

# SAFETY DATA SHEET

Brilliant III Ultra-Fast SYBR Green QRT-PCR Master Mix, 10-pack, Part Number 600887

## Section 1. Identification

### 1.1 Product identifier

**Product name** : Brilliant III Ultra-Fast SYBR Green QRT-PCR Master Mix, 10-pack, Part Number 600887  
**Part No. (Chemical Kit)** : 600887  
**Part No.** :  Brilliant III SYBR® Green QRT-PCR Master Mix 600886-51  
RT/RNase Block 600886-52  
Reference Dye 600530-53  
100 mM DTT 600089-53  
**Validation date** : 8/21/2017

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

**Material uses** : Analytical reagent.  
 Brilliant III SYBR® Green QRT-PCR Master Mix 10 x (2 x 2 ml)  
RT/RNase Block 10 x 0.4 ml  
Reference Dye 10 x 0.1 ml (100 µl 1 mM)  
100 mM DTT 10 x 0.1 ml (100 µl)

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

**Supplier/Manufacturer** : Agilent Technologies, Inc.  
5301 Stevens Creek Blvd  
Santa Clara, CA 95051, USA  
800-227-9770

### 1.4 Emergency telephone number

**In case of emergency** : CHEMTREC®: 1-800-424-9300

## Section 2. Hazards identification

### 2.1 Classification of the substance or mixture

**OSHA/HCS status** :  Brilliant III SYBR® Green QRT-PCR Master Mix  
RT/RNase Block  
Reference Dye  
100 mM DTT  
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).  
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).  
While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.  
While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

### Classification of the substance or mixture

## Section 2. Hazards identification

### 2X Brilliant III SYBR® Green

#### QRT-PCR Master Mix

H320 EYE IRRITATION - Category 2B

### RT/RNase Block

H320 EYE IRRITATION - Category 2B

<b>Ingredients of unknown toxicity</b>	: 2X Brilliant III SYBR® Green QRT-PCR Master Mix	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: 10 - 30%
	RT/RNase Block	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60%
	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%
	100 mM DTT	Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10% 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%

### 2.2 GHS label elements

<b>Signal word</b>	: 2X Brilliant III SYBR® Green QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	Warning Warning No signal word. No signal word.
<b>Hazard statements</b>	: 2X Brilliant III SYBR® Green QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	H320 - Causes eye irritation. H320 - Causes eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Precautionary statements</b>		
<b>Prevention</b>	: 2X Brilliant III SYBR® Green QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	P264 - Wash hands thoroughly after handling. P264 - Wash hands thoroughly after handling. Not applicable. Not applicable.
<b>Response</b>	: 2X Brilliant III SYBR® Green QRT-PCR Master Mix  RT/RNase Block  Reference Dye 100 mM DTT	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention. Not applicable. Not applicable.

## Section 2. Hazards identification

<b>Storage</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	Not applicable.
	RT/RNase Block	Not applicable.
	Reference Dye	Not applicable.
	100 mM DTT	Not applicable.
<b>Disposal</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green 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>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	None known.
	RT/RNase Block	None known.
	Reference Dye	None known.
	100 mM DTT	None known.

### 2.3 Other hazards

<b>Hazards not otherwise classified</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	None known.
	RT/RNase Block	None known.
	Reference Dye	None known.
	100 mM DTT	None known.

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	Mixture
	RT/RNase Block	Mixture
	Reference Dye	Mixture
	100 mM DTT	Mixture

Ingredient name	%	CAS number
<input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix		
Glycerol	≥10 - ≤25	56-81-5
Dimethyl sulfoxide	≤10	67-68-5
Potassium chloride	≤3	7447-40-7
<b>RT/RNase Block</b>		
Glycerol	≥50 - ≤75	56-81-5
<b>Reference Dye</b>		
Potassium chloride	≤5	7447-40-7
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	≤3	1185-53-1
<b>100 mM DTT</b>		
(R*,R*)-1,4-Dimercaptobutane-2,3-diol	≤3	3483-12-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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

### 4.1 Description of necessary first aid measures

<b>Eye contact</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green 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. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
	RT/RNase Block	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
	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.
	100 mM DTT	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>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	RT/RNase Block	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	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.

## Section 4. First aid measures

<b>Skin contact</b>	:  Brilliant III SYBR® Green QRT-PCR Master Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	RT/RNase Block	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	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>	:  Brilliant III SYBR® Green QRT-PCR Master Mix	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	RT/RNase Block	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	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.
	100 mM DTT	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

## Section 4. First aid measures

quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

### 4.2 Most important symptoms/effects, acute and delayed

#### Potential acute health effects

<b>Eye contact</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	Causes eye irritation.
		Causes eye irritation.
		No known significant effects or critical hazards.
		No known significant effects or critical hazards.
<b>Inhalation</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green 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>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green 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>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green 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>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix  RT/RNase Block  Reference Dye 100 mM DTT	Adverse symptoms may include the following:
		irritation
		watering
		redness
<b>Inhalation</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	Adverse symptoms may include the following:
		irritation
		watering
		redness
<b>Skin contact</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green 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>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	No specific data.
		No specific data.
		No specific data.
		No specific data.

