

# SAFETY DATA SHEET

Brilliant III Ultra-Fast QRT-PCR Master Mix, Part Number 600884

## Section 1. Identification

<b>Product identifier</b>	: Brilliant III Ultra-Fast QRT-PCR Master Mix, Part Number 600884		
<b>Part no. (chemical kit)</b>	: 600884		
<b>Part no.</b>	2X Brilliant III QRT-PCR Master Mix	600884-51	
	RT/RNase Block	600884-52	
	Reference Dye	600530-53	
	100 mM DTT	600089-53	

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

<b>Material uses</b>	: Analytical reagent.		
	2X Brilliant III QRT-PCR Master Mix	2 x 2 ml	
	RT/RNase Block	0.4 ml	
	Reference Dye	0.1 ml (100 µl 1 mM)	
	100 mM DTT	0.1 ml	

<b>Supplier/Manufacturer</b>	: Agilent Technologies Australia Pty Ltd 679 Springvale Road Mulgrave Victoria 3170, Australia 1800 802 402		
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<b>Emergency telephone number (with hours of operation)</b>	: CHEMTREC®: +(61)-290372994		
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## Section 2. Hazard(s) identification

### Classification of the substance or mixture

Not classified.

### GHS label elements

<b>Signal word</b>	2X Brilliant III QRT-PCR Master Mix	No signal word.
	RT/RNase Block	No signal word.
	Reference Dye	No signal word.
	100 mM DTT	No signal word.
<b>Hazard statements</b>	2X Brilliant III QRT-PCR Master Mix	No known significant effects or critical hazards.
	RT/RNase Block	No known significant effects or critical hazards.
	Reference Dye	No known significant effects or critical hazards.
	100 mM DTT	No known significant effects or critical hazards.
<b>Precautionary statements</b>		
<b>Prevention</b>	2X Brilliant III QRT-PCR Master Mix	Not applicable.
	RT/RNase Block	Not applicable.
	Reference Dye	Not applicable.
	100 mM DTT	Not applicable.
<b>Response</b>	2X Brilliant III QRT-PCR Master Mix	Not applicable.
	RT/RNase Block	Not applicable.
	Reference Dye	Not applicable.
	100 mM DTT	Not applicable.

## Section 2. Hazard(s) identification

<b>Storage</b>	: 2X Brilliant III QRT-PCR Master Mix	Not applicable.
	RT/RNase Block	Not applicable.
	Reference Dye	Not applicable.
	100 mM DTT	Not applicable.
<b>Disposal</b>	: 2X Brilliant III QRT-PCR Master Mix	Not applicable.
	RT/RNase Block	Not applicable.
	Reference Dye	Not applicable.
	100 mM DTT	Not applicable.
<b>Supplemental label elements</b>		
<b>Additional warning phrases</b>	: 2X Brilliant III QRT-PCR Master Mix	Not applicable.
	RT/RNase Block	Not applicable.
	Reference Dye	Not applicable.
	100 mM DTT	Not applicable.
<b>Other hazards which do not result in classification</b>	: 2X Brilliant III QRT-PCR Master Mix	None known.
	RT/RNase Block	None known.
	Reference Dye	None known.
	100 mM DTT	None known.

## Section 3. Composition and ingredient information

<b>Substance/mixture</b>	: 2X Brilliant III QRT-PCR Master Mix	Mixture
	RT/RNase Block	Mixture
	Reference Dye	Mixture
	100 mM DTT	Mixture

### CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
<b>2X Brilliant III QRT-PCR Master Mix</b>		
Glycerol	≥10 - ≤30	56-81-5
Polyethylene glycol	≤10	25322-68-3
<b>RT/RNase Block</b>		
Glycerol	≥30 - ≤60	56-81-5

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.

