

# SAFETY DATA SHEET

Brilliant II QRT-PCR Core Reagent Kit - 1-Step - 10-pack

## Section 1. Identification

<b>Product identifier</b>	: Brilliant II QRT-PCR Core Reagent Kit - 1-Step - 10-pack		
<b>Part no. (chemical kit)</b>	: 600819		
<b>Part no.</b>	SureStart Taq DNA Polymerase	600530-51	
	Reference Dye	600530-53	
	20 mM dNTP Mix (5 mM each dNTP)	600530-52	
	50 mM Magnesium Chloride	600530-55	
	10X Core RT-PCR Buffer	600532-51	
	Reverse Transcriptase	600810-52	

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

<b>Identified uses</b>	: Analytical reagent.		
	SureStart Taq DNA Polymerase	0.1 ml (500 U 5 U/ µl)	
	Reference Dye	0.1 ml (100 µl 1 mM)	
	20 mM dNTP Mix (5 mM each dNTP)	0.4 ml	
	50 mM Magnesium Chloride	1.5 ml	
	10X Core RT-PCR Buffer	1.7 ml	
	Reverse Transcriptase	0.4 ml (400 reactions)	

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

### Classification of the substance or mixture

<b>SureStart Taq DNA Polymerase</b> H320	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B
<b>50 mM Magnesium Chloride</b> H412	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
<b>Reverse Transcriptase</b> H320	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B

### GHS label elements

<b>Signal word</b>	: SureStart Taq DNA Polymerase	WARNING
	Reference Dye	No signal word.
	20 mM dNTP Mix (5 mM each dNTP)	No signal word.
	50 mM Magnesium Chloride	No signal word.
	10X Core RT-PCR Buffer	No signal word.
	Reverse Transcriptase	WARNING

## Section 2. Hazard(s) identification

<b>Hazard statements</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	H320 - Causes eye irritation.  No known significant effects or critical hazards. No known significant effects or critical hazards.  H412 - Harmful to aquatic life with long lasting effects. No known significant effects or critical hazards. H320 - Causes eye irritation.
 <b>Precautionary statements</b>		
<b>Prevention</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	Not applicable.  Not applicable. Not applicable.  P273 - Avoid release to the environment. Not applicable. Not applicable.
<b>Response</b>	: SureStart Taq DNA Polymerase  Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	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 advice or attention.  Not applicable. Not applicable.  Not applicable. Not applicable. 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 advice or attention.
<b>Storage</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	Not applicable.  Not applicable. Not applicable.  Not applicable. Not applicable. Not applicable.
<b>Disposal</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride  10X Core RT-PCR Buffer Reverse Transcriptase	Not applicable.  Not applicable. Not applicable.  P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.  Not applicable. Not applicable.
 <b>Supplemental label elements</b>		
<b>Additional warning phrases</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	Not applicable.  Not applicable. Not applicable.  Not applicable. Not applicable. Not applicable.

## Section 2. Hazard(s) identification

<b>Other hazards which do not result in classification</b>	SureStart Taq DNA Polymerase	None known.
	Reference Dye	None known.
	20 mM dNTP Mix (5 mM each dNTP)	None known.
	50 mM Magnesium Chloride	None known.
	10X Core RT-PCR Buffer	None known.
	Reverse Transcriptase	None known.

## Section 3. Composition and ingredient information

<b>Substance/mixture</b>	SureStart Taq DNA Polymerase	Mixture
	Reference Dye	Mixture
	20 mM dNTP Mix (5 mM each dNTP)	Mixture
	50 mM Magnesium Chloride	Mixture
	10X Core RT-PCR Buffer	Mixture
	Reverse Transcriptase	Mixture

### CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
<b>SureStart Taq DNA Polymerase</b>		
Glycerol	≥30 - ≤60	56-81-5
<b>50 mM Magnesium Chloride</b>		
Magnesium chloride	<2.5	7786-30-3
<b>Reverse Transcriptase</b>		
Glycerol	≥30 - ≤60	56-81-5

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

The total concentration of ingredients in this product, reported or not in this section, is 100%.

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

## Section 4. First aid measures

### Description of necessary first aid measures

<b>Eye contact</b>	SureStart Taq DNA Polymerase	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.
	20 mM dNTP Mix (5 mM each dNTP)	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.
	50 mM Magnesium Chloride	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.

