

# SAFETY DATA SHEET



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

## SECTION 1: Identification of the substance/mixture and of the company/ undertaking

### 1.1 Product identifier

**Product name** : Brilliant II QPCR Master Mix 10-pack, Part Number 600815  
**Part No. (Kit)** : 600815  
**Part No.** : 2× Brilliant II QPCR Master Mix 600804-51  
 Reference dye, 1mM 600530-53

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

Identified uses	
Analytical reagent.	
2× Brilliant II QPCR Master Mix	50 ml (20 tubes each containing 2.5 ml)
Reference dye, 1mM	1 ml

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Manufacturing GmbH & Co. KG  
 Hewlett-Packard-Str. 8  
 76337 Waldbronn  
 Germany  
 0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +(44)-870-8200418

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : 2× Brilliant II QPCR Master Mix Mixture  
 Reference dye, 1mM Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

**2× Brilliant II QPCR Master Mix**  
 H373 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

**Reference dye, 1mM**  
 H412 LONG-TERM AQUATIC HAZARD - Category 3

**Ingredients of unknown toxicity** : 2× Brilliant II QPCR Master Mix Not applicable.  
 Reference dye, 1mM Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 2.4%

**Ingredients of unknown ecotoxicity** : 2× Brilliant II QPCR Master Mix Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 12.5%  
 Reference dye, 1mM Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 2.4%

#### Classification according to Directive 1999/45/EC [DPD]

## SECTION 2: Hazards identification

2× Brilliant II QPCR Master Mix	The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.
Reference dye, 1mM	The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.
<b>Classification</b>	: 2× Brilliant II QPCR Master Mix Not classified. Reference dye, 1mM Not classified.

See Section 16 for the full text of the R phrases or H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

#### Hazard pictograms



<b>Signal word</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	Warning No signal word.
<b>Hazard statements</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	<b>GHS08</b> - May cause damage to organs through prolonged or repeated exposure. Harmful to aquatic life with long lasting effects.
<b>Precautionary statements</b>		
<b>Prevention</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	P260 - Do not breathe vapour. P273 - Avoid release to the environment.
<b>Response</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	P314 - Get medical attention if you feel unwell. Not applicable.
<b>Storage</b>	:	
<b>Disposal</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazardous ingredients</b>	: <b>2× Brilliant II QPCR Master Mix</b> Glycerol	
<b>Supplemental label elements</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	Not applicable. Not applicable.
<b>Special packaging requirements</b>		
<b>Tactile warning of danger</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	Not applicable. Not applicable.

### 2.3 Other hazards

<b>Other hazards which do not result in classification</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	None known. None known.
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## SECTION 3: Composition/information on ingredients

<b>Substance/mixture</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	Mixture Mixture
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### SECTION 3: Composition/information on ingredients

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
<b>2× Brilliant II QPCR Master Mix</b> Glycerol	EC: 200-289-5 CAS: 56-81-5	>=10 - <15	Not classified.	STOT RE 2, H373 (kidneys) (inhalation)	[1]
<b>Reference dye, 1mM</b> Potassium chloride	EC: 231-211-8 CAS: 7447-40-7	>=1 - <5	Not classified.	STOT RE 2, H373 (gastrointestinal tract) Aquatic Chronic 2, H411	[1]
2-Amino-2-(hydroxymethyl) propane-1,3-diol hydrochloride	EC: 214-684-5 CAS: 1185-53-1	>=1 - <5	Xi; R36/37/38	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 (Respiratory tract irritation)	[1]
			<b>See Section 16 for the full text of the R-phrases declared above.</b>	<b>See Section 16 for the full text of the H statements declared above.</b>	

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

#### Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

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

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

<b>Eye contact</b>	: 2× Brilliant II QPCR Master Mix	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell.
	Reference dye, 1mM	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. Get medical attention if irritation occurs.
<b>Inhalation</b>	: 2× Brilliant II QPCR Master Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention following exposure or if feeling unwell. 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, 1mM	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.

**SECTION 4: First aid measures**

		Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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 QPCR Master Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Reference dye, 1mM	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.
<b>Ingestion</b>	: 2x Brilliant II QPCR Master Mix	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 following exposure or if feeling unwell. 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, 1mM	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.
<b>Protection of first-aiders</b>	: 2x Brilliant II 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, 1mM	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.