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

## Section 4. First aid measures

### Description of necessary first aid measures

<b>Eye contact</b>	: 2X Brilliant III 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.
	RT/RNase Block	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

## Section 4. First aid measures

	100 mM DTT	medical attention if irritation occurs. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
<b>Inhalation</b>	: 2X Brilliant III 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.
	RT/RNase Block	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.
	100 mM DTT	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
<b>Skin contact</b>	: 2X Brilliant III QRT-PCR Master Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	RT/RNase Block	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.
	100 mM DTT	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	: 2X Brilliant III 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.
	RT/RNase Block	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.
	100 mM DTT	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.
<b><u>Most important symptoms/effects, acute and delayed</u></b>		
<b><u>Potential acute health effects</u></b>		
<b>Eye contact</b>	: 2X Brilliant III QRT-PCR Master Mix	No known significant effects or critical hazards.
	RT/RNase Block	No known significant effects or critical hazards.
	Reference Dye	No known significant effects or critical hazards.
	100 mM DTT	No known significant effects or critical hazards.

## Section 4. First aid measures

<b>Inhalation</b>	: 2X Brilliant III QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	No known significant effects or critical hazards.  No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Skin contact</b>	: 2X Brilliant III QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	No known significant effects or critical hazards.  No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Ingestion</b>	: 2X Brilliant III QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	No known significant effects or critical hazards.  No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

### Over-exposure signs/symptoms

<b>Eye contact</b>	: 2X Brilliant III QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	No specific data.  No specific data. No specific data. No specific data.
<b>Inhalation</b>	: 2X Brilliant III QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	No specific data.  No specific data. No specific data. No specific data.
<b>Skin contact</b>	: 2X Brilliant III QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	No specific data.  No specific data. No specific data. No specific data.
<b>Ingestion</b>	: 2X Brilliant III QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	No specific data.  No specific data. No specific data. No specific data.

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

<b>Notes to physician</b>	: 2X Brilliant III QRT-PCR Master Mix  RT/RNase Block  Reference Dye  100 mM DTT	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.  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.
<b>Specific treatments</b>	: 2X Brilliant III QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	No specific treatment.  No specific treatment. No specific treatment. No specific treatment.

## Section 4. First aid measures

<b>Protection of first-aiders</b>	: 2X Brilliant III QRT-PCR Master Mix RT/RNase Block  Reference Dye  100 mM DTT	No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training.
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See toxicological information (Section 11)

## Section 5. Firefighting measures

### Extinguishing media

<b>Suitable extinguishing media</b>	: 2X Brilliant III QRT-PCR Master Mix RT/RNase Block  Reference Dye  100 mM DTT	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. Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: 2X Brilliant III QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	None known.  None known. None known. None known.

### Specific hazards arising from the chemical

: 2X Brilliant III QRT-PCR Master Mix RT/RNase Block  Reference Dye  100 mM DTT	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. In a fire or if heated, a pressure increase will occur and the container may burst.
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### Hazardous thermal decomposition products

: 2X Brilliant III QRT-PCR Master Mix  RT/RNase Block  Reference Dye  100 mM DTT	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides 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 Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides
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## Section 5. Firefighting measures

<b>Special protective actions for fire-fighters</b>	: 2X Brilliant III 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.
	RT/RNase Block	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.
	100 mM DTT	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
<b>Special protective equipment for fire-fighters</b>	: 2X Brilliant III 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.
	RT/RNase Block	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	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	100 mM DTT	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	: 2X Brilliant III 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.
	RT/RNase Block	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.
	100 mM DTT	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.

## Section 6. Accidental release measures

<b>For emergency responders</b>	: 2X Brilliant III 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".
	RT/RNase Block	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".
	100 mM DTT	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".

<b>Environmental precautions</b>	: 2X Brilliant III 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).
	RT/RNase Block	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).
	100 mM DTT	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).

### Methods and material for containment and cleaning up

<b>Methods for cleaning up</b>	: 2X Brilliant III 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.
	RT/RNase Block	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.
	100 mM DTT	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

disposal contractor.