## Section 4. First aid measures

	10X Core RT-PCR Buffer	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.
	Reverse Transcriptase	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.
<b>Inhalation</b>	: SureStart Taq DNA Polymerase	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.
	20 mM dNTP Mix (5 mM each dNTP)	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	50 mM Magnesium Chloride	Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	10X Core RT-PCR Buffer	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.
	Reverse Transcriptase	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.
<b>Skin contact</b>	: SureStart Taq DNA Polymerase	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.
	20 mM dNTP Mix (5 mM each dNTP)	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	50 mM Magnesium Chloride	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	10X Core RT-PCR Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get

## Section 4. First aid measures

### Ingestion

Reverse Transcriptase

: SureStart Taq DNA Polymerase

Reference Dye

20 mM dNTP Mix (5 mM each dNTP)

50 mM Magnesium Chloride

10X Core RT-PCR Buffer

Reverse Transcriptase

medical attention if symptoms occur.

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.

Wash out mouth with water. Remove dentures if any. 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.

Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

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Wash out mouth with water. Remove dentures if any. 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.

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

#### Potential acute health effects

## Section 4. First aid measures

<b>Eye contact</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	Causes eye irritation. 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. Causes eye irritation.
<b>Inhalation</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	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. No known significant effects or critical hazards.
<b>Skin contact</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	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. No known significant effects or critical hazards.
<b>Ingestion</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	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. No known significant effects or critical hazards.

### Over-exposure signs/symptoms

<b>Eye contact</b>	: SureStart Taq DNA Polymerase  Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	Adverse symptoms may include the following:  irritation watering redness No specific data. No specific data. No specific data. No specific data. Adverse symptoms may include the following: irritation watering redness
<b>Inhalation</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	No specific data. No specific data. No specific data. No specific data. No specific data.

## Section 4. First aid measures

<b>Skin contact</b>	: SureStart Taq DNA Polymerase	No specific data.
	Reference Dye	No specific data.
	20 mM dNTP Mix (5 mM each dNTP)	No specific data.
	50 mM Magnesium Chloride	No specific data.
	10X Core RT-PCR Buffer	No specific data.
<b>Ingestion</b>	Reverse Transcriptase	No specific data.
	: SureStart Taq DNA Polymerase	No specific data.
	Reference Dye	No specific data.
	20 mM dNTP Mix (5 mM each dNTP)	No specific data.
	50 mM Magnesium Chloride	No specific data.
	10X Core RT-PCR Buffer	No specific data.
	Reverse Transcriptase	No specific data.

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

<b>Notes to physician</b>	: SureStart Taq DNA Polymerase	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.
	20 mM dNTP Mix (5 mM each dNTP)	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	50 mM Magnesium Chloride	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	10X Core RT-PCR Buffer	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.
	Reverse Transcriptase	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	: SureStart Taq DNA Polymerase	No specific treatment.
	Reference Dye	No specific treatment.
	20 mM dNTP Mix (5 mM each dNTP)	No specific treatment.
	50 mM Magnesium Chloride	No specific treatment.
	10X Core RT-PCR Buffer	No specific treatment.
	Reverse Transcriptase	No specific treatment.
<b>Protection of first-aiders</b>	: SureStart Taq DNA Polymerase	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.
	20 mM dNTP Mix (5 mM each dNTP)	No action shall be taken involving any personal risk or without suitable training.
	50 mM Magnesium Chloride	No action shall be taken involving any personal risk or without suitable training.
	10X Core RT-PCR Buffer	No action shall be taken involving any personal risk or without suitable training.
	Reverse Transcriptase	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.

## Section 4. First aid measures

See toxicological information (Section 11)

