

SAFETY DATA SHEET



Brilliant II QRT-PCR Master Mix - 1-Step - 10-pack, Part Number 600818

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

1.1 Product identifier

Product name : Brilliant II QRT-PCR Master Mix - 1-Step - 10-pack, Part Number 600818
Part no. (chemical kit) : 600818
Part no. : Brilliant II QRT-PCR Master Mix 600809-51
Reference Dye 600530-53
RT/RNase Block 600809-52
Enzyme Mixture

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

Material uses : Analytical reagent.
 Brilliant II QRT-PCR Master Mix 20 x 2.5 ml
Reference Dye 0.1 ml (100 µl 1 mM)
RT/RNase Block Enzyme Mixture 0.4 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 : Brilliant II QRT-PCR Master Mix Mixture
Reference Dye Mixture
RT/RNase Block Mixture
Enzyme Mixture

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

Not classified.

Ingredients of unknown toxicity : Brilliant II QRT-PCR Master Mix Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 10 - 30%
Reference Dye Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10%
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10%
Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 1 - 10%
RT/RNase Block Enzyme Mixture Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 30 - 60%

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SECTION 2: Hazards identification

Ingredients of unknown ecotoxicity : Reference Dye Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 2.4%

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

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

2.2 Label elements

Signal word : Brilliant II QRT-PCR Master Mix No signal word.
Reference Dye No signal word.
RT/RNase Block No signal word.
Enzyme Mixture

Hazard statements : Brilliant II QRT-PCR Master Mix No known significant effects or critical hazards.
Reference Dye No known significant effects or critical hazards.
RT/RNase Block No known significant effects or critical hazards.
Enzyme Mixture

Precautionary statements

Prevention : Brilliant II QRT-PCR Master Mix Not applicable.
Reference Dye Not applicable.
RT/RNase Block Not applicable.
Enzyme Mixture

Response : Brilliant II QRT-PCR Master Mix Not applicable.
Reference Dye Not applicable.
RT/RNase Block Not applicable.
Enzyme Mixture

Storage : Brilliant II QRT-PCR Master Mix Not applicable.
Reference Dye Not applicable.
RT/RNase Block Not applicable.
Enzyme Mixture

Disposal : Brilliant II QRT-PCR Master Mix Not applicable.
Reference Dye Not applicable.
RT/RNase Block Not applicable.
Enzyme Mixture

Hazardous ingredients : Brilliant II QRT-PCR Master Mix Not applicable.
Reference Dye Not applicable.

Supplemental label elements : Brilliant II QRT-PCR Master Mix Safety data sheet available on request.
Reference Dye Safety data sheet available on request.
RT/RNase Block Not applicable.
Enzyme Mixture

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Brilliant II QRT-PCR Master Mix Not applicable.
Reference Dye Not applicable.
RT/RNase Block Not applicable.
Enzyme Mixture

Special packaging requirements

Tactile warning of danger : Brilliant II QRT-PCR Master Mix Not applicable.
Reference Dye Not applicable.
RT/RNase Block Not applicable.
Enzyme Mixture

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SECTION 2: Hazards identification

2.3 Other hazards

Other hazards which do not result in classification :

<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	None known.
Reference Dye	None known.
RT/RNase Block Enzyme Mixture	None known.

SECTION 3: Composition/information on ingredients

3.1 Substances :

<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	Mixture
Reference Dye	Mixture
RT/RNase Block Enzyme Mixture	Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix				
Glycerol	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥10 - ≤25	Not classified.	[2]
Dimethyl sulfoxide	EC: 200-664-3 CAS: 67-68-5	≤3	Aquatic Chronic 3, H412	[1]
Reference Dye 2-Amino-2-(hydroxymethyl) propane-1,3-diol hydrochloride	EC: 214-684-5 CAS: 1185-53-1	≤3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	[1]
RT/RNase Block Enzyme Mixture Glycerol	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥50 - ≤75	Not classified.	[2]
			See Section 16 for the full text of the H statements declared above.	

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
- [6] Additional disclosure due to company policy

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact :

<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	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.
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.
RT/RNase Block Enzyme Mixture	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.