**4.2 Most important symptoms and effects, both acute and delayed**

Potential acute health effects

<b>Eye contact</b>	: 2x Brilliant II QPCR Master Mix	No known significant effects or critical hazards.
	Reference dye, 1mM	No known significant effects or critical hazards.
<b>Inhalation</b>	: 2x Brilliant II QPCR Master Mix	No known significant effects or critical hazards.
	Reference dye, 1mM	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
<b>Skin contact</b>	: 2x Brilliant II QPCR Master Mix	No known significant effects or critical hazards.
	Reference dye, 1mM	No known significant effects or critical hazards.
<b>Ingestion</b>	: 2x Brilliant II QPCR Master Mix	No known significant effects or critical hazards.
	Reference dye, 1mM	No known significant effects or critical hazards.

**SECTION 4: First aid measures****Over-exposure signs/symptoms**

<b>Eye contact</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	No specific data. No specific data.
<b>Inhalation</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	No specific data. No specific data.
<b>Skin contact</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	No specific data. No specific data.
<b>Ingestion</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	No specific data. No specific data.

**4.3 Indication of any immediate medical attention and special treatment needed**

<b>Notes to physician</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
<b>Specific treatments</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	No specific treatment. No specific treatment.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

<b>Suitable extinguishing media</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	None known. None known.

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

<b>Hazards from the substance or mixture</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	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. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
<b>Hazardous combustion products</b>	: 2× Brilliant II QPCR Master Mix  Reference dye, 1mM	Decomposition products may include the following materials: carbon dioxide carbon monoxide Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides

**5.3 Advice for firefighters**

<b>Special precautions for fire-fighters</b>	: 2× Brilliant II QPCR Master Mix  Reference dye, 1mM	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.
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## SECTION 5: Firefighting measures

<b>Special protective equipment for fire-fighters</b>	: 2× Brilliant II QPCR Master Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	Reference dye, 1mM	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	: 2× Brilliant II QPCR Master Mix	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	Reference dye, 1mM	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 spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	: 2× Brilliant II QPCR Master Mix	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Reference dye, 1mM	If specialised 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".

### 6.2 Environmental precautions

: 2× Brilliant II QPCR Master Mix	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Reference dye, 1mM	Avoid dispersal of spilt 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). Water polluting material. May be harmful to the environment if released in large quantities.

### 6.3 Methods and materials for containment and cleaning up

<b>Methods for cleaning up</b>	: 2× Brilliant II QPCR Master Mix	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	Reference dye, 1mM	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 6: Accidental release measures

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.  
 See Section 8 for information on appropriate personal protective equipment.  
 See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- |   |                                   |  |
|---|-----------------------------------|--|
| <b>Protective measures</b>                    | : 2× Brilliant II QPCR Master Mix | Put on appropriate personal protective equipment (see Section 8). Do not breathe vapour or mist. Do not ingest. Avoid contact with eyes, skin and clothing. 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, 1mM                | Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. 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. |
| <b>Advice on general occupational hygiene</b> | : 2× Brilliant II QPCR Master Mix | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.  |
|   | Reference dye, 1mM                | 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.  |

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

- |                                   |   |
|-----------------------------------|---|
| : 2× Brilliant II QPCR Master Mix | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. |
| Reference dye, 1mM                | 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. |

### 7.3 Specific end use(s)

- |   |                                   |   |
|---|-----------------------------------|---|
| <b>Recommendations</b>                      | : 2× Brilliant II QPCR Master Mix | Industrial applications, Professional applications. |
|   | Reference dye, 1mM                | Industrial applications, Professional applications. |
| <b>Industrial sector specific solutions</b> | : Not applicable.                 |   |

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Occupational exposure limits**

No exposure limit value known.

**Recommended monitoring procedures**

: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**Derived effect levels**

No DNELs available.

**Predicted effect concentrations**

No PNECs available.

**8.2 Exposure controls**

**Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Individual protection measures****Hygiene measures**

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

**Eye/face protection**

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

**Skin protection****Hand protection**

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. 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**

: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**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.