## Section 5. Firefighting measures

### Extinguishing media

<b>Suitable extinguishing media</b>	: SureStart Taq DNA Polymerase Reference Dye	Use an extinguishing agent suitable for the surrounding fire.
	20 mM dNTP Mix (5 mM each dNTP)	Use an extinguishing agent suitable for the surrounding fire.
	50 mM Magnesium Chloride	Use an extinguishing agent suitable for the surrounding fire.
	10X Core RT-PCR Buffer	Use an extinguishing agent suitable for the surrounding fire.
	Reverse Transcriptase	Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: SureStart Taq DNA Polymerase Reference Dye	None known.
	20 mM dNTP Mix (5 mM each dNTP)	None known.
	50 mM Magnesium Chloride	None known.
	10X Core RT-PCR Buffer	None known.
	Reverse Transcriptase	None known.
<b>Specific hazards arising from the chemical</b>	: SureStart Taq DNA Polymerase Reference Dye	In a fire or if heated, a pressure increase will occur and the container may burst.
	20 mM dNTP Mix (5 mM each dNTP)	In a fire or if heated, a pressure increase will occur and the container may burst.
	50 mM Magnesium Chloride	In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
	10X Core RT-PCR Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	Reverse Transcriptase	In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous thermal decomposition products</b>	: SureStart Taq DNA Polymerase	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	Reference Dye	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
	20 mM dNTP Mix (5 mM each dNTP)	No specific data.
	50 mM Magnesium Chloride	Decomposition products may include the following materials: halogenated compounds metal oxide/oxides
	10X Core RT-PCR Buffer	Decomposition products may include the following materials:



## Section 5. Firefighting measures

		carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
	Reverse Transcriptase	Decomposition products may include the following materials: carbon dioxide carbon monoxide
<b>Special protective actions for fire-fighters</b>	: SureStart Taq DNA Polymerase	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Reference Dye	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	20 mM dNTP Mix (5 mM each dNTP)	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.
	50 mM Magnesium Chloride	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.
	10X Core RT-PCR Buffer	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.
	Reverse Transcriptase	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>	: SureStart Taq DNA Polymerase	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Reference Dye	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	20 mM dNTP Mix (5 mM each dNTP)	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	50 mM Magnesium Chloride	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	10X Core RT-PCR Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Reverse Transcriptase	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	: SureStart Taq DNA Polymerase	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour 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 spilt material. Put on appropriate personal protective equipment.
	20 mM dNTP Mix (5 mM each dNTP)	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	50 mM Magnesium Chloride	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	10X Core RT-PCR Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	Reverse Transcriptase	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	: SureStart Taq DNA Polymerase	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Reference Dye	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	20 mM dNTP Mix (5 mM each dNTP)	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".
	50 mM Magnesium Chloride	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".
	10X Core RT-PCR Buffer	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".
	Reverse Transcriptase	If specialised clothing is required to deal with the

## Section 6. Accidental release measures

		spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
<b>Environmental precautions</b>	: SureStart Taq DNA Polymerase	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Reference Dye	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	20 mM dNTP Mix (5 mM each dNTP)	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	50 mM Magnesium Chloride	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
	10X Core RT-PCR Buffer	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Reverse Transcriptase	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and material for containment and cleaning up

<b>Methods for cleaning up</b>	: SureStart Taq DNA Polymerase	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.
	20 mM dNTP Mix (5 mM each dNTP)	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.
	50 mM Magnesium Chloride	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.
	10X Core RT-PCR Buffer	Stop leak if without risk. Move containers from spill

## Section 6. Accidental release measures

Reverse Transcriptase

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.

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

### Precautions for safe handling

#### Protective measures

: SureStart Taq DNA Polymerase

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour 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.

Reference Dye

Put on appropriate personal protective equipment (see Section 8).

20 mM dNTP Mix (5 mM each dNTP)

Put on appropriate personal protective equipment (see Section 8).

50 mM Magnesium Chloride

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. 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.

10X Core RT-PCR Buffer

Put on appropriate personal protective equipment (see Section 8).

Reverse Transcriptase

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour 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.

#### Advice on general occupational hygiene

: SureStart Taq DNA Polymerase

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

Reference Dye

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

20 mM dNTP Mix (5 mM each dNTP)

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

## Section 7. Handling and storage

	50 mM Magnesium Chloride	contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	10X Core RT-PCR Buffer	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.
	Reverse Transcriptase	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><b>Conditions for safe storage, including any incompatibilities</b></p>	<p>SureStart Taq DNA Polymerase</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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
	Reference Dye	<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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
	20 mM dNTP Mix (5 mM each dNTP)	<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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
	50 mM Magnesium Chloride	<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</p>

## Section 7. Handling and storage

10X Core RT-PCR Buffer

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

Reverse Transcriptase

## Section 8. Exposure controls and personal protection

### Control parameters

### Occupational exposure limits

Ingredient name	Exposure limits
<b>SureStart Taq DNA Polymerase</b> Glycerol	<b>Safe Work Australia (Australia, 10/2022).</b> TWA: 10 mg/m <sup>3</sup> 8 hours.
<b>Reverse Transcriptase</b> Glycerol	<b>Safe Work Australia (Australia, 10/2022).</b> TWA: 10 mg/m <sup>3</sup> 8 hours.

