Conforms to HPR 2015

SAFETY DATA SHEET

Agilent Technologies

Brilliant III Ultra-Fast SYBR Green QPCR Master Mix, Part Number 600883

Section 1. Identification

Product identifier : Brilliant III Ultra-Fast SYBR Green QPCR Master Mix, Part Number 600883

Part no. (chemical kit) : 600883

Part no. :

Reference Dye	600530-53
2X Brilliant III SYBR® Green QPCR Master Mix	600882-51

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

Identified uses : Analytical reagent.

Reference Dye	0.1 ml (100 µl 1 mM)
2X Brilliant III SYBR® Green QPCR Master Mix	10 x 2 ml

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

2X Brilliant III SYBR® Green QPCR Master Mix

H320 EYE IRRITATION - Category 2B

GHS label elements

Signal word :

Reference Dye	No signal word.
2X Brilliant III SYBR® Green QPCR Master Mix	Warning

Hazard statements :

Reference Dye	No known significant effects or critical hazards.
2X Brilliant III SYBR® Green QPCR Master Mix	H320 - Causes eye irritation.

Precautionary statements

Prevention :

Reference Dye	Not applicable.
2X Brilliant III SYBR® Green QPCR Master Mix	Not applicable.

Response :

Reference Dye	Not applicable.
2X Brilliant III 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 III SYBR® Green QPCR Master Mix	Not applicable.

Section 2. Hazard identification

Disposal : Reference Dye — Not applicable.
2X Brilliant III SYBR® Green QPCR Master Mix — Not applicable.

Supplemental label elements : Reference Dye — None known.
2X Brilliant III SYBR® Green QPCR Master Mix — None known.

Other hazards which do not result in classification : Reference Dye — None known.
2X Brilliant III SYBR® Green QPCR Master Mix — None known.

Section 3. Composition/information on ingredients

Substance/mixture : Reference Dye — Mixture
2X Brilliant III SYBR® Green QPCR Master Mix — Mixture

Ingredient name	Synonyms	% (w/w)	CAS number
Reference Dye			
Potassium chloride	Potassium Chloride	≥1 - ≤5	7447-40-7
2X Brilliant III SYBR® Green QPCR Master Mix			
Glycerol	Glycerol	≥10 - ≤30	56-81-5
Dimethyl sulfoxide	Dimethyl sulfoxide	≥5 - ≤10	67-68-5
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

Eye contact : 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.

2X Brilliant III 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.

Inhalation : 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.

2X Brilliant III 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

Section 4. First-aid measures

			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.
Skin contact	:	Reference Dye	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		2X Brilliant III 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.
Ingestion	:	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.
		2X Brilliant III 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

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

Over-exposure signs/symptoms

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

Section 4. First-aid measures

Inhalation	:	Reference Dye	No specific data.
		2X Brilliant III SYBR® Green QPCR Master Mix	No specific data.
Skin contact	:	Reference Dye	No specific data.
		2X Brilliant III SYBR® Green QPCR Master Mix	No specific data.
Ingestion	:	Reference Dye	No specific data.
		2X Brilliant III SYBR® Green QPCR Master Mix	No specific data.

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

Notes to physician	:	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.
		2X Brilliant III SYBR® Green QPCR Master Mix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	:	Reference Dye	No specific treatment.
		2X Brilliant III SYBR® Green QPCR Master Mix	No specific treatment.
Protection of first-aiders	:	Reference Dye	No action shall be taken involving any personal risk or without suitable training.
		2X Brilliant III 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.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	:	Reference Dye	Use an extinguishing agent suitable for the surrounding fire.
		2X Brilliant III SYBR® Green QPCR Master Mix	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	:	Reference Dye	None known.
		2X Brilliant III SYBR® Green QPCR Master Mix	None known.
Specific hazards arising from the chemical	:	Reference Dye	In a fire or if heated, a pressure increase will occur and the container may burst.
		2X Brilliant III SYBR® Green QPCR Master Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	:	Reference Dye	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
		2X Brilliant III SYBR® Green QPCR Master Mix	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides

Section 5. Fire-fighting measures

halogenated compounds
metal oxide/oxides

Special protective actions for fire-fighters

: 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.