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

## Section 4. First aid measures

<b>Notes to physician</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	RT/RNase Block	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Reference Dye	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	100 mM DTT	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	No specific treatment.
	RT/RNase Block	No specific treatment.
	Reference Dye	No specific treatment.
	100 mM DTT	No specific treatment.
<b>Protection of first-aiders</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	RT/RNase Block	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	Reference Dye	No action shall be taken involving any personal risk or without suitable training.
	100 mM DTT	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	Use an extinguishing agent suitable for the surrounding fire.
	RT/RNase Block	Use an extinguishing agent suitable for the surrounding fire.
	Reference Dye	Use an extinguishing agent suitable for the surrounding fire.
	100 mM DTT	Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	None known.
	RT/RNase Block	None known.
	Reference Dye	None known.
	100 mM DTT	None known.

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



## Section 5. Fire-fighting measures

<b>Specific hazards arising from the chemical</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green 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.
<b>Hazardous thermal decomposition products</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix   RT/RNase Block   Reference Dye   100 mM DTT	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides 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

### 5.3 Advice for firefighters

<b>Special protective actions for fire-fighters</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix  RT/RNase Block  Reference Dye  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. 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.
<b>Special protective equipment for fire-fighters</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix  RT/RNase Block  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. 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



## Section 5. Fire-fighting measures

100 mM DTT

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.

## Section 6. Accidental release measures

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

**For non-emergency personnel**

:  Brilliant III SYBR® Green 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 spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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 spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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 spilled 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 spilled material. Put on appropriate personal protective equipment.

100 mM DTT

**For emergency responders**

:  Brilliant III SYBR® Green QRT-PCR Master Mix

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".  
If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".  
If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".  
If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

RT/RNase Block

Reference Dye

100 mM DTT

## Section 6. Accidental release measures

<b>6.2 Environmental precautions</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	RT/RNase Block	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Reference Dye	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	100 mM DTT	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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



<b>Methods for cleaning up</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green 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 7. Handling and storage

### 7.1 Precautions for safe handling

<b>Protective measures</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
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## Section 7. Handling and storage

	<p>RT/RNase Block</p> <p>Reference Dye</p> <p>100 mM DTT</p>	<p>Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.</p> <p>Put on appropriate personal protective equipment (see Section 8).</p> <p>Put on appropriate personal protective equipment (see Section 8).</p>
<p><b>Advice on general occupational hygiene</b></p>	<p>:  Brilliant III SYBR® Green QRT-PCR Master Mix</p> <p>RT/RNase Block</p> <p>Reference Dye</p> <p>100 mM DTT</p>	<p>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.</p>
<p><b>7.2 Conditions for safe storage, including any incompatibilities</b></p>	<p>:  Brilliant III SYBR® Green QRT-PCR Master Mix</p> <p>RT/RNase Block</p>	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. 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</p>

## Section 7. Handling and storage

Reference Dye

100 mM DTT

opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

<b>Recommendations</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	Industrial applications, Professional applications.  Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications.
<b>Industrial sector specific solutions</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	Not applicable.  Not applicable. Not applicable. Not applicable.

## Section 8. Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
<input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	<b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>OSHA PEL (United States, 6/2016).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 15 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>AIHA WEEL (United States, 10/2011).</b> TWA: 250 ppm 8 hours. None.
Glycerol	
Dimethyl sulfoxide	
Potassium chloride	

## Section 8. Exposure controls/personal protection

<b>RT/RNase Block</b> Glycerol	<b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>OSHA PEL (United States, 6/2016).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 15 mg/m <sup>3</sup> 8 hours. Form: Total dust
<b>Reference Dye</b> Potassium chloride 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	None. None.
<b>100 mM DTT</b> (R*,R*)-1,4-Dimercaptobutane-2,3-diol	None.

