

SAFETY DATA SHEET



Brilliant II QRT-PCR Master Mix - 1-Step

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

Part no. (chemical kit) : 600809

Part no. : 2X Brilliant II QRT-PCR Master Mix 600809-51
 Reference Dye 600530-53
 RT/RNase Block Enzyme Mixture 600809-52

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

Identified uses : Analytical reagent.

Brilliant II QRT-PCR Master Mix 2 x 2.5 ml
 Reference Dye 0.1 ml (100 µl 1 mM)
 RT/RNase Block Enzyme Mixture 0.4 ml

Uses advised against : None known.

1.3 Details of the supplier of the safety data sheet

Agilent Technologies LDA UK Ltd.
 5500 Lakeside Cheadle Royal Business Park,
 Cheadle, Cheshire, SK8 3GR
 United Kingdom
 Tel: +44 (0) 345 712 5292

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 : 2X Brilliant II QRT-PCR Mixture
 Master Mix
 Reference Dye Mixture
 RT/RNase Block Mixture
 Enzyme Mixture

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

Not classified.

<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.
Reference Dye	The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.
RT/RNase Block Enzyme Mixture	The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Brilliant II QRT-PCR Master Mix - 1-Step

SECTION 2: Hazards identification

Ingredients of unknown toxicity	<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%
	Reference Dye	Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 1 - 10%
		Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 1 - 10%
	RT/RNase Block Enzyme Mixture	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 30 - 60%

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	<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	No signal word.
	Reference Dye	No signal word.
	RT/RNase Block Enzyme Mixture	No signal word.
Hazard statements	<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.

Precautionary statements

Prevention	<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	Not applicable.
	Reference Dye	Not applicable.
	RT/RNase Block Enzyme Mixture	Not applicable.
Response	<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	Not applicable.
	Reference Dye	Not applicable.
	RT/RNase Block Enzyme Mixture	Not applicable.
Storage	<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	Not applicable.
	Reference Dye	Not applicable.
	RT/RNase Block Enzyme Mixture	Not applicable.
Disposal	<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	Not applicable.
	Reference Dye	Not applicable.
	RT/RNase Block Enzyme Mixture	Not applicable.
Supplemental label elements	<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	Safety data sheet available on request.
	Reference Dye	Not applicable.
	RT/RNase Block Enzyme Mixture	Safety data sheet available on request.
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.

Special packaging requirements

Brilliant II QRT-PCR Master Mix - 1-Step

SECTION 2: Hazards identification

- Containers to be fitted with child-resistant fastenings** : Brilliant II QRT-PCR Master Mix Not applicable.
 Reference Dye Not applicable.
 RT/RNase Block Not applicable.
 Enzyme Mixture
- Tactile warning of danger** : Brilliant II QRT-PCR Master Mix Not applicable.
 Reference Dye Not applicable.
 RT/RNase Block Not applicable.
 Enzyme Mixture

2.3 Other hazards

- Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : Brilliant II QRT-PCR Master Mix This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
 Reference Dye This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
 RT/RNase Block This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
 Enzyme Mixture
- Other hazards which do not result in classification** : Brilliant II QRT-PCR Master Mix None known.
 Reference Dye None known.
 RT/RNase Block None known.
 Enzyme Mixture

SECTION 3: Composition/information on ingredients

- 3.1 Substances** : 2X Brilliant II QRT-PCR Master Mix Mixture
 Reference Dye Mixture
 RT/RNase Block Enzyme Mixture Mixture

Product/ingredient name	Identifiers	%	Classification	Type
<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Glycerol	UK (GB) REACH #: Annex V REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥10 - ≤25	Not classified.	[1]
RT/RNase Block Enzyme Mixture Glycerol	UK (GB) REACH #: Annex V REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥50 - ≤75	Not classified. See Section 16 for the full text of the H statements declared above.	[1]

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type

- Brilliant II QRT-PCR Master Mix [1] Substance with a workplace exposure limit
 RT/RNase Block Enzyme Mixture [1] Substance with a workplace exposure limit

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

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.
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. 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. 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. 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

Over-exposure signs/symptoms

Eye contact	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	No specific data.
	Reference Dye	No specific data.
	RT/RNase Block Enzyme Mixture	No specific data.

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SECTION 4: First aid measures

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.

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 Reference Dye RT/RNase Block Enzyme Mixture	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. In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous combustion products	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds

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SECTION 5: Firefighting measures

RT/RNase Block Enzyme Mixture	metal oxide/oxides Decomposition products may include the following materials: carbon dioxide carbon monoxide
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5.3 Advice for firefighters

Special protective actions 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. 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.
Reference Dye	
RT/RNase Block Enzyme Mixture	

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. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Reference Dye	
RT/RNase Block Enzyme Mixture	

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. 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. 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	
RT/RNase Block Enzyme Mixture	

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". 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". 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	
RT/RNase Block Enzyme Mixture	

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SECTION 6: Accidental release measures

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	: 2X 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.