2X Brilliant III SYBR® Green QPCR Master Mix — Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

: 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.

2X Brilliant III SYBR® Green QPCR Master Mix — Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: Reference Dye — No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

2X Brilliant III SYBR® Green QPCR Master Mix — No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

: 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".

2X Brilliant III SYBR® Green QPCR Master Mix — If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions

: 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).

2X Brilliant III SYBR® Green QPCR Master Mix — Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Section 6. Accidental release measures

Methods for cleaning up	:	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.
		2X Brilliant III 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.

Section 7. Handling and storage

Precautions for safe handling

Protective measures	:	Reference Dye	Put on appropriate personal protective equipment (see Section 8).
		2X Brilliant III 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.
Advice on general occupational hygiene	:	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.
		2X Brilliant III 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.
Conditions for safe storage, including any incompatibilities	:	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.
		2X Brilliant III 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

Section 7. Handling and storage

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

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
2X Brilliant III SYBR® Green QPCR Master Mix Glycerol	**CA Alberta Provincial (Canada, 6/2018).** 8 hrs OEL: 10 mg/m³ 8 hours. Form: Mist **CA Quebec Provincial (Canada, 6/2021).** TWAEV: 10 mg/m³ 8 hours. Form: mist **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 20 mg/m³ 15 minutes. Form: mist TWA: 10 mg/m³ 8 hours. Form: mist **CA British Columbia Provincial (Canada, 3/2022).** TWA: 3 mg/m³ 8 hours. Form: respirable mist TWA: 10 mg/m³ 8 hours. Form: total mist
Dimethyl sulfoxide	**OARS WEEL (United States, 1/2021).** TWA: 250 ppm 8 hours.

Biological exposure indices

None known.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

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

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

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 : Reference Dye — Liquid.
2X Brilliant III SYBR® Green QPCR Master Mix — Liquid.

Color : Reference Dye — Not available.
2X Brilliant III SYBR® Green QPCR Master Mix — Not available.

Odor : Reference Dye — Not available.
2X Brilliant III SYBR® Green QPCR Master Mix — Not available.

Odor threshold : Reference Dye — Not available.
2X Brilliant III SYBR® Green QPCR Master Mix — Not available.

pH : Reference Dye — 8
2X Brilliant III SYBR® Green QPCR Master Mix — 7.8

Melting point/freezing point : Reference Dye — Not available.
2X Brilliant III SYBR® Green QPCR Master Mix — Not available.

Boiling point, initial boiling point, and boiling range : Reference Dye — Not available.
2X Brilliant III SYBR® Green QPCR Master Mix — Not available.

Flash point :

	Closed cup			Open cup		
Ingredient name	**°C**	**°F**	**Method**	**°C**	**°F**	**Method**
2X Brilliant III 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 :

Reference Dye	Not available.
2X Brilliant III SYBR® Green QPCR Master Mix	Not available.

Flammability :

Reference Dye	Not applicable.
2X Brilliant III SYBR® Green QPCR Master Mix	Not applicable.

Lower and upper explosion limit/flammability limit :

Reference Dye	Not available.
2X Brilliant III SYBR® Green QPCR Master Mix	Not available.

Vapor pressure :

Ingredient name	Vapor Pressure at 20˚C			Vapor pressure at 50˚C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Reference Dye						
water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl) propane-1,3-diol hydrochloride	0	0		0.000007501	0.000001	
2X Brilliant III SYBR® Green QPCR Master Mix						
water	23.8	3.2		92.258	12.3	
Dimethyl sulfoxide	0.42	0.056	EU A.4			

Relative vapor density :

Reference Dye	Not available.
2X Brilliant III SYBR® Green QPCR Master Mix	Not available.

Relative density :

Reference Dye	Not available.
2X Brilliant III SYBR® Green QPCR Master Mix	Not available.

Solubility(ies) :

Media	Result
Reference Dye	
water	Soluble
2X Brilliant III SYBR® Green QPCR Master Mix	
water	Soluble

Partition coefficient: n-octanol/water :

Reference Dye	Not applicable.
2X Brilliant III SYBR® Green QPCR Master Mix	Not applicable.