### Biological exposure indices

No exposure indices known.

- 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.

## Section 8. Exposure controls and personal protection

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: 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 and safety characteristics

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

### Appearance

<b>Physical state</b>	SureStart Taq DNA Polymerase	Liquid.
	Reference Dye	Liquid.
	20 mM dNTP Mix (5 mM each dNTP)	Liquid.
	50 mM Magnesium Chloride	Liquid.
	10X Core RT-PCR Buffer	Liquid.
	Reverse Transcriptase	Liquid.
<b>Colour</b>	SureStart Taq DNA Polymerase	Not available.
	Reference Dye	Not available.
	20 mM dNTP Mix (5 mM each dNTP)	Not available.
	50 mM Magnesium Chloride	Not available.
	10X Core RT-PCR Buffer	Not available.
	Reverse Transcriptase	Not available.
<b>Odour</b>	SureStart Taq DNA Polymerase	Not available.
	Reference Dye	Not available.
	20 mM dNTP Mix (5 mM each dNTP)	Not available.
	50 mM Magnesium Chloride	Not available.
	10X Core RT-PCR Buffer	Not available.
	Reverse Transcriptase	Not available.

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

**Odour threshold** : SureStart Taq DNA Polymerase Not available.  
 Reference Dye Not available.  
 20 mM dNTP Mix (5 mM each dNTP) Not available.  
 50 mM Magnesium Chloride Not available.  
 10X Core RT-PCR Buffer Not available.  
 Reverse Transcriptase Not available.

**pH** : SureStart Taq DNA Polymerase Not available.  
 Reference Dye 8  
 20 mM dNTP Mix (5 mM each dNTP) Not available.  
 50 mM Magnesium Chloride Not available.  
 10X Core RT-PCR Buffer Not available.  
 Reverse Transcriptase Not available.

**Melting point/freezing point** : SureStart Taq DNA Polymerase Not available.  
 Reference Dye Not available.  
 20 mM dNTP Mix (5 mM each dNTP) 0°C (32°F)  
 50 mM Magnesium Chloride 0°C (32°F)  
 10X Core RT-PCR Buffer Not available.  
 Reverse Transcriptase Not available.

**Boiling point, initial boiling point, and boiling range** : SureStart Taq DNA Polymerase Not available.  
 Reference Dye Not available.  
 20 mM dNTP Mix (5 mM each dNTP) 100°C (212°F)  
 50 mM Magnesium Chloride 100°C (212°F)  
 10X Core RT-PCR Buffer Not available.  
 Reverse Transcriptase Not available.

**Flash point** :

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
<b>SureStart Taq DNA Polymerase</b>						
Glycerol	-	-	-	177	350.6	-
<b>Reverse Transcriptase</b>						
Glycerol	-	-	-	177	350.6	-

**Evaporation rate** : SureStart Taq DNA Polymerase Not available.  
 Reference Dye Not available.  
 20 mM dNTP Mix (5 mM each dNTP) Not available.  
 50 mM Magnesium Chloride Not available.  
 10X Core RT-PCR Buffer Not available.  
 Reverse Transcriptase Not available.

**Flammability** : SureStart Taq DNA Polymerase Not applicable.  
 Reference Dye Not applicable.  
 20 mM dNTP Mix (5 mM each dNTP) Not applicable.  
 50 mM Magnesium Chloride Not applicable.  
 10X Core RT-PCR Buffer Not applicable.  
 Reverse Transcriptase Not applicable.



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

**Lower and upper explosion limit/flammability limit** : SureStart Taq DNA Polymerase Not available.  
 Reference Dye Not available.  
 20 mM dNTP Mix (5 mM each dNTP) Not available.  
 50 mM Magnesium Chloride Not available.  
 10X Core RT-PCR Buffer Not available.  
 Reverse Transcriptase Not available.