### 8.2 Exposure controls

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

### Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	Liquid.
	RT/RNase Block	Liquid.
	Reference Dye	Liquid.
	100 mM DTT	Liquid.
<b>Color</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	Not available.
	RT/RNase Block	Not available.
	Reference Dye	Not available.
	100 mM DTT	Not available.
<b>Odor</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	Not available.
	RT/RNase Block	Not available.
	Reference Dye	Not available.
	100 mM DTT	Not available.
<b>Odor threshold</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	Not available.
	RT/RNase Block	Not available.
	Reference Dye	Not available.
	100 mM DTT	Not available.
<b>pH</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	7.8
	RT/RNase Block	8
	Reference Dye	8
	100 mM DTT	Not available.
<b>Melting point</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	Not available.
	RT/RNase Block	Not available.
	Reference Dye	Not available.
	100 mM DTT	0°C (32°F)
<b>Boiling point</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	Not available.
	RT/RNase Block	Not available.
	Reference Dye	Not available.
	100 mM DTT	100°C (212°F)
<b>Flash point</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	Not available.
	RT/RNase Block	Not available.
	Reference Dye	Not available.
	100 mM DTT	Not available.
<b>Evaporation rate</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	Not available.
	RT/RNase Block	Not available.
	Reference Dye	Not available.
	100 mM DTT	Not available.
<b>Flammability (solid, gas)</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	Not applicable.
	RT/RNase Block	Not applicable.
	Reference Dye	Not applicable.
	100 mM DTT	Not applicable.



## Section 9. Physical and chemical properties

<b>Lower and upper explosive (flammable) limits</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	Not available. Not available. Not available. Not available.
<b>Vapor pressure</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	Not available. Not available. Not available. Not available.
<b>Vapor density</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	Not available. Not available. Not available. Not available.
<b>Relative density</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	Not available. Not available. Not available. Not available.
<b>Solubility</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix RT/RNase Block  Reference Dye  100 mM DTT	Easily soluble in the following materials: cold water and hot water. Soluble in the following materials: cold water and hot water.  Easily soluble in the following materials: cold water and hot water.  Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	Not available. Not available. Not available. Not available.
<b>Auto-ignition temperature</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	Not available. Not available. Not available. Not available.
<b>Decomposition temperature</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	Not available. Not available. Not available. Not available.
<b>Viscosity</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix RT/RNase Block Reference Dye 100 mM DTT	Not available. Not available. Not available. Not available.



## Section 10. Stability and reactivity

<b>10.1 Reactivity</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green 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>10.2 Chemical stability</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green 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>10.3 Possibility of hazardous reactions</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green 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>10.4 Conditions to avoid</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green 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>10.5 Incompatible materials</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix RT/RNase Block  Reference Dye  100 mM DTT	May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials.
<b>10.6 Hazardous decomposition products</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green 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

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<b>2X Brilliant III SYBR® Green QRT-PCR Master Mix</b>				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Dimethyl sulfoxide	LD50 Dermal	Rat	40000 mg/kg	-
	LD50 Oral	Rat	14500 mg/kg	-
Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-
<b>RT/RNase Block</b>				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
<b>Reference Dye</b>				
Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>2X Brilliant III SYBR® Green QRT-PCR Master Mix</b>					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
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	-
Potassium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
<b>RT/RNase Block</b>					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
<b>Reference Dye</b>					
Potassium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

#### Sensitization

Not available.

#### Mutagenicity

Not available.

#### Carcinogenicity

Not available.

#### Reproductive toxicity

Not available.

## Section 11. Toxicological information

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
<b>Reference Dye</b> 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	Category 3	Not applicable.	Respiratory tract irritation
<b>100 mM DTT</b> (R*,R*)-1,4-Dimercaptobutane-2,3-diol	Category 3	Not applicable.	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

<b>Information on the likely routes of exposure</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix RT/RNase Block	Routes of entry anticipated: Oral, Dermal, Inhalation.
	Reference Dye	Routes of entry anticipated: Oral, Dermal, Inhalation.
	100 mM DTT	Routes of entry anticipated: Oral, Dermal, Inhalation.

### Potential acute health effects

<b>Eye contact</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix RT/RNase Block	Causes eye irritation.
	Reference Dye	Causes eye irritation.
	100 mM DTT	No known significant effects or critical hazards.
		No known significant effects or critical hazards.
<b>Inhalation</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix 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.
		No known significant effects or critical hazards.
<b>Skin contact</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix 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.
		No known significant effects or critical hazards.
<b>Ingestion</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix 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.
		No known significant effects or critical hazards.

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

## Section 11. Toxicological information

<b>Eye contact</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	Adverse symptoms may include the following: irritation watering redness
	RT/RNase Block	Adverse symptoms may include the following: irritation watering redness
	Reference Dye 100 mM DTT	No specific data. No specific data.
<b>Inhalation</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	No specific data.
	RT/RNase Block	No specific data.
	Reference Dye 100 mM DTT	No specific data. No specific data.
<b>Skin contact</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	No specific data.
	RT/RNase Block	No specific data.
	Reference Dye 100 mM DTT	No specific data. No specific data.
<b>Ingestion</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix	No specific data.
	RT/RNase Block	No specific data.
	Reference Dye 100 mM DTT	No specific data. No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Potential chronic health effects