## Section 7. Handling and storage

### Precautions for safe handling

<b>Protective measures</b>	: 2X Brilliant III QRT-PCR Master Mix RT/RNase Block  Reference Dye  100 mM DTT	Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	: 2X Brilliant III QRT-PCR Master Mix  RT/RNase Block  Reference Dye  100 mM DTT	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. 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. 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. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
<b>Conditions for safe storage, including any incompatibilities</b>	: 2X Brilliant III QRT-PCR Master Mix  RT/RNase Block	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. 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





## Section 8. Exposure controls and 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.

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

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

### Appearance

<b>Physical state</b>	: 2X Brilliant III QRT-PCR Master Mix	Liquid.
	RT/RNase Block	Liquid.
	Reference Dye	Liquid.
	100 mM DTT	Liquid.
<b>Colour</b>	: 2X Brilliant III QRT-PCR Master Mix	Not available.
	RT/RNase Block	Not available.
	Reference Dye	Not available.
	100 mM DTT	Not available.
<b>Odour</b>	: 2X Brilliant III QRT-PCR Master Mix	Not available.
	RT/RNase Block	Not available.
	Reference Dye	Not available.
	100 mM DTT	Not available.
<b>Odour threshold</b>	: 2X Brilliant III QRT-PCR Master Mix	Not available.
	RT/RNase Block	Not available.
	Reference Dye	Not available.
	100 mM DTT	Not available.
<b>pH</b>	: 2X Brilliant III QRT-PCR Master Mix	7.8
	RT/RNase Block	8
	Reference Dye	8
	100 mM DTT	Not available.
<b>Melting point/freezing point</b>	: 2X Brilliant III QRT-PCR Master Mix	Not available.
	RT/RNase Block	Not available.
	Reference Dye	Not available.
	100 mM DTT	0°C (32°F)

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

**Boiling point, initial boiling point, and boiling range** : 2X Brilliant III QRT-PCR Master Mix Not available.  
 RT/RNase Block Not available.  
 Reference Dye Not available.  
 100 mM DTT 100°C (212°F)

**Flash point** :

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
<b>2X Brilliant III QRT-PCR Master Mix</b>						
Edetic acid	>100	>212	DIN 51758			
Polyoxyethylene octyl phenyl ether	>109.85	>229.7				
<b>RT/RNase Block</b>						
Edetic acid	>100	>212	DIN 51758			
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy-	>109.85	>229.7				
<b>100 mM DTT</b>						
(R*, R*)-1,4-Dimercaptobutane-2,3-diol	>110	>230				

**Evaporation rate** : 2X Brilliant III QRT-PCR Master Mix Not available.  
 RT/RNase Block Not available.  
 Reference Dye Not available.  
 100 mM DTT Not available.

**Flammability** : 2X Brilliant III QRT-PCR Master Mix Not applicable.  
 RT/RNase Block Not applicable.  
 Reference Dye Not applicable.  
 100 mM DTT Not applicable.

**Lower and upper explosion limit/flammability limit** : 2X Brilliant III QRT-PCR Master Mix Not available.  
 RT/RNase Block Not available.  
 Reference Dye Not available.  
 100 mM DTT Not available.

**Vapour pressure** :

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
<b>2X Brilliant III QRT-PCR Master Mix</b>						
water	23.8	3.2		92.258	12.3	
Sorbitan monolaurate, ethoxylated	<1	<0.13				
<b>RT/RNase Block</b>						
water	23.8	3.2		92.258	12.3	
Glycerol	0.000075	0.00001		0.0025	0.00033	
<b>Reference Dye</b>						

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

water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
<b>100 mM DTT</b>						
water	23.8	3.2		92.258	12.3	

**Relative vapour density** : 2X Brilliant III QRT-PCR Master Mix Not available.  
RT/RNase Block Not available.  
Reference Dye Not available.  
100 mM DTT Not available.

**Relative density** : 2X Brilliant III QRT-PCR Master Mix Not available.  
RT/RNase Block Not available.  
Reference Dye Not available.  
100 mM DTT Not available.

**Solubility** : 2X Brilliant III QRT-PCR Master Mix Easily soluble in the following materials: cold water and hot water.  
RT/RNase Block Easily soluble in the following materials: cold water and hot water.  
Reference Dye Easily soluble in the following materials: cold water and hot water.  
100 mM DTT Easily soluble in the following materials: cold water and hot water.

**Partition coefficient: n-octanol/water** :  2X Brilliant III QRT-PCR Master Mix Not applicable.  
RT/RNase Block Not applicable.  
Reference Dye Not applicable.  
100 mM DTT Not applicable.