**Vapour pressure** :

Ingredient name	Vapour Pressure at 20 °C			Vapour pressure at 50 °C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
<b>SureStart Taq DNA Polymerase</b>						
water	17.5	2.3	-	92.258	12.3	-
Glycerol	0.000075	0.00001	-	0.0025	0.00033	-
<b>Reference Dye</b>						
water	17.5	2.3	-	92.258	12.3	-
<b>20 mM dNTP Mix (5 mM each dNTP)</b>						
water	17.5	2.3	-	92.258	12.3	-
<b>50 mM Magnesium Chloride</b>						
water	17.5	2.3	-	92.258	12.3	-
<b>10X Core RT-PCR Buffer</b>						
water	17.5	2.3	-	92.258	12.3	-
<b>Reverse Transcriptase</b>						
water	17.5	2.3	-	92.258	12.3	-
Glycerol	0.000075	0.00001	-	0.0025	0.00033	-

**Relative vapour density** : SureStart Taq DNA Polymerase Not available.  
 Reference Dye Not available.  
 20 mM dNTP Mix (5 mM each dNTP) Not available.  
 50 mM Magnesium Chloride Not available.  
 10X Core RT-PCR Buffer Not available.  
 Reverse Transcriptase Not available.

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

**Relative density** : SureStart Taq DNA Polymerase Not available.  
 Reference Dye Not available.  
 20 mM dNTP Mix (5 mM each dNTP) Not available.  
 50 mM Magnesium Chloride Not available.  
 10X Core RT-PCR Buffer Not available.  
 Reverse Transcriptase Not available.

**Solubility(ies)** :

Media	Result
<b>SureStart Taq DNA Polymerase</b> water	Soluble
<b>Reference Dye</b> water	Soluble
<b>20 mM dNTP Mix (5 mM each dNTP)</b> water	Soluble
<b>50 mM Magnesium Chloride</b> water	Soluble
<b>10X Core RT-PCR Buffer</b> water	Soluble
<b>Reverse Transcriptase</b> water	Soluble

**Partition coefficient: n-octanol/water** : SureStart Taq DNA Polymerase Not applicable.  
 Reference Dye Not applicable.  
 20 mM dNTP Mix (5 mM each dNTP) Not applicable.  
 50 mM Magnesium Chloride Not applicable.  
 10X Core RT-PCR Buffer Not applicable.  
 Reverse Transcriptase Not applicable.

**Auto-ignition temperature** :

Ingredient name	°C	°F	Method
<b>SureStart Taq DNA Polymerase</b>			
Glycerol	370	698	-
<b>Reverse Transcriptase</b>			
Glycerol	370	698	-

**Decomposition temperature** : SureStart Taq DNA Polymerase Not available.  
 Reference Dye Not available.  
 20 mM dNTP Mix (5 mM each dNTP) Not available.  
 50 mM Magnesium Chloride Not available.  
 10X Core RT-PCR Buffer Not available.  
 Reverse Transcriptase Not available.

**Viscosity** : SureStart Taq DNA Polymerase Not available.  
 Reference Dye Not available.  
 20 mM dNTP Mix (5 mM each dNTP) Not available.  
 50 mM Magnesium Chloride Not available.  
 10X Core RT-PCR Buffer Not available.  
 Reverse Transcriptase Not available.

**Particle characteristics**

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

<b>Median particle size</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
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## Section 10. Stability and reactivity

<b>Reactivity</b>	: SureStart Taq DNA Polymerase Reference Dye  20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride  10X Core RT-PCR Buffer  Reverse Transcriptase	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. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	The product is stable.  The product is stable. The product is stable.  The product is stable. The product is stable. The product is stable.
<b>Possibility of hazardous reactions</b>	: SureStart Taq DNA Polymerase Reference Dye  20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride  10X Core RT-PCR Buffer  Reverse Transcriptase	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. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	No specific data.  No specific data. No specific data.  No specific data. No specific data. No specific data.

## Section 10. Stability and reactivity

<b>Incompatible materials</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
<b>Hazardous decomposition products</b>	: SureStart Taq DNA Polymerase  Reference Dye  20 mM dNTP Mix (5 mM each dNTP)  50 mM Magnesium Chloride  10X Core RT-PCR Buffer  Reverse Transcriptase	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.  Under normal conditions of storage and use, hazardous decomposition products should not be produced.  Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<b>SureStart Taq DNA Polymerase</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-
<b>50 mM Magnesium Chloride</b> Magnesium chloride	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat	2800 mg/kg	-
<b>Reverse Transcriptase</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>SureStart Taq DNA Polymerase</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
<b>Reverse Transcriptase</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

## Section 11. Toxicological information

### Sensitisation

Not available.

