>

Section 7. Handling and storage

7.1 Precautions for safe handling

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

Section 7. Handling and storage

contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

: 2X Brilliant II SYBR® Green 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 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 applications, Professional applications.

Industrial sector specific solutions

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

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 Glycerol	<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>CAL OSHA PEL (United States, 5/2018). TWA: 5 mg/m³ 8 hours. Form: respirable fraction TWA: 10 mg/m³ 8 hours. Form: total dust</p> <p>OARS WEEL (United States, 4/2022). TWA: 250 ppm 8 hours.</p> <p>None.</p>
Dimethyl sulfoxide	
Magnesium chloride	

Section 8. Exposure controls/personal protection

Reference Dye
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: 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 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 SYBR® Green Liquid.

QPCR Master Mix

Reference Dye

Liquid.

Color

: 2X Brilliant II SYBR® Green

QPCR Master Mix

Reference Dye

Not available.

Not available.

Section 9. Physical and chemical properties and safety characteristics

Odor	: 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye	Not available. Not available.
Odor threshold	: 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye	Not available. Not available.
pH	: 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye	Not available. 8
Melting point/freezing point	: 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye	Not available. Not available.
Boiling point, initial boiling point, and boiling range	: 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye	Not available. Not available.

Flash point	:	Closed cup			Open cup		
Ingredient name		°C	°F	Method	°C	°F	Method
2X Brilliant II SYBR® Green QPCR Master Mix							
Dimethyl sulfoxide		87	188.6	ASTM D 93	87	188.6	-
Glycerol		-	-	-	177	350.6	-

Evaporation rate	: 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye	Not available. Not available.
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Flammability	: 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye	Not applicable. Not applicable.
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Lower and upper explosion limit/flammability limit	: 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye	Not available. Not available.
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Vapor pressure	:	Vapor Pressure at 20°C			Vapor pressure at 50°C		
Ingredient name		mm Hg	kPa	Method	mm Hg	kPa	Method
2X Brilliant II SYBR® Green QPCR Master Mix							
water		17.5	2.3	-	92.258	12.3	-
Dimethyl sulfoxide		0.42	0.056	EU A.4	-	-	-
Reference Dye							
water		17.5	2.3	-	92.258	12.3	-
2-Amino-2-(hydroxymethyl) propane-1,3-diol hydrochloride		0	0	-	0.000007501	0.000001	-

Section 9. Physical and chemical properties and safety characteristics

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

Relative density : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye Not available.

Relative density : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye Not available.

Relative density : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye Not available.

Solubility(ies)	Media	Result
	2X Brilliant II SYBR® Green QPCR Master Mix	
	water	Soluble
	Reference Dye	
	water	Soluble

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

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

Auto-ignition temperature	Ingredient name	°C	°F	Method
	2X Brilliant II SYBR® Green QPCR Master Mix			
	Dimethyl sulfoxide	300 to 302	572 to 575.6	-
	Glycerol	370	698	-

Decomposition temperature : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye Not available.

Decomposition temperature : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye Not available.

Viscosity : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye Not available.

Viscosity : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye Not available.

Particle characteristics

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

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

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.

10.2 Chemical stability : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye The product is stable.

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.

10.4 Conditions to avoid : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye No specific data.

Section 10. Stability and reactivity

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	-
	LD50 Dermal	Rat	40000 mg/kg	-
	LD50 Oral	Rat	14500 mg/kg	-
	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	-	100 mg	-
		Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Skin - Mild irritant	Rabbit	-	100 mg	-
		Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Reference Dye 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.

Section 11. Toxicological information

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	: <input checked="" type="checkbox"/> Brilliant II SYBR® Green QPCR Master Mix Reference Dye	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes. 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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

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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. 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. 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. 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. 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"/> 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"/> Brilliant II SYBR® Green QPCR Master Mix			
Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
Dimethyl sulfoxide	Acute LC50 25000 ppm Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	48 hours
	Acute LC50 34000000 µg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
	Chronic NOEC 100 ul/L Marine water	Algae - <i>Ulva lactuca</i>	72 hours
	Chronic NOEC 100 ul/L Fresh water	Daphnia - <i>Daphnia magna</i> - Juvenile (Fledgling, Hatchling, Weanling)	21 days
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 ssp. padanus</i> - Adult	48 hours
	Acute IC50 6.8 mg/l Fresh water	Aquatic plants - <i>Lemna aequinoctialis</i>	96 hours
	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</i>	72 hours

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Reference Dye Potassium chloride	Chronic NOEC 0.1 mg/l Fresh water	<i>subspicatus</i> Fish - <i>Cyprinus carpio</i>	35 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

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.

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

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Section 15. Regulatory information

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye EYE IRRITATION - Category 2B
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; DIMETHYL SULFOXIDE; METHANE, SULFINYLBIS-

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 : Not determined.

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

New Zealand : Not determined.

Philippines : Not determined.

Republic of Korea : Not determined.

Taiwan : Not determined.

Section 15. Regulatory information

Thailand	: Not determined.
Turkey	: Not determined.
United States	: Not determined.
Viet Nam	: Not determined.

Section 16. Other information

Procedure used to derive the classification

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

History

Date of issue/Date of revision	: 07/20/2023
Date of previous issue	: 06/03/2020
Version	: 6
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

📌 Indicates information that has changed from previously issued version.

Notice to reader

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