**Auto-ignition temperature** :

Ingredient name	°C	°F	Method
<input checked="" type="checkbox"/> 2X Brilliant III QRT-PCR Master Mix			
Polyethylene glycol	360	680	
Glycerol	370	698	
<b>RT/RNase Block</b>			
Glycerol	370	698	
Edetic acid	>400	>752	VDI 2263

**Decomposition temperature** : 2X Brilliant III QRT-PCR Master Mix Not available.  
RT/RNase Block Not available.  
Reference Dye Not available.  
100 mM DTT Not available.

**Viscosity** : 2X Brilliant III QRT-PCR Master Mix Not available.  
RT/RNase Block Not available.  
Reference Dye Not available.  
100 mM DTT Not available.

### Particle characteristics

**Median particle size** :  2X Brilliant III QRT-PCR Master Mix Not applicable.  
RT/RNase Block Not applicable.  
Reference Dye Not applicable.  
100 mM DTT Not applicable.

## Section 10. Stability and reactivity

<b>Reactivity</b>	: 2X Brilliant III QRT-PCR Master Mix RT/RNase Block  Reference Dye  100 mM DTT	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: 2X Brilliant III QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	The product is stable.  The product is stable. The product is stable. The product is stable.
<b>Possibility of hazardous reactions</b>	: 2X Brilliant III QRT-PCR Master Mix RT/RNase Block  Reference Dye  100 mM DTT	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: 2X Brilliant III QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	No specific data.  No specific data. No specific data. No specific data.
<b>Incompatible materials</b>	: 2X Brilliant III QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	May react or be incompatible with oxidising materials.  May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
<b>Hazardous decomposition products</b>	: 2X Brilliant III QRT-PCR Master Mix  RT/RNase Block  Reference Dye  100 mM DTT	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

## Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
<b>2X Brilliant III QRT-PCR Master Mix</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-
<b>RT/RNase Block</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>2X Brilliant III QRT-PCR Master Mix</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Polyethylene glycol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Mild irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
<b>RT/RNase Block</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

### Sensitisation

Not available.

### Mutagenicity

**Conclusion/Summary** : Not available.

### Carcinogenicity

**Conclusion/Summary** : Not available.

### Reproductive toxicity

**Conclusion/Summary** : Not available.

### Teratogenicity

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on likely routes of exposure** : **2X Brilliant III QRT-PCR Master Mix** Routes of entry anticipated: Oral, Dermal, Inhalation.  
**RT/RNase Block** Routes of entry anticipated: Oral, Dermal, Inhalation.  
**Reference Dye** Not available.  
**100 mM DTT** Routes of entry anticipated: Oral, Dermal, Inhalation.

### Potential acute health effects

## Section 11. Toxicological information

<b>Eye contact</b>	: 2X Brilliant III QRT-PCR Master Mix	No known significant effects or critical hazards.
	RT/RNase Block	No known significant effects or critical hazards.
	Reference Dye	No known significant effects or critical hazards.
	100 mM DTT	No known significant effects or critical hazards.
<b>Inhalation</b>	: 2X Brilliant III QRT-PCR Master Mix	No known significant effects or critical hazards.
	RT/RNase Block	No known significant effects or critical hazards.
	Reference Dye	No known significant effects or critical hazards.
	100 mM DTT	No known significant effects or critical hazards.
<b>Skin contact</b>	: 2X Brilliant III QRT-PCR Master Mix	No known significant effects or critical hazards.
	RT/RNase Block	No known significant effects or critical hazards.
	Reference Dye	No known significant effects or critical hazards.
	100 mM DTT	No known significant effects or critical hazards.
<b>Ingestion</b>	: 2X Brilliant III QRT-PCR Master Mix	No known significant effects or critical hazards.
	RT/RNase Block	No known significant effects or critical hazards.
	Reference Dye	No known significant effects or critical hazards.
	100 mM DTT	No known significant effects or critical hazards.

