Conforms to US OSHA Hazard Communication 29CFR1910.1200

SAFETY DATA SHEET

Agilent Technologies

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

Section 1. Identification

1.1 Product identifier

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

Part No. (Chemical Kit) : 600818

Part No. :

2× Brilliant II QRT-PCR Master Mix	600809-51
Reference dye, 1mM	600530-53
RT/RNase Block Enzyme Mixture	600809-52

Validation date : 4/28/2014.

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

Material uses : Analytical reagent.

2× Brilliant II QRT-PCR Master Mix	50 ml (20 Tubes x 2.5 ml)
Reference dye, 1mM	1 ml
RT/RNase Block Enzyme Mixture	4 ml

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer : Agilent Technologies, Inc.
Logistics Center - Americas
500 Ships Landing Way
New Castle, Delaware 19720
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 :

2× Brilliant II QRT-PCR Master Mix	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Reference dye, 1mM	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
RT/RNase Block Enzyme Mixture	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

2× Brilliant II QRT-PCR Master Mix

H320	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B
H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

Reference dye, 1mM

H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

RT/RNase Block Enzyme Mixture

H320	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B
H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

Section 2. Hazards identification

Ingredients of unknown toxicity :

2× Brilliant II QRT-PCR Master Mix	Percentage of the mixture consisting of ingredient (s) of unknown toxicity: 10%
Reference dye, 1mM	Percentage of the mixture consisting of ingredient (s) of unknown toxicity: 2.4%
RT/RNase Block Enzyme Mixture	Not applicable.

2.2 GHS label elements

Hazard pictograms :

Signal word :

2× Brilliant II QRT-PCR Master Mix	Warning
Reference dye, 1mM	Warning
RT/RNase Block Enzyme Mixture	Warning

Hazard statements :

2× Brilliant II QRT-PCR Master Mix	H320 - Causes eye irritation. H373 - May cause damage to organs through prolonged or repeated exposure.
Reference dye, 1mM	H373 - May cause damage to organs through prolonged or repeated exposure.
RT/RNase Block Enzyme Mixture	H320 - Causes eye irritation. H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention :

2× Brilliant II QRT-PCR Master Mix	P280 - Wear eye or face protection. P260 - Do not breathe vapor. P264 - Wash hands thoroughly after handling.
Reference dye, 1mM	P260 - Do not breathe vapor.
RT/RNase Block Enzyme Mixture	P280 - Wear eye or face protection. P260 - Do not breathe vapor. P264 - Wash hands thoroughly after handling.

Response :

2× Brilliant II QRT-PCR Master Mix	P314 - Get medical attention if you feel unwell. 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.
Reference dye, 1mM	P314 - Get medical attention if you feel unwell.
RT/RNase Block Enzyme Mixture	P314 - Get medical attention if you feel unwell. 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.

Storage :

2× Brilliant II QRT-PCR Master Mix	Not applicable.
Reference dye, 1mM	Not applicable.
RT/RNase Block Enzyme Mixture	Not applicable.

Disposal :

2× Brilliant II QRT-PCR Master Mix	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Reference dye, 1mM	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
RT/RNase Block Enzyme Mixture	P501 - Dispose of contents and container in

Section 2. Hazards identification

accordance with all local, regional, national and international regulations.

Supplemental label elements : 2× Brilliant II QRT-PCR Master Mix None known.
Reference dye, 1mM None known.
RT/RNase Block Enzyme Mixture None known.

2.3 Other hazards

Hazards not otherwise classified : 2× Brilliant II QRT-PCR Master Mix None known.
Reference dye, 1mM None known.
RT/RNase Block Enzyme Mixture None known.

Section 3. Composition/information on ingredients

Substance/mixture : 2× Brilliant II QRT-PCR Master Mix Mixture
Reference dye, 1mM Mixture
RT/RNase Block Enzyme Mixture Mixture

Ingredient name	%	CAS number
2× Brilliant II QRT-PCR Master Mix		
Glycerol	10 - 30	56-81-5
Polyethylene glycol	5 - 10	25322-68-3
Dimethyl sulfoxide	1 - 5	67-68-5
Reference dye, 1mM		
Potassium chloride	1 - 5	7447-40-7
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	1 - 5	1185-53-1
RT/RNase Block Enzyme Mixture		
Glycerol	30 - 60	56-81-5

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

Eye contact : 2× Brilliant II QRT-PCR Master Mix Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell.

Reference dye, 1mM Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell.

RT/RNase Block Enzyme Mixture Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell.