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SECTION 4: First aid measures

Inhalation	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	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.
	RT/RNase Block Enzyme Mixture	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Reference Dye	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	RT/RNase Block Enzyme Mixture	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	Wash out mouth with water. 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. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Reference Dye	Wash out mouth with water. 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. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	RT/RNase Block Enzyme Mixture	Wash out mouth with water. 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. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Protection of first-aiders	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	No action shall be taken involving any personal risk or without suitable training.
	Reference Dye	No action shall be taken involving any personal risk or without suitable training.
	RT/RNase Block Enzyme Mixture	No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	No known significant effects or critical hazards.
	Reference Dye	No known significant effects or critical hazards.
	RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards.
Inhalation	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	No known significant effects or critical hazards.
	Reference Dye	No known significant effects or critical hazards.
	RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards.

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SECTION 4: First aid measures

Skin contact	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<u>Over-exposure signs/symptoms</u>		
Eye contact	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	No specific data. No specific data. No specific data.
Inhalation	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	No specific data. No specific data. No specific data.
Skin contact	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	No specific data. No specific data. No specific data.
Ingestion	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	No specific data. No specific data. No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	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. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	No specific treatment. No specific treatment. No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	None known. None known. None known.

SECTION 5: Firefighting measures

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR 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.
Hazardous combustion products	RT/RNase Block Enzyme Mixture	In a fire or if heated, a pressure increase will occur and the container may burst.
	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR 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
	RT/RNase Block Enzyme Mixture	Decomposition products may include the following materials: carbon dioxide carbon monoxide

5.3 Advice for firefighters

Special precautions for fire-fighters	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR 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.
	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.
	RT/RNase Block Enzyme Mixture	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	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR 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	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.
	RT/RNase Block Enzyme Mixture	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

For non-emergency personnel	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR 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. Put on appropriate personal protective equipment.
	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 spilt material. Put on appropriate personal protective equipment.
	RT/RNase Block Enzyme Mixture	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. Put on appropriate personal protective equipment.
For emergency responders	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR 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	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".
	RT/RNase Block Enzyme Mixture	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

: <input checked="" type="checkbox"/> Brilliant II QRT-PCR 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	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).
RT/RNase Block Enzyme Mixture	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).

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR 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.
	RT/RNase Block Enzyme Mixture	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.

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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

Protective measures	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	Put on appropriate personal protective equipment (see Section 8).
	Reference Dye	Put on appropriate personal protective equipment (see Section 8).
	RT/RNase Block Enzyme Mixture	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR 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.
	RT/RNase Block Enzyme Mixture	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

Storage	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR 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. See Section 10 for incompatible materials before handling or use.
	Reference Dye	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
	RT/RNase Block Enzyme Mixture	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

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SECTION 7: Handling and storage

contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations	<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	Industrial applications, Professional applications.
	Reference Dye	Industrial applications, Professional applications.
	RT/RNase Block	Industrial applications, Professional applications.
	Enzyme Mixture	
Industrial sector specific solutions	<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	Not applicable.
	Reference Dye	Not applicable.
	RT/RNase Block	Not applicable.
	Enzyme Mixture	

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Glycerol	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 10 mg/m ³ 8 hours. Form: Mist
RT/RNase Block Enzyme Mixture Glycerol	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 10 mg/m ³ 8 hours. Form: Mist

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.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available

8.2 Exposure controls

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

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.

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SECTION 8: Exposure controls/personal protection

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- 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

- Physical state** : Brilliant II QRT-PCR Master Mix Liquid.
Reference Dye Liquid.
RT/RNase Block Liquid.
Enzyme Mixture
- Colour** : Brilliant II QRT-PCR Master Mix Not available.
Reference Dye Not available.
RT/RNase Block Not available.
Enzyme Mixture
- Odour** : Brilliant II QRT-PCR Master Mix Not available.
Reference Dye Not available.
RT/RNase Block Not available.
Enzyme Mixture
- Odour threshold** : Brilliant II QRT-PCR Master Mix Not available.
Reference Dye Not available.
RT/RNase Block Not available.
Enzyme Mixture
- pH** : Brilliant II QRT-PCR Master Mix 8
Reference Dye 8
RT/RNase Block 8
Enzyme Mixture
- Melting point/freezing point** : Brilliant II QRT-PCR Master Mix Not available.
Reference Dye Not available.
RT/RNase Block Not available.
Enzyme Mixture