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

<b>Eye contact</b>	: 2X Brilliant III QRT-PCR Master Mix	No specific data.
	RT/RNase Block	No specific data.
	Reference Dye	No specific data.
	100 mM DTT	No specific data.
<b>Inhalation</b>	: 2X Brilliant III QRT-PCR Master Mix	No specific data.
	RT/RNase Block	No specific data.
	Reference Dye	No specific data.
	100 mM DTT	No specific data.
<b>Skin contact</b>	: 2X Brilliant III QRT-PCR Master Mix	No specific data.
	RT/RNase Block	No specific data.
	Reference Dye	No specific data.
	100 mM DTT	No specific data.
<b>Ingestion</b>	: 2X Brilliant III QRT-PCR Master Mix	No specific data.
	RT/RNase Block	No specific data.
	Reference Dye	No specific data.
	100 mM DTT	No specific data.

### 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.

#### Potential chronic health effects

<b>General</b>	: 2X Brilliant III QRT-PCR Master Mix	No known significant effects or critical hazards.
	RT/RNase Block	No known significant effects or critical hazards.
	Reference Dye	No known significant effects or critical hazards.
	100 mM DTT	No known significant effects or critical hazards.

## Section 11. Toxicological information

<b>Carcinogenicity</b>	: 2X Brilliant III QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Mutagenicity</b>	: 2X Brilliant III QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	: <input checked="" type="checkbox"/> 2X Brilliant III QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
<b>2X Brilliant III QRT-PCR Master Mix</b>					
Glycerol	12600	N/A	N/A	N/A	N/A
Polyethylene glycol	28000	N/A	N/A	N/A	N/A
<b>RT/RNase Block</b>					
Glycerol	12600	N/A	N/A	N/A	N/A
<b>100 mM DTT</b>					
100 mM DTT	33333.3	N/A	N/A	N/A	N/A

<b>Other information</b>	: <input checked="" type="checkbox"/> 2X Brilliant III QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	Not available. Not available. Not available. Adverse symptoms may include the following: May cause sensitisation by skin contact.
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## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
<b>2X Brilliant III QRT-PCR Master Mix</b>			
Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
Polyethylene glycol	Acute LC50 >1000000 µg/l Fresh water	Fish - Salmo salar - Parr	96 hours
<b>RT/RNase Block</b>			
Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

### Persistence and degradability



## Section 12. Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
<b>2X Brilliant III QRT-PCR Master Mix</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
Polyethylene glycol	OECD 301D Ready Biodegradability - Closed Bottle Test	74.85 % - Readily - 28 days	4 mg/l	-
<b>RT/RNase Block</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<b>2X Brilliant III QRT-PCR Master Mix</b> Polyethylene glycol	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>2X Brilliant III QRT-PCR Master Mix</b> Glycerol	-1.76	-	low
Polyethylene glycol	-	3.2	low
<b>RT/RNase Block</b> Glycerol	-1.76	-	low

### Mobility in soil

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

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

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. 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

**ADG / IMDG / IATA** : Not regulated as Dangerous Goods according to the ADG Code .

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments** : Not available.

## Section 15. Regulatory information

### Standard for the Uniform Scheduling of Medicines and Poisons

Not regulated.

### Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Australia</b>	: Not determined.
<b>Canada</b>	: Not determined.
<b>China</b>	: All components are listed or exempted.
<b>Europe</b>	: Not determined.
<b>Japan</b>	: <b>Japan inventory (CSCL):</b> Not determined. <b>Japan inventory (ISHL):</b> Not determined.
<b>New Zealand</b>	: Not determined.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: Not determined.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: Not determined.
<b>Viet Nam</b>	: Not determined.

## Section 16. Any other relevant information

### History

<b>Date of issue/Date of revision</b>	: 27/05/2022
<b>Date of previous issue</b>	: 17/09/2019
<b>Version</b>	: 8

## Section 16. Any other relevant information

**Key to abbreviations** : ADG = Australian Dangerous Goods  
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
N/A = Not available  
SUSMP = Standard Uniform Schedule of Medicine and Poisons  
UN = United Nations

### Procedure used to derive the classification

Classification
Not classified.

**References** : Not available.

✔ Indicates information that has changed from previously issued version.

### Notice to reader

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