**General** :  Brilliant III SYBR® Green 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.

**Carcinogenicity** :  Brilliant III SYBR® Green 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.

**Mutagenicity** :  Brilliant III SYBR® Green 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.

## Section 11. Toxicological information

<b>Teratogenicity</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green 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>Developmental effects</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green 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>Fertility effects</b>	: <input checked="" type="checkbox"/> Brilliant III SYBR® Green 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

Route	ATE value
<input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix Oral	179217.6 mg/kg
<b>Reference Dye</b> Oral	70270.3 mg/kg
<b>100 mM DTT</b> Oral	33333.3 mg/kg

## Section 12. Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
<input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix Glycerol Dimethyl sulfoxide	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 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 100 µl/L Marine water	Algae - Ulva lactuca	72 hours
	Acute EC50 1337000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 9.24 g/L Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 141460 µg/l Fresh water Acute LC50 12.92 mg/l Fresh water	Daphnia - Daphnia magna Crustaceans - Pseudosida ramosa - Neonate	48 hours 48 hours
<b>RT/RNase Block</b> Glycerol	Acute LC50 880 mg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
<b>Reference Dye</b> Potassium chloride	Acute EC50 1337000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 9.24 g/L Fresh water	Algae - Desmodesmus	72 hours

## Section 12. Ecological information

<b>100 mM DTT</b> (R*,R*)-1, 4-Dimercaptobutane-2,3-diol	Acute EC50 141460 µg/l Fresh water	subspicatus	48 hours
	Acute LC50 12.92 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 880 mg/l Fresh water	Crustaceans - Pseudosida ramosa - Neonate	96 hours
	Acute LC50 27000 µg/l Fresh water	Fish - Pimephales promelas	48 hours

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<b>2X Brilliant III SYBR® Green QRT-PCR Master Mix</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
<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 SYBR® Green QRT-PCR Master Mix</b> Potassium chloride	-	-	Readily
<b>Reference Dye</b> Potassium chloride	-	-	Readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>2X Brilliant III SYBR® Green QRT-PCR Master Mix</b> Glycerol	-1.76	-	low
Dimethyl sulfoxide	-1.35	3.16	low
Potassium chloride	-0.46	-	low
<b>RT/RNase Block</b> Glycerol	-1.76	-	low
<b>Reference Dye</b> Potassium chloride	-0.46	-	low

### 12.4 Mobility in soil

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

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

## Section 13. Disposal considerations

### 13.1 Waste treatment methods

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.**

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

## Section 14. Transport information

**DOT / TDG / Mexico / IMDG / IATA** : Not regulated.

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

**Transport in bulk according to 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

**U.S. Federal regulations** : **TSCA 8(a) PAIR:** Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-  
**TSCA 8(a) CDR Exempt/Partial exemption:** Not determined  
**Clean Water Act (CWA) 311:** Edetic acid

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Not listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed



## Section 15. Regulatory information

**DEA List II Chemicals (Essential Chemicals)** : Not listed

### SARA 302/304

#### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

### SARA 311/312

**Classification** :  Brilliant III SYBR® Green QRT- Immediate (acute) health hazard  
 PCR Master Mix  
 RT/RNase Block Immediate (acute) health hazard  
 Reference Dye Not applicable.  
 100 mM DTT Not applicable.

#### Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
<b><input checked="" type="checkbox"/> Brilliant III SYBR® Green QRT-PCR Master Mix</b>						
Glycerol	≥10 - ≤25	No.	No.	No.	Yes.	No.
Dimethyl sulfoxide	≤10	Yes.	No.	No.	Yes.	No.
Potassium chloride	≤3	No.	No.	No.	Yes.	No.
<b>RT/RNase Block</b>						
Glycerol	≥50 - ≤75	No.	No.	No.	Yes.	No.
<b>Reference Dye</b>						
Potassium chloride	≤5	No.	No.	No.	Yes.	No.
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	≤3	No.	No.	No.	Yes.	No.
<b>100 mM DTT</b> (R*,R*)-1,4-Dimercaptobutane-2,3-diol	≤3	No.	No.	No.	Yes.	No.

### State regulations

**Massachusetts** : The following components are listed: GLYCERINE MIST

**New York** : None of the components are listed.

**New Jersey** : The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL; DIMETHYL SULFOXIDE; METHANE, SULFINYLBIS-

**Pennsylvania** : The following components are listed: 1,2,3-PROPANETRIOL

### 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.

## Section 15. Regulatory information

### [UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

### [Inventory list](#)

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

## Section 16. Other information

### [History](#)

<a href="#">Date of issue</a>	: 08/21/2017
<a href="#">Date of previous issue</a>	: 01/21/2016.
<a href="#">Version</a>	: 6

Indicates information that has changed from previously issued version.

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