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SECTION 9: Physical and chemical properties

Initial boiling point and boiling range	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	Not available. Not available. Not available.
Flash point	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	Not available. Not available. Not available.
Evaporation rate	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	Not available. Not available. Not available.
Flammability (solid, gas)	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	Not applicable. Not applicable. Not applicable.
Upper/lower flammability or explosive limits	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	Not available. Not available. Not available.
Vapour pressure	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	Not available. Not available. Not available.
Vapour density	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	Not available. Not available. Not available.
Relative density	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	Not available. Not available. Not available.
Solubility(ies)	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	Soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	Not available. Not available. Not available.
Auto-ignition temperature	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	Not available. Not available. Not available.

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SECTION 9: Physical and chemical properties

Decomposition temperature	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	Not available.
	Reference Dye	Not available.
	RT/RNase Block	Not available.
	Enzyme Mixture	
Viscosity	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	Not available.
	Reference Dye	Not available.
	RT/RNase Block	Not available.
	Enzyme Mixture	
Explosive properties	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	Not available.
	Reference Dye	Not available.
	RT/RNase Block	Not available.
	Enzyme Mixture	
Oxidising properties	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	Not available.
	Reference Dye	Not available.
	RT/RNase Block	Not available.
	Enzyme Mixture	

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	No specific test data related to reactivity available for this product or its ingredients.
	Reference Dye	No specific test data related to reactivity available for this product or its ingredients.
	RT/RNase Block	No specific test data related to reactivity available for this product or its ingredients.
	Enzyme Mixture	
10.2 Chemical stability	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	The product is stable.
	Reference Dye	The product is stable.
	RT/RNase Block	The product is stable.
	Enzyme Mixture	
10.3 Possibility of hazardous reactions	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	Under normal conditions of storage and use, hazardous reactions will not occur.
	Reference Dye	Under normal conditions of storage and use, hazardous reactions will not occur.
	RT/RNase Block	Under normal conditions of storage and use, hazardous reactions will not occur.
	Enzyme Mixture	
10.4 Conditions to avoid	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	No specific data.
	Reference Dye	No specific data.
	RT/RNase Block	No specific data.
	Enzyme Mixture	
10.5 Incompatible materials	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	May react or be incompatible with oxidising materials.
	Reference Dye	May react or be incompatible with oxidising materials.
	RT/RNase Block	May react or be incompatible with oxidising materials.
	Enzyme Mixture	

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SECTION 10: Stability and reactivity

10.6 Hazardous decomposition products	:	<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Reference Dye	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		RT/RNase Block	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Enzyme Mixture	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
<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix				
Dimethyl sulfoxide	LD50 Dermal	Rat	40000 mg/kg	-
	LD50 Oral	Rat	14500 mg/kg	-

Acute toxicity estimates

Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix					
Dimethyl sulfoxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	100 milligrams	-

Sensitiser

Conclusion/Summary : 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)

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

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

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SECTION 11: Toxicological information

Information on likely routes of exposure : Brilliant II QRT-PCR Master Mix Routes of entry anticipated: Oral, Dermal, Inhalation.
Reference Dye Routes of entry anticipated: Oral, Dermal, Inhalation.
RT/RNase Block Routes of entry anticipated: Oral, Dermal, Inhalation.
Enzyme Mixture

Potential acute health effects

Inhalation : Brilliant II QRT-PCR Master Mix No known significant effects or critical hazards.
Reference Dye No known significant effects or critical hazards.
RT/RNase Block No known significant effects or critical hazards.
Enzyme Mixture

Ingestion : Brilliant II QRT-PCR Master Mix No known significant effects or critical hazards.
Reference Dye No known significant effects or critical hazards.
RT/RNase Block No known significant effects or critical hazards.
Enzyme Mixture