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	: 2X Brilliant II QRT-PCR Master Mix Reference Dye	Put on appropriate personal protective equipment (see Section 8). 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.

Brilliant II QRT-PCR Master Mix - 1-Step

SECTION 7: Handling and storage

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

7.3 Specific end use(s)

Recommendations	: 2X Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications.
Industrial sector specific solutions	: 2X Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	Not available. Not available. Not available.

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), 1/2020). TWA: 10 mg/m ³ 8 hours. Form: Mist
RT/RNase Block Enzyme Mixture Glycerol	EH40/2005 WELs (United Kingdom (UK), 1/2020). TWA: 10 mg/m ³ 8 hours. Form: Mist

Biological exposure indices

No exposure indices known.

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SECTION 8: Exposure controls/personal protection

Recommended monitoring procedures : Reference should be made to appropriate monitoring standards. 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.

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

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : 2X Brilliant II QRT-PCR Master Mix Liquid.
Reference Dye Liquid.
RT/RNase Block Liquid.
Enzyme Mixture

Colour : 2X 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

Odour : 2X Brilliant II QRT-PCR Master Mix Not available.
 Reference Dye Not available.
 RT/RNase Block Not available.
 Enzyme Mixture

Odour threshold : 2X Brilliant II QRT-PCR Master Mix Not available.
 Reference Dye Not available.
 RT/RNase Block Not available.
 Enzyme Mixture

Melting point/freezing point : 2X Brilliant II QRT-PCR Master Mix Not available.
 Reference Dye Not available.
 RT/RNase Block Not available.
 Enzyme Mixture

Initial boiling point and boiling range : 2X Brilliant II QRT-PCR Master Mix Not available.
 Reference Dye Not available.
 RT/RNase Block Not available.
 Enzyme Mixture

Flammability : 2X Brilliant II QRT-PCR Master Mix Not applicable.
 Reference Dye Not applicable.
 RT/RNase Block Not applicable.
 Enzyme Mixture

Upper/lower flammability or explosive limits : 2X Brilliant II QRT-PCR Master Mix Not available.
 Reference Dye Not available.
 RT/RNase Block Not available.
 Enzyme Mixture

Flash point :

Ingredient name	Closed cup		Open cup	
	°C	Method	°C	Method
2X Brilliant II QRT-PCR Master Mix				
dimethyl sulfoxide	87	ASTM D 93	87	-
Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy- Ethane-1,2-diol, ethoxylated	171 to 235	-	199 to 238	-
RT/RNase Block Enzyme Mixture				
glycerol	-	-	177	-

Auto-ignition temperature :

Ingredient name	°C	Method
2X Brilliant II QRT-PCR Master Mix		
dimethyl sulfoxide	300 to 302	-
Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy- Ethane-1,2-diol, ethoxylated	360	-
RT/RNase Block Enzyme Mixture		
glycerol	370	-

Decomposition temperature : 2X 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

pH : 2X Brilliant II QRT-PCR 8
 Master Mix
 Reference Dye 8
 RT/RNase Block 8
 Enzyme Mixture

Viscosity : 2X Brilliant II QRT-PCR Not available.
 Master Mix
 Reference Dye Not available.
 RT/RNase Block Not available.
 Enzyme Mixture

Solubility(ies)	Media	Result
	2X Brilliant II QRT-PCR Master Mix	
	water	Soluble
	Reference Dye	
	water	Soluble
	RT/RNase Block Enzyme Mixture	
	water	Soluble

Partition coefficient: n-octanol/water : 2X Brilliant II QRT-PCR Not applicable.
 Master Mix
 Reference Dye Not applicable.
 RT/RNase Block Not applicable.
 Enzyme Mixture

Vapour pressure	Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
		mm Hg	kPa	Method	mm Hg	kPa	Method
	2X Brilliant II QRT-PCR Master Mix						
	water	17.5	2.3	-	92.258	12.3	-
	dimethyl sulfoxide	0.42	0.056	EU A.4	-	-	-
	Reference Dye						
	water	17.5	2.3	-	92.258	12.3	-
	RT/RNase Block Enzyme Mixture						
	water	17.5	2.3	-	92.258	12.3	-
	glycerol	0.000075	0.00001	-	0.0025	0.00033	-

Evaporation rate : 2X Brilliant II QRT-PCR Not available.
 Master Mix
 Reference Dye Not available.
 RT/RNase Block Not available.
 Enzyme Mixture

Relative density : 2X Brilliant II QRT-PCR Not available.
 Master Mix
 Reference Dye Not available.
 RT/RNase Block Not available.
 Enzyme Mixture

Vapour density : 2X Brilliant II QRT-PCR Not available.
 Master Mix
 Reference Dye Not available.
 RT/RNase Block Not available.
 Enzyme Mixture

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SECTION 9: Physical and chemical properties

Explosive properties : 2X Brilliant II QRT-PCR Master Mix Not available.
Reference Dye Not available.
RT/RNase Block Not available.
Enzyme Mixture