Auto-ignition temperature :

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

Section 9. Physical and chemical properties and safety characteristics

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

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

Particle characteristics

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

Section 10. Stability and reactivity

Reactivity : Reference Dye — No specific test data related to reactivity available for this product or its ingredients.
2X Brilliant III SYBR® Green QPCR Master Mix — No specific test data related to reactivity available for this product or its ingredients.

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

Possibility of hazardous reactions : Reference Dye — Under normal conditions of storage and use, hazardous reactions will not occur.
2X Brilliant III SYBR® Green QPCR Master Mix — Under normal conditions of storage and use, hazardous reactions will not occur.

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

Incompatible materials : Reference Dye — May react or be incompatible with oxidizing materials.
2X Brilliant III SYBR® Green QPCR Master Mix — May react or be incompatible with oxidizing materials.

Hazardous decomposition products : Reference Dye — Under normal conditions of storage and use, hazardous decomposition products should not be produced.
2X Brilliant III SYBR® Green QPCR Master Mix — Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
Reference Dye				
Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-
2X Brilliant III SYBR® Green QPCR Master Mix				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Dimethyl sulfoxide	LD50 Dermal	Rat	40000 mg/kg	-
	LD50 Oral	Rat	14500 mg/kg	-
Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-

Irritation/Corrosion

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

Section 11. Toxicological information

Potential acute health effects

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

Symptoms related to the physical, chemical and toxicological characteristics

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

General	:	Reference Dye	No known significant effects or critical hazards.
		2X Brilliant III SYBR® Green QPCR Master Mix	No known significant effects or critical hazards.
Carcinogenicity	:	Reference Dye	No known significant effects or critical hazards.
		2X Brilliant III SYBR® Green QPCR Master Mix	No known significant effects or critical hazards.
Mutagenicity	:	Reference Dye	No known significant effects or critical hazards.
		2X Brilliant III SYBR® Green QPCR Master Mix	No known significant effects or critical hazards.
Reproductive toxicity	:	Reference Dye	No known significant effects or critical hazards.
		2X Brilliant III SYBR® Green QPCR Master Mix	No known significant effects or critical hazards.

Section 11. Toxicological information

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)
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
2X Brilliant III SYBR® Green QPCR Master Mix					
2X Brilliant III SYBR® Green QPCR Master Mix	183001.9	N/A	N/A	N/A	N/A
Glycerol	12600	N/A	N/A	N/A	N/A
Dimethyl sulfoxide	14500	40000	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
Reference Dye			
Potassium chloride	Acute EC50 9.24 g/L Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 1337000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 83000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 9.68 mg/l Fresh water	Crustaceans - Pseudosida ramosa - Neonate	48 hours
	Acute LC50 509.65 mg/l Fresh water	Fish - Danio rerio	96 hours
2X Brilliant III SYBR® Green QPCR Master Mix			
Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
Dimethyl sulfoxide	Acute LC50 25000 ppm Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 34000000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 100 ul/L Marine water	Algae - Ulva lactuca	72 hours
	Chronic NOEC 100 ul/L Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	21 days
Potassium chloride	Acute EC50 9.24 g/L Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 1337000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 83000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 9.68 mg/l Fresh water	Crustaceans - Pseudosida ramosa - Neonate	48 hours
	Acute LC50 509.65 mg/l Fresh water	Fish - Danio rerio	96 hours

Persistence and degradability

Section 12. Ecological information

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

Bioaccumulative potential

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

Mobility in soil

Soil/water partition coefficient (K_{OC}) : 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

Australia : Not determined.

Canada : Not determined.

China : Not determined.

Eurasian Economic Union : **Russian Federation inventory**: All components are listed or exempted.

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.

Thailand : Not determined.

Turkey : Not determined.

United States : Not determined.

Viet Nam : Not determined.

Section 16. Other information

History

Date of issue/Date of revision : 03/28/2023

Date of previous issue : 03/13/2020

Version : 7

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

Procedure used to derive the classification

Classification	Justification
2X Brilliant III 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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