Skin contact : Brilliant II QRT-PCR Master Mix No known significant effects or critical hazards.
Reference Dye No known significant effects or critical hazards.
RT/RNase Block No known significant effects or critical hazards.
Enzyme Mixture

Eye contact : Brilliant II QRT-PCR Master Mix No known significant effects or critical hazards.
Reference Dye No known significant effects or critical hazards.
RT/RNase Block No known significant effects or critical hazards.
Enzyme Mixture

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : Brilliant II QRT-PCR Master Mix No specific data.
Reference Dye No specific data.
RT/RNase Block No specific data.
Enzyme Mixture

Ingestion : Brilliant II QRT-PCR Master Mix No specific data.
Reference Dye No specific data.
RT/RNase Block No specific data.
Enzyme Mixture

Skin contact : Brilliant II QRT-PCR Master Mix No specific data.
Reference Dye No specific data.
RT/RNase Block No specific data.
Enzyme Mixture

Eye contact : Brilliant II QRT-PCR Master Mix No specific data.
Reference Dye No specific data.
RT/RNase Block No specific data.
Enzyme Mixture

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

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SECTION 11: Toxicological information

Potential delayed effects : Not available.

Potential chronic health effects

General	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	No known significant effects or critical hazards.
	Reference Dye	No known significant effects or critical hazards.
	RT/RNase Block	No known significant effects or critical hazards.
	Enzyme Mixture	
Carcinogenicity	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	No known significant effects or critical hazards.
	Reference Dye	No known significant effects or critical hazards.
	RT/RNase Block	No known significant effects or critical hazards.
	Enzyme Mixture	
Mutagenicity	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	No known significant effects or critical hazards.
	Reference Dye	No known significant effects or critical hazards.
	RT/RNase Block	No known significant effects or critical hazards.
	Enzyme Mixture	
Teratogenicity	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	No known significant effects or critical hazards.
	Reference Dye	No known significant effects or critical hazards.
	RT/RNase Block	No known significant effects or critical hazards.
	Enzyme Mixture	
Developmental effects	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	No known significant effects or critical hazards.
	Reference Dye	No known significant effects or critical hazards.
	RT/RNase Block	No known significant effects or critical hazards.
	Enzyme Mixture	
Fertility effects	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	No known significant effects or critical hazards.
	Reference Dye	No known significant effects or critical hazards.
	RT/RNase Block	No known significant effects or critical hazards.
	Enzyme Mixture	

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Dimethyl sulfoxide	Acute EC50 18299 µg/l Marine water	Algae - Nitzschia pungens	96 hours
	Acute LC50 37.437 mg/l Marine water	Crustaceans - Artemia sp.	48 hours
	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 3323 µg/l Marine water	Algae - Nitzschia pungens	96 hours

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Dimethyl sulfoxide	-1.35	3.16	low

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SECTION 12: Ecological information

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

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 : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

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. 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

ADR/RID / IMDG / IATA : Not regulated.

14.6 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.

14.7 Transport in bulk according to Annex II of Marpol 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

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

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SECTION 15: Regulatory information

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	Not applicable.
	Reference Dye	Not applicable.
	RT/RNase Block Enzyme Mixture	Not applicable.

Other EU regulations

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

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	: All components are listed or exempted.
Europe	: Not determined.
Japan	: Japan inventory (ENCS): Not determined. Japan inventory (ISHL): Not determined.
Malaysia	: Not determined.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
Thailand	: <input checked="" type="checkbox"/> Not determined.
Turkey	: Not determined.
United States	: Not determined.
Viet Nam	: <input checked="" type="checkbox"/> Not determined.

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

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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
Not classified.	

Full text of abbreviated H statements

<p>✔ Brilliant II QRT-PCR Master Mix H412</p> <p>Reference Dye H315 H319 H335</p>	<p>Harmful to aquatic life with long lasting effects.</p> <p>Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.</p>
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Full text of classifications [CLP/GHS]

<p>✔ Brilliant II QRT-PCR Master Mix Aquatic Chronic 3, H412</p> <p>Reference Dye Eye Irrit. 2, H319 Skin Irrit. 2, H315 STOT SE 3, H335</p>	<p>LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3</p> <p>SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3</p>
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