**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****Appearance**

<b>Physical state</b>	: 2× Brilliant II QPCR Master Mix	Liquid.
	Reference dye, 1mM	Liquid.
<b>Colour</b>	: 2× Brilliant II QPCR Master Mix	Not available.
	Reference dye, 1mM	Not available.
<b>Odour</b>	: 2× Brilliant II QPCR Master Mix	Not available.
	Reference dye, 1mM	Not available.
<b>Odour threshold</b>	: 2× Brilliant II QPCR Master Mix	Not available.
	Reference dye, 1mM	Not available.
<b>pH</b>	: 2× Brilliant II QPCR Master Mix	Not available.
	Reference dye, 1mM	8
<b>Melting point/freezing point</b>	: 2× Brilliant II QPCR Master Mix	Not available.
	Reference dye, 1mM	Not available.
<b>Initial boiling point and boiling range</b>	: 2× Brilliant II QPCR Master Mix	Not available.
	Reference dye, 1mM	Not available.
<b>Flash point</b>	: 2× Brilliant II QPCR Master Mix	Not available.
	Reference dye, 1mM	Not available.
<b>Evaporation rate</b>	: 2× Brilliant II QPCR Master Mix	Not available.
	Reference dye, 1mM	Not available.
<b>Flammability (solid, gas)</b>	: 2× Brilliant II QPCR Master Mix	Not applicable.
	Reference dye, 1mM	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	: 2× Brilliant II QPCR Master Mix	Not available.
	Reference dye, 1mM	Not available.
<b>Vapour pressure</b>	: 2× Brilliant II QPCR Master Mix	Not available.
	Reference dye, 1mM	Not available.
<b>Vapour density</b>	: 2× Brilliant II QPCR Master Mix	Not available.
	Reference dye, 1mM	Not available.
<b>Relative density</b>	: 2× Brilliant II QPCR Master Mix	Not available.
	Reference dye, 1mM	Not available.
<b>Solubility(ies)</b>	: 2× Brilliant II QPCR Master Mix	Easily soluble in the following materials: cold water and hot water.
	Reference dye, 1mM	Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	: 2× Brilliant II QPCR Master Mix	Not available.
	Reference dye, 1mM	Not available.
<b>Auto-ignition temperature</b>	: 2× Brilliant II QPCR Master Mix	Not available.
	Reference dye, 1mM	Not available.
<b>Decomposition temperature</b>	: 2× Brilliant II QPCR Master Mix	Not available.
	Reference dye, 1mM	Not available.
<b>Viscosity</b>	: 2× Brilliant II QPCR Master Mix	Not available.
	Reference dye, 1mM	Not available.

## SECTION 9: Physical and chemical properties

<b>Explosive properties</b>	: 2× Brilliant II QPCR Master Mix	Not available.
	Reference dye, 1mM	Not available.

### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	: 2× Brilliant II QPCR Master Mix	No specific test data related to reactivity available for this product or its ingredients.
	Reference dye, 1mM	No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: 2× Brilliant II QPCR Master Mix	The product is stable.
	Reference dye, 1mM	The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: 2× Brilliant II QPCR Master Mix	Under normal conditions of storage and use, hazardous reactions will not occur.
	Reference dye, 1mM	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: 2× Brilliant II QPCR Master Mix	No specific data.
	Reference dye, 1mM	No specific data.
<b>10.5 Incompatible materials</b>	: 2× Brilliant II QPCR Master Mix	No specific data.
	Reference dye, 1mM	No specific data.
<b>10.6 Hazardous decomposition products</b>	: 2× Brilliant II QPCR Master Mix	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Reference dye, 1mM	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
2× Brilliant II QPCR Master Mix Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Reference dye, 1mM Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-

#### Acute toxicity estimates

Not available.

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2× Brilliant II QPCR Master Mix Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Reference dye, 1mM					

## SECTION 11: Toxicological information

Potassium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
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### Sensitiser

**Conclusion/Summary** : Not available.

### [Chronic toxicity / Carcinogenicity / Mutagenicity / Teratogenicity / Reproductive toxicity](#)

Not available.

### [Specific target organ toxicity \(single exposure\)](#)

Product/ingredient name	Category	Route of exposure	Target organs
<b>Reference dye, 1mM</b> 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	Category 3	Not applicable.	Respiratory tract irritation

### [Specific target organ toxicity \(repeated exposure\)](#)

Product/ingredient name	Category	Route of exposure	Target organs
<b>2× Brilliant II QPCR Master Mix</b> Glycerol	Category 2	Inhalation	kidneys
<b>Reference dye, 1mM</b> Potassium chloride	Category 2	Not determined	gastrointestinal tract

### [Aspiration hazard](#)

Not available.

