

SAFETY DATA SHEET

SureSelect cDNA Module (Pre PCR), 96 Reactions, Part Number 5500-0149

Section 1. Identification

Product identifier : SureSelect cDNA Module (Pre PCR), 96 Reactions, Part Number 5500-0149

Part no. (chemical kit) : 5500-0149

Part no. :

2X Priming Buffer	5191-6842
First Strand Master Mix	5191-6843
Second Strand Enzyme Mix	5190-7764
Second Strand Oligo Mix	5190-7765

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

Identified uses :

<input type="checkbox"/> Analytical reagent.	
For research use only.	
<input checked="" type="checkbox"/> 2X Priming Buffer	1.3 ml (96 reactions)
First Strand Master Mix	0.816 ml (96 reactions)
Second Strand Enzyme Mix	2.8 ml (96 reactions)
Second Strand Oligo Mix	0.6 ml (96 reactions)

Uses advised against : ☒ Not for use in diagnostic procedures.

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

Emergency telephone number (with hours of operation) : CHEMTREC®: 1-800-424-9300

Section 2. Hazard identification

Classification of the substance or mixture

First Strand Master Mix
H320 EYE IRRITATION - Category 2B

Second Strand Enzyme Mix
H320 EYE IRRITATION - Category 2B

GHS label elements

Signal word :

2X Priming Buffer	No signal word.
First Strand Master Mix	Warning
Second Strand Enzyme Mix	Warning
Second Strand Oligo Mix	No signal word.

Hazard statements :

2X Priming Buffer	No known significant effects or critical hazards.
First Strand Master Mix	H320 - Causes eye irritation.
Second Strand Enzyme Mix	H320 - Causes eye irritation.
Second Strand Oligo Mix	No known significant effects or critical hazards.

Precautionary statements

Prevention :

2X Priming Buffer	Not applicable.
First Strand Master Mix	Not applicable.
Second Strand Enzyme Mix	Not applicable.
Second Strand Oligo Mix	Not applicable.

Section 2. Hazard identification

Response	: 2X Priming Buffer	Not applicable.
	First Strand Master Mix	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.
	Second Strand Enzyme Mix	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.
Storage	Second Strand Oligo Mix	Not applicable.
	: 2X Priming Buffer	Not applicable.
	First Strand Master Mix	Not applicable.
	Second Strand Enzyme Mix	Not applicable.
	Second Strand Oligo Mix	Not applicable.
Disposal	: 2X Priming Buffer	Not applicable.
	First Strand Master Mix	Not applicable.
	Second Strand Enzyme Mix	Not applicable.
	Second Strand Oligo Mix	Not applicable.
Supplemental label elements	: 2X Priming Buffer	None known.
	First Strand Master Mix	None known.
	Second Strand Enzyme Mix	None known.
	Second Strand Oligo Mix	None known.
Other hazards which do not result in classification	: 2X Priming Buffer	None known.
	First Strand Master Mix	None known.
	Second Strand Enzyme Mix	None known.
	Second Strand Oligo Mix	None known.

Section 3. Composition/information on ingredients

Substance/mixture	: 2X Priming Buffer	Mixture
	First Strand Master Mix	Mixture
	Second Strand Enzyme Mix	Mixture
	Second Strand Oligo Mix	Mixture

Ingredient name	Synonyms	% (w/w)	CAS number
2X Priming Buffer			
Potassium chloride	Potassium Chloride	≥1 - ≤5	7447-40-7
First Strand Master Mix			
Glycerol	Glycerol	≥10 - ≤30	56-81-5
Polyoxyethylene octyl phenyl ether	Triton X-100	≤0.1	9002-93-1
Second Strand Enzyme Mix			
Glycerol	Glycerol	≥10 - ≤30	56-81-5
Potassium chloride	Potassium Chloride	≥1 - ≤5	7447-40-7
Polyoxyethylene octyl phