

# SAFETY DATA SHEET

Brilliant II SYBR Green QPCR Master Mix

## Section 1. Identification

**Product identifier** : Brilliant II SYBR Green QPCR Master Mix

**Part no. (chemical kit)** : 600828

**Part no.** : 2X Brilliant II SYBR® Green QPCR Master Mix 600828-51  
Reference Dye 600530-53

### 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)

**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 SYBR® Green  
QPCR Master Mix  
H320 EYE IRRITATION - Category 2B

### 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.

**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.

**Storage** : Reference Dye Not applicable.  
2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye Not applicable.  
Not applicable.

## Section 2. Hazard identification

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

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	: 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye	Mixture Mixture
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Ingredient name	Synonyms	% (w/w)	CAS number
<b>2X Brilliant II SYBR® Green QPCR Master Mix</b>			
Glycerol	Glycerol	≥10 - ≤30	56-81-5
Dimethyl sulfoxide	Dimethyl sulfoxide	≥5 - ≤10	67-68-5
Magnesium chloride	Magnesium chloride	≥0.1 - ≤1	7786-30-3
<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 SYBR® Green QPCR Master Mix  Reference Dye	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.  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 SYBR® Green QPCR Master Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such

## Section 4. First-aid measures

	Reference Dye	as a collar, tie, belt or waistband. 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 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.
<b>Ingestion</b>	: 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.

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

#### Potential acute health effects

<b>Eye contact</b>	: 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye	Causes eye irritation.  No known significant effects or critical hazards.
<b>Inhalation</b>	: 2X Brilliant II SYBR® Green 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 SYBR® Green 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 SYBR® Green 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 SYBR® Green QPCR Master Mix	Adverse symptoms may include the following:  irritation watering redness
	Reference Dye	No specific data.

## Section 4. First-aid measures

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

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

<b>Notes to physician</b>	: 2X Brilliant II SYBR® Green QPCR Master Mix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Reference Dye	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 SYBR® Green QPCR Master Mix	No specific treatment.
	Reference Dye	No specific treatment.
<b>Protection of first-aiders</b>	: 2X Brilliant II SYBR® Green QPCR Master Mix	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	Reference Dye	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 SYBR® Green QPCR Master Mix	Use an extinguishing agent suitable for the surrounding fire.
	Reference Dye	Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: 2X Brilliant II SYBR® Green QPCR Master Mix	None known.
	Reference Dye	None known.
<b>Specific hazards arising from the chemical</b>	: 2X Brilliant II SYBR® Green QPCR Master Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
	Reference Dye	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 SYBR® Green QPCR Master Mix	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides
	Reference Dye	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 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.
<b>Special protective equipment for fire-fighters</b>	: 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

### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	: 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.
<b>For emergency responders</b>	: 2X Brilliant II SYBR® Green 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>Environmental precautions</b>	: 2X Brilliant II SYBR® Green 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).

### Methods and materials for containment and cleaning up

## Section 6. Accidental release measures

<b>Methods for cleaning up</b>	: 2X Brilliant II SYBR® Green QPCR Master Mix	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	Reference Dye	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

## Section 7. Handling and storage

### Precautions for safe handling

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



## Section 8. Exposure controls/personal 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 QPCR Master Mix Reference Dye Liquid. Liquid.
- Color** : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye Not available. Not available.
- 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

Ingredient name	Closed cup			Open cup		
	°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	-

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

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

**Flammability** : 2X Brilliant II SYBR® Green QPCR Master Mix Reference Dye Not applicable.

**Lower and upper explosion limit/flammability limit** : 2X Brilliant II SYBR® Green QPCR Master Mix 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
<b>2X Brilliant II SYBR® Green QPCR Master Mix</b>						
water	17.5	2.3	-	92.258	12.3	-
Dimethyl sulfoxide	0.42	0.056	EU A.4	-	-	-
<b>Reference Dye</b>						
water	17.5	2.3	-	92.258	12.3	-

**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.

**Solubility(ies)** :

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

**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
<b>2X Brilliant II SYBR® Green QPCR Master Mix</b>			
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.

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

### Particle characteristics

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

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

## Section 10. Stability and reactivity

**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.

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

**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.

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

**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.

**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

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<b>2X Brilliant II SYBR® Green QPCR Master Mix</b> Glycerol Dimethyl sulfoxide Magnesium chloride	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	-
<b>Reference Dye</b> Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-

#### Irritation/Corrosion

## Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
2X Brilliant II SYBR® Green QPCR Master Mix Glycerol  Dimethyl sulfoxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Mild irritant	Rabbit	-	100 mg	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	100 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 II SYBR® Green QPCR Master Mix  
Reference Dye  
Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.  
Not available.

### 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.

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

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

## Section 11. Toxicological information

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

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

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)

## Section 11. Toxicological information

2X Brilliant II SYBR® Green QPCR Master Mix					
Glycerol	12600	N/A	N/A	N/A	N/A
Dimethyl sulfoxide	14500	40000	N/A	N/A	N/A
Magnesium chloride	2800	2500	N/A	N/A	N/A
Reference Dye					
Reference Dye	70270.3	N/A	N/A	N/A	N/A
Potassium chloride	2600	N/A	N/A	N/A	N/A

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure	
2X Brilliant II SYBR® Green QPCR Master Mix Glycerol Dimethyl sulfoxide	Acute LC50 54000 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours	
	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 µl/L Marine water	Algae - <i>Ulva lactuca</i>	72 hours	
	Chronic NOEC 100 µl/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</i> ssp. <i>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 subspicatus</i>	72 hours	
Reference Dye Potassium chloride	Chronic NOEC 0.1 mg/l Fresh water	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	

### Persistence and degradability

## Section 12. Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
<b>2X Brilliant II SYBR® Green QPCR Master Mix</b> 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
<b>2X Brilliant II SYBR® Green QPCR Master Mix</b> Dimethyl sulfoxide	-	-	Not readily
<b>Reference Dye</b> Potassium chloride	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>2X Brilliant II SYBR® Green QPCR Master Mix</b> Glycerol	-1.76	-	Low
Dimethyl sulfoxide	-1.35	3.16	Low
<b>Reference Dye</b> Potassium chloride	-0.46	-	Low

### Mobility in soil

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

**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. 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.

## 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** : 07/17/2024

**Date of previous issue** : 07/15/2021

**Version** : 8

**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

## Section 16. Other information

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

✔ Indicates information that has changed from previously issued version.

### [Notice to reader](#)

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