**Information on the likely routes of exposure** : Not available.

### [Potential acute health effects](#)

<b>Inhalation</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	No known significant effects or critical hazards. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
<b>Ingestion</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Skin contact</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Eye contact</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	No known significant effects or critical hazards. No known significant effects or critical hazards.

### [Symptoms related to the physical, chemical and toxicological characteristics](#)

<b>Inhalation</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	No specific data. No specific data.
<b>Ingestion</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	No specific data. No specific data.
<b>Skin contact</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	No specific data. No specific data.
<b>Eye contact</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	No specific data. No specific data.

### [Delayed and immediate effects and also chronic effects from short and long term exposure](#)

#### [Short term exposure](#)

## SECTION 11: Toxicological information

**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>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	May cause damage to organs through prolonged or repeated exposure. No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Mutagenicity</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Teratogenicity</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Developmental effects</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Fertility effects</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Absorption</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	Not available. Not available.
<b>Other information</b>	: Not available.	

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Reference dye, 1mM Potassium chloride	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 880000 µg/l Fresh water	Fish - Pimephales promelas	96 hours

### 12.2 Persistence and degradability

**Conclusion/Summary** : Not available.

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
2× Brilliant II QPCR Master Mix Glycerol	-1.76	-	low

### 12.4 Mobility in soil

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

## SECTION 12: Ecological information

**Mobility** : Not available.

### 12.5 Results of PBT and vPvB assessment

**PBT** : Not applicable.

**vPvB** : Not applicable.

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

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : The generation of waste should be avoided or minimised 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.

**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

### Regulatory information

**ADR/RID / IMDG / IATA** : Not regulated.

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** : Not available.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorisation

##### Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

#### Other EU regulations

**Europe inventory** : At least one component is not listed.

**Black List Chemicals** : Not listed

**Priority List Chemicals** : Not listed

**Integrated pollution prevention and control list (IPPC) - Air** : Not listed

## SECTION 15: Regulatory information

**Integrated pollution prevention and control list (IPPC) - Water** : Not listed

**15.2 Chemical Safety Assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

## SECTION 16: Other information

Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
<b>2× Brilliant II QPCR Master Mix</b> STOT RE 2, H373	Calculation method
<b>Reference dye, 1mM</b> Aquatic Chronic 3, H412	Calculation method

**Full text of abbreviated H statements** : **2× Brilliant II QPCR Master Mix**  
 H373  
 H373 (kidneys) (inhalation)  
 May cause damage to organs through prolonged or repeated exposure.  
 May cause damage to organs through prolonged or repeated exposure if inhaled. (kidneys)

**Reference dye, 1mM**  
 H315  
 H319  
 H335 (Respiratory tract irritation)  
 H373 (gastrointestinal tract)  
 H411  
 H412  
 Causes skin irritation.  
 Causes serious eye irritation.  
 May cause respiratory irritation. (Respiratory tract irritation)  
 May cause damage to organs through prolonged or repeated exposure. (gastrointestinal tract)  
 Toxic to aquatic life with long lasting effects.  
 Harmful to aquatic life with long lasting effects.

**Full text of classifications [CLP/GHS]** : **2× Brilliant II QPCR Master Mix**  
 STOT RE 2, H373  
 STOT RE 2, H373 (kidneys) (inhalation)  
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys) (inhalation) - Category 2

**Reference dye, 1mM**  
 Aquatic Chronic 2, H411  
 Aquatic Chronic 3, H412  
 Eye Irrit. 2, H319  
 Skin Irrit. 2, H315  
 STOT RE 2, H373 (gastrointestinal tract)  
 STOT SE 3, H335 (Respiratory tract irritation)  
 LONG-TERM AQUATIC HAZARD - Category 2  
 LONG-TERM AQUATIC HAZARD - Category 3  
 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2  
 SKIN CORROSION/IRRITATION - Category 2  
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (gastrointestinal tract) - Category 2  
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

**Full text of abbreviated R phrases** : **2× Brilliant II QPCR Master Mix**  
 Reference dye, 1mM  
 Not applicable.  
 R36/37/38- Irritating to eyes, respiratory system and skin.



## SECTION 16: Other information

<b>Full text of classifications [DSD/DPD]</b>	: 2× Brilliant II QPCR Master Mix Reference dye, 1mM	Not applicable. Xi - Irritant
<b>Date of issue/ Date of revision</b>	: 28/04/2014	
<b>Date of previous issue</b>	: 05/03/2012.	
<b>Version</b>	: 3	

### Notice to reader

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