Section 4. First aid measures

Inhalation	:	2× Brilliant II 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 following exposure or if feeling unwell. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
		Reference dye, 1mM	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention following exposure or if feeling unwell. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
		RT/RNase Block Enzyme Mixture	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention following exposure or if feeling unwell. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	:	2× Brilliant II QRT-PCR Master Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		Reference dye, 1mM	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		RT/RNase Block Enzyme Mixture	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Section 4. First aid measures

Ingestion	:	2× Brilliant II 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 following exposure or if feeling unwell. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
		Reference dye, 1mM	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention following exposure or if feeling unwell. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
		RT/RNase Block Enzyme Mixture	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention following exposure or if feeling unwell. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	:	2× Brilliant II QRT-PCR Master Mix	Causes eye irritation.
		Reference dye, 1mM	No known significant effects or critical hazards.
		RT/RNase Block Enzyme Mixture	Causes eye irritation.

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Inhalation	:	2× Brilliant II QRT-PCR Master Mix	No known significant effects or critical hazards.
		Reference dye, 1mM	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
		RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards.
Skin contact	:	2× Brilliant II QRT-PCR Master Mix	No known significant effects or critical hazards.
		Reference dye, 1mM	No known significant effects or critical hazards.
		RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards.
Ingestion	:	2× Brilliant II QRT-PCR Master Mix	May be irritating to mouth, throat and stomach.
		Reference dye, 1mM	No known significant effects or critical hazards.
		RT/RNase Block Enzyme Mixture	May be irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact	:	2× Brilliant II QRT-PCR Master Mix	Adverse symptoms may include the following: irritation watering redness
		Reference dye, 1mM	No specific data.
		RT/RNase Block Enzyme Mixture	Adverse symptoms may include the following: irritation watering redness
Inhalation	:	2× Brilliant II QRT-PCR Master Mix	No specific data.
		Reference dye, 1mM	No specific data.
		RT/RNase Block Enzyme Mixture	No specific data.
Skin contact	:	2× Brilliant II QRT-PCR Master Mix	No specific data.
		Reference dye, 1mM	No specific data.
		RT/RNase Block Enzyme Mixture	No specific data.
Ingestion	:	2× Brilliant II QRT-PCR Master Mix	No specific data.
		Reference dye, 1mM	No specific data.
		RT/RNase Block Enzyme Mixture	No specific data.

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

Notes to physician	:	2× Brilliant II QRT-PCR Master Mix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Reference dye, 1mM	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
		RT/RNase Block Enzyme Mixture	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	:	2× Brilliant II QRT-PCR Master Mix	No specific treatment.
		Reference dye, 1mM	No specific treatment.
		RT/RNase Block Enzyme Mixture	No specific treatment.
Protection of first-aiders	:	2× Brilliant II 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.
		Reference dye, 1mM	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
		RT/RNase Block Enzyme Mixture	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

Section 4. First aid measures

resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	2× Brilliant II QRT-PCR Master Mix	Use an extinguishing agent suitable for the surrounding fire.
		Reference dye, 1mM	Use an extinguishing agent suitable for the surrounding fire.
		RT/RNase Block Enzyme Mixture	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	:	2× Brilliant II QRT-PCR Master Mix	None known.
		Reference dye, 1mM	None known.
		RT/RNase Block Enzyme Mixture	None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	:	2× Brilliant II QRT-PCR Master Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
		Reference dye, 1mM	In a fire or if heated, a pressure increase will occur and the container may burst.
		RT/RNase Block Enzyme Mixture	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	:	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides	

5.3 Advice for firefighters

Special protective actions for fire-fighters	:	2× Brilliant II QRT-PCR Master Mix	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
		Reference dye, 1mM	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
		RT/RNase Block Enzyme Mixture	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	:	2× Brilliant II QRT-PCR Master Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Reference dye, 1mM	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		RT/RNase Block Enzyme Mixture	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : 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.

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

6.2 Environmental precautions :

2× Brilliant II 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).
Reference dye, 1mM	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 Enzyme Mixture	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

2× Brilliant II QRT-PCR Master Mix	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Reference dye, 1mM	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
RT/RNase Block Enzyme Mixture	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures :

2× Brilliant II QRT-PCR Master Mix	Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Reference dye, 1mM	Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use.