Oxidising properties : 2X Brilliant II QRT-PCR Master Mix Not available.
Reference Dye Not available.
RT/RNase Block Not available.
Enzyme Mixture

Particle characteristics

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

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity : 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 : 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 : 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 : 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 : 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

10.6 Hazardous decomposition products : 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

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2X Brilliant II QRT-PCR Master Mix Glycerol	LD50 Oral	Rat	12600 mg/kg	-
RT/RNase Block Enzyme Mixture Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
2X Brilliant II QRT-PCR Master Mix Glycerol	12600	N/A	N/A	N/A	N/A
RT/RNase Block Enzyme Mixture Glycerol	12600	N/A	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2X Brilliant II QRT-PCR Master Mix Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
RT/RNase Block Enzyme Mixture Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

Conclusion/Summary : Not available.

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)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Brilliant II QRT-PCR Master Mix - 1-Step

SECTION 11: Toxicological information

Information on likely routes of exposure : Brilliant II QRT-PCR Master Mix Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
 Reference Dye Not available.
 RT/RNase Block Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
 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.

Potential delayed effects : Not available.

Brilliant II QRT-PCR Master Mix - 1-Step

SECTION 11: Toxicological information

Potential chronic health effects

Conclusion/Summary	:	Not available.								
General	:	<table border="0"> <tr> <td><input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix</td> <td>No known significant effects or critical hazards.</td> </tr> <tr> <td>Reference Dye</td> <td>No known significant effects or critical hazards.</td> </tr> <tr> <td>RT/RNase Block</td> <td>No known significant effects or critical hazards.</td> </tr> <tr> <td>Enzyme Mixture</td> <td></td> </tr> </table>	<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	
<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	:	<table border="0"> <tr> <td><input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix</td> <td>No known significant effects or critical hazards.</td> </tr> <tr> <td>Reference Dye</td> <td>No known significant effects or critical hazards.</td> </tr> <tr> <td>RT/RNase Block</td> <td>No known significant effects or critical hazards.</td> </tr> <tr> <td>Enzyme Mixture</td> <td></td> </tr> </table>	<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	
<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	:	<table border="0"> <tr> <td><input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix</td> <td>No known significant effects or critical hazards.</td> </tr> <tr> <td>Reference Dye</td> <td>No known significant effects or critical hazards.</td> </tr> <tr> <td>RT/RNase Block</td> <td>No known significant effects or critical hazards.</td> </tr> <tr> <td>Enzyme Mixture</td> <td></td> </tr> </table>	<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	
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Reference Dye	No known significant effects or critical hazards.									
RT/RNase Block	No known significant effects or critical hazards.									
Enzyme Mixture										
Reproductive toxicity	:	<table border="0"> <tr> <td><input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix</td> <td>No known significant effects or critical hazards.</td> </tr> <tr> <td>Reference Dye</td> <td>No known significant effects or critical hazards.</td> </tr> <tr> <td>RT/RNase Block</td> <td>No known significant effects or critical hazards.</td> </tr> <tr> <td>Enzyme Mixture</td> <td></td> </tr> </table>	<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	
<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										
Other information	:	<table border="0"> <tr> <td><input checked="" type="checkbox"/> RT/RNase Block</td> <td>Adverse symptoms may include the following: May cause skin sensitisation.</td> </tr> <tr> <td>Enzyme Mixture</td> <td></td> </tr> </table>	<input checked="" type="checkbox"/> RT/RNase Block	Adverse symptoms may include the following: May cause skin sensitisation.	Enzyme Mixture					
<input checked="" type="checkbox"/> RT/RNase Block	Adverse symptoms may include the following: May cause skin sensitisation.									
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 Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Trout - <i>Oncorhynchus mykiss</i>	96 hours
RT/RNase Block Enzyme Mixture Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Trout - <i>Oncorhynchus mykiss</i>	96 hours

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
RT/RNase Block Enzyme Mixture Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Brilliant II QRT-PCR Master Mix - 1-Step

SECTION 12: Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
<input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Glycerol	-1.76	-	Low
RT/RNase Block Enzyme Mixture Glycerol	-1.76	-	Low

12.4 Mobility in soil

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

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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 : Dispose of material(s) and residues under controlled conditions. 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
14.1 UN number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-

Brilliant II QRT-PCR Master Mix - 1-Step

SECTION 14: Transport information

14.5 Environmental hazards	No.	No.	No.
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Additional information

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 IMO instruments : Not available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture UK (GB)/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.

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

No listed substance

Label	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	Not applicable.
	: Reference Dye	Not applicable.
	: RT/RNase Block Enzyme Mixture	Not applicable.

Seveso Directive

This product is not controlled under the Seveso Directive.

EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

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

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Brilliant II QRT-PCR Master Mix - 1-Step

SECTION 15: Regulatory information

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

United States : Not determined.

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

Classification	Justification
Not classified.	

Full text of abbreviated H statements

Not applicable.

Full text of classifications

Not applicable.

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Date of previous issue : 15/07/2021

Version : 4

Notice to reader

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