### Mutagenicity

**Conclusion/Summary** : Not available.

### Carcinogenicity

**Conclusion/Summary** : Not available.

### Reproductive toxicity

**Conclusion/Summary** : Not available.

### Teratogenicity

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

<b>Information on likely routes of exposure</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes. Not available. Not available. Not available. Not available. Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
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### Potential acute health effects

<b>Eye contact</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	Causes eye irritation. 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. Causes eye irritation.
<b>Inhalation</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	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. No known significant effects or critical hazards.
<b>Skin contact</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	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. No known significant effects or critical hazards.

## Section 11. Toxicological information

<b>Ingestion</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	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. No known significant effects or critical hazards. No known significant effects or critical hazards.
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### Symptoms related to the physical, chemical and toxicological characteristics

<b>Eye contact</b>	: SureStart Taq DNA Polymerase  Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	Adverse symptoms may include the following:  irritation watering redness No specific data. No specific data. No specific data. No specific data. Adverse symptoms may include the following: irritation watering redness
<b>Inhalation</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
<b>Skin contact</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
<b>Ingestion</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.

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

#### Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

## Section 11. Toxicological information

### Potential chronic health effects

<b>General</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	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. No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	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. No known significant effects or critical hazards.
<b>Mutagenicity</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	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. No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	: SureStart Taq DNA Polymerase Reference Dye 20 mM dNTP Mix (5 mM each dNTP) 50 mM Magnesium Chloride 10X Core RT-PCR Buffer Reverse Transcriptase	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. No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
<b>SureStart Taq DNA Polymerase</b> Glycerol	12600	N/A	N/A	N/A	N/A
<b>50 mM Magnesium Chloride</b> Magnesium chloride	2800	N/A	N/A	N/A	N/A
<b>Reverse Transcriptase</b> Glycerol	12600	N/A	N/A	N/A	N/A

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
<b>SureStart Taq DNA Polymerase</b> Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
<b>50 mM Magnesium Chloride</b> Magnesium chloride	Acute EC50 >100 mg/l Fresh water	Algae - <i>Desmodesmus subspicatus</i>	72 hours
	Acute EC50 180000 µg/l Fresh water	Crustaceans - <i>Eudiaptomus padanus ssp. padanus</i> - Adult	48 hours
	Acute IC50 6.8 mg/l Fresh water	Aquatic plants - <i>Lemna aequinoctialis</i>	96 hours
	Acute LC50 32000 µg/l Fresh water	Daphnia - <i>Daphnia hyalina</i> - Adult	48 hours
	Acute LC50 2120 mg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
	Acute NOEC 100 mg/l Fresh water	Algae - <i>Desmodesmus subspicatus</i>	72 hours
	Chronic NOEC 0.1 mg/l Fresh water	Fish - <i>Cyprinus carpio</i>	35 days
<b>Reverse Transcriptase</b> Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours

### Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<b>SureStart Taq DNA Polymerase</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
<b>Reverse Transcriptase</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>SureStart Taq DNA Polymerase</b> Glycerol	-1.76	-	Low
<b>Reverse Transcriptase</b> Glycerol	-1.76	-	Low

### Mobility in soil

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

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



## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

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

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

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

## Section 15. Regulatory information

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

Not regulated.

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

No listed substance

### International regulations

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

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

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

Not listed.

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

Not listed.

### Inventory list

**Australia** : Not determined.

**New Zealand** : Not determined.

**United States** : Not determined.

## Section 16. Any other relevant information

### History

**Date of issue/Date of revision** : 22/05/2024

**Date of previous issue** : 24/05/2021

**Version** : 6

### Key to abbreviations

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

### Procedure used to derive the classification

Classification	Justification
<b>SureStart Taq DNA Polymerase</b> SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B	Calculation method
<b>50 mM Magnesium Chloride</b> LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3	Calculation method
<b>Reverse Transcriptase</b> SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B	Calculation method

✓ Indicates information that has changed from previously issued version.

### Notice to reader

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