Section 7. Handling and storage

		Empty containers retain product residue and can be hazardous. Do not reuse container.
	RT/RNase Block Enzyme Mixture	Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities :

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

7.3 Specific end use(s)

Recommendations :

2× Brilliant II QRT-PCR Master Mix	Industrial applications, Professional applications.
Reference dye, 1mM	Industrial applications, Professional applications.
RT/RNase Block Enzyme Mixture	Industrial applications, Professional applications.

Section 7. Handling and storage

Industrial sector specific solutions : Not applicable.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
2× Brilliant II QRT-PCR Master Mix	
Glycerol	**OSHA PEL (United States, 2/2013).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust **OSHA PEL 1989 (United States, 3/1989).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust
Polyethylene glycol	**AIHA WEEL (United States, 5/2010).** TWA: 10 mg/m³ 8 hours. Form: Aerosol
Dimethyl sulfoxide	**AIHA WEEL (United States, 10/2011).** TWA: 250 ppm 8 hours.
RT/RNase Block Enzyme Mixture	
Glycerol	**OSHA PEL (United States, 2/2013).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust **OSHA PEL 1989 (United States, 3/1989).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust

8.2 Exposure controls

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

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

Section 8. Exposure controls/personal protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

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

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	:	2× Brilliant II QRT-PCR Master Mix	Liquid.
		Reference dye, 1mM	Liquid.
		RT/RNase Block Enzyme Mixture	Liquid.
Color	:	2× Brilliant II QRT-PCR Master Mix	Not available.
		Reference dye, 1mM	Not available.
		RT/RNase Block Enzyme Mixture	Not available.
Odor	:	2× Brilliant II QRT-PCR Master Mix	Not available.
		Reference dye, 1mM	Not available.
		RT/RNase Block Enzyme Mixture	Not available.
Odor threshold	:	2× Brilliant II QRT-PCR Master Mix	Not available.
		Reference dye, 1mM	Not available.
		RT/RNase Block Enzyme Mixture	Not available.
pH	:	2× Brilliant II QRT-PCR Master Mix	Not available.
		Reference dye, 1mM	8
		RT/RNase Block Enzyme Mixture	Not available.
Melting point	:	2× Brilliant II QRT-PCR Master Mix	Not available.
		Reference dye, 1mM	Not available.
		RT/RNase Block Enzyme Mixture	Not available.
Boiling point	:	2× Brilliant II QRT-PCR Master Mix	Not available.
		Reference dye, 1mM	Not available.
		RT/RNase Block Enzyme Mixture	Not available.
Flash point	:	2× Brilliant II QRT-PCR Master Mix	Not available.
		Reference dye, 1mM	Not available.
		RT/RNase Block Enzyme Mixture	Not available.
Evaporation rate	:	2× Brilliant II QRT-PCR Master Mix	Not available.
		Reference dye, 1mM	Not available.
		RT/RNase Block Enzyme Mixture	Not available.
Flammability (solid, gas)	:	2× Brilliant II QRT-PCR Master Mix	Not applicable.
		Reference dye, 1mM	Not applicable.
		RT/RNase Block Enzyme Mixture	Not applicable.
Lower and upper explosive (flammable) limits	:	2× Brilliant II QRT-PCR Master Mix	Not available.
		Reference dye, 1mM	Not available.
		RT/RNase Block Enzyme Mixture	Not available.

Section 9. Physical and chemical properties

Vapor pressure	:	2× Brilliant II QRT-PCR Master Mix	Not available.
		Reference dye, 1mM	Not available.
		RT/RNase Block Enzyme Mixture	Not available.
Vapor density	:	2× Brilliant II QRT-PCR Master Mix	Not available.
		Reference dye, 1mM	Not available.
		RT/RNase Block Enzyme Mixture	Not available.
Relative density	:	2× Brilliant II QRT-PCR Master Mix	Not available.
		Reference dye, 1mM	Not available.
		RT/RNase Block Enzyme Mixture	Not available.
Solubility	:	2× Brilliant II QRT-PCR Master Mix	Soluble in the following materials: cold water and hot water.
		Reference dye, 1mM	Easily soluble in the following materials: cold water and hot water.
		RT/RNase Block Enzyme Mixture	Soluble in the following materials: cold water and hot water.
Solubility in water	:	Not available.	
Partition coefficient: n-octanol/water	:	2× Brilliant II QRT-PCR Master Mix	Not available.
		Reference dye, 1mM	Not available.
		RT/RNase Block Enzyme Mixture	Not available.
Auto-ignition temperature	:	2× Brilliant II QRT-PCR Master Mix	Not available.
		Reference dye, 1mM	Not available.
		RT/RNase Block Enzyme Mixture	Not available.
Decomposition temperature	:	2× Brilliant II QRT-PCR Master Mix	Not available.
		Reference dye, 1mM	Not available.
		RT/RNase Block Enzyme Mixture	Not available.
Viscosity	:	2× Brilliant II QRT-PCR Master Mix	Not available.
		Reference dye, 1mM	Not available.
		RT/RNase Block Enzyme Mixture	Not available.

Section 10. Stability and reactivity

10.1 Reactivity	:	2× Brilliant II QRT-PCR Master Mix	No specific test data related to reactivity available for this product or its ingredients.
		Reference dye, 1mM	No specific test data related to reactivity available for this product or its ingredients.
		RT/RNase Block Enzyme Mixture	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	:	2× Brilliant II QRT-PCR Master Mix	The product is stable.
		Reference dye, 1mM	The product is stable.
		RT/RNase Block Enzyme Mixture	The product is stable.
10.3 Possibility of hazardous reactions	:	2× Brilliant II QRT-PCR Master Mix	Under normal conditions of storage and use, hazardous reactions will not occur.
		Reference dye, 1mM	Under normal conditions of storage and use, hazardous reactions will not occur.
		RT/RNase Block Enzyme Mixture	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	:	2× Brilliant II QRT-PCR Master Mix	No specific data.
		Reference dye, 1mM	No specific data.
		RT/RNase Block Enzyme Mixture	No specific data.

Section 10. Stability and reactivity

10.5 Incompatible materials :

2× Brilliant II QRT-PCR Master Mix	No specific data.
Reference dye, 1mM	No specific data.
RT/RNase Block Enzyme Mixture	No specific data.

10.6 Hazardous decomposition products :

2× Brilliant II QRT-PCR Master Mix	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Reference dye, 1mM	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
RT/RNase Block Enzyme Mixture	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2× Brilliant II QRT-PCR Master Mix				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Dimethyl sulfoxide	LD50 Dermal	Rat	40000 mg/kg	-
	LD50 Oral	Rat	14500 mg/kg	-
Reference dye, 1mM				
Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-
RT/RNase Block Enzyme Mixture				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2× Brilliant II QRT-PCR Master Mix					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Polyethylene glycol	Eyes - Mild irritant	Rabbit	-	-	-
	Skin - Mild irritant	Rabbit	-	-	-
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	-
Reference dye, 1mM					
Potassium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
RT/RNase Block Enzyme Mixture					

Section 11. Toxicological information

Glycerol	Eyes - Mild irritant Skin - Mild irritant	Rabbit Rabbit	- -	24 hours 500 milligrams 24 hours 500 milligrams	- -

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Reference dye, 1mM 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
2× Brilliant II QRT-PCR Master Mix			
Glycerol	Category 2	Inhalation	kidneys
Dimethyl sulfoxide	Category 2	Oral	kidneys and liver
Reference dye, 1mM			
Potassium chloride	Category 2	Not determined	gastrointestinal tract
RT/RNase Block Enzyme Mixture			
Glycerol	Category 2	Inhalation	kidneys

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact :

2× Brilliant II QRT-PCR Master Mix	Causes eye irritation.
Reference dye, 1mM	No known significant effects or critical hazards.
RT/RNase Block Enzyme Mixture	Causes eye irritation.

Inhalation :

2× Brilliant II QRT-PCR Master Mix	No known significant effects or critical hazards.
Reference dye, 1mM	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards.

Section 11. Toxicological information

Skin contact	:	2× Brilliant II QRT-PCR Master Mix	No known significant effects or critical hazards.
		Reference dye, 1mM	No known significant effects or critical hazards.
		RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards.
Ingestion	:	2× Brilliant II QRT-PCR Master Mix	May be irritating to mouth, throat and stomach.
		Reference dye, 1mM	No known significant effects or critical hazards.
		RT/RNase Block Enzyme Mixture	May be irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	:	2× Brilliant II QRT-PCR Master Mix	Adverse symptoms may include the following: irritation watering redness
		Reference dye, 1mM	No specific data.
		RT/RNase Block Enzyme Mixture	Adverse symptoms may include the following: irritation watering redness
Inhalation	:	2× Brilliant II QRT-PCR Master Mix	No specific data.
		Reference dye, 1mM	No specific data.
		RT/RNase Block Enzyme Mixture	No specific data.
Skin contact	:	2× Brilliant II QRT-PCR Master Mix	No specific data.
		Reference dye, 1mM	No specific data.
		RT/RNase Block Enzyme Mixture	No specific data.
Ingestion	:	2× Brilliant II QRT-PCR Master Mix	No specific data.
		Reference dye, 1mM	No specific data.
		RT/RNase Block Enzyme Mixture	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

Not available.

General	:	2× Brilliant II QRT-PCR Master Mix	May cause damage to organs through prolonged or repeated exposure.
		Reference dye, 1mM	May cause damage to organs through prolonged or repeated exposure.
		RT/RNase Block Enzyme Mixture	May cause damage to organs through prolonged or repeated exposure.
Carcinogenicity	:	2× Brilliant II QRT-PCR Master Mix	No known significant effects or critical hazards.
		Reference dye, 1mM	No known significant effects or critical hazards.
		RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards.
Mutagenicity	:	2× Brilliant II QRT-PCR Master Mix	No known significant effects or critical hazards.
		Reference dye, 1mM	No known significant effects or critical hazards.
		RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards.
Teratogenicity	:	2× Brilliant II QRT-PCR Master Mix	No known significant effects or critical hazards.
		Reference dye, 1mM	No known significant effects or critical hazards.
		RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards.

Section 11. Toxicological information

Developmental effects : 2× Brilliant II QRT-PCR Master Mix — No known significant effects or critical hazards.
Reference dye, 1mM — No known significant effects or critical hazards.
RT/RNase Block Enzyme Mixture — No known significant effects or critical hazards.

Fertility effects : 2× Brilliant II QRT-PCR Master Mix — No known significant effects or critical hazards.
Reference dye, 1mM — No known significant effects or critical hazards.
RT/RNase Block Enzyme Mixture — No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Reference dye, 1mM	
Oral	70270.3 mg/kg

Other information : 2× Brilliant II QRT-PCR Master Mix — Not available.
Reference dye, 1mM — Not available.
RT/RNase Block Enzyme Mixture — Not available.

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
2× Brilliant II QRT-PCR Master Mix			
Polyethylene glycol	Acute LC50 >1000000 µg/l Fresh water	Fish - Salmo salar - Parr	96 hours
Dimethyl sulfoxide	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 0.1 g/L Fresh water	Fish - Danio rerio - Embryo	30 days
Reference dye, 1mM			
Potassium chloride	Acute EC50 1337000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 83000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 9.68 mg/l Fresh water	Crustaceans - Pseudosida ramosa - Neonate	48 hours
	Acute LC50 880000 µg/l Fresh water	Fish - Pimephales promelas	96 hours

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
2× Brilliant II QRT-PCR Master Mix			
Glycerol	-1.76	-	low
Dimethyl sulfoxide	-1.35	3.16	low
RT/RNase Block Enzyme Mixture			
Glycerol	-1.76	-	low

12.4 Mobility in soil

Section 12. Ecological information

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

12.5 Other adverse effects :

2× Brilliant II QRT-PCR Master Mix	No known significant effects or critical hazards.
Reference dye, 1mM	No known significant effects or critical hazards.
RT/RNase Block Enzyme Mixture	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

Regulatory information

DOT / IMDG / IATA : Not regulated.

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-

United States inventory (TSCA 8b): At least one component is not listed.

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

Section 15. Regulatory information

DEA List I Chemicals (Precursor Chemicals) : Not listed

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 : Immediate (acute) health hazard
Delayed (chronic) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
2× Brilliant II QRT-PCR Master Mix						
Glycerol	10 - 30	No.	No.	No.	Yes.	Yes.
Polyethylene glycol	5 - 10	Yes.	No.	No.	Yes.	No.
Dimethyl sulfoxide	1 - 5	Yes.	No.	No.	Yes.	Yes.
Reference dye, 1mM						
Potassium chloride	1 - 5	No.	No.	No.	Yes.	Yes.
2-Amino-2-(hydroxymethyl)propane-1, 3-diol hydrochloride	1 - 5	No.	No.	No.	Yes.	No.
RT/RNase Block Enzyme Mixture						
Glycerol	30 - 60	No.	No.	No.	Yes.	Yes.

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

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

California Prop. 65

No products were found.

Canada inventory : Not determined.

International regulations

International lists : **Australia inventory (AICS)**: At least one component is not listed.
China inventory (IECSC): At least one component is not listed.
Japan inventory: Not determined.
Korea inventory: Not determined.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): Not determined.
Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Section 15. Regulatory information

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

Section 16. Other information

History

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Version : 3

Indicates information that has changed from previously issued version.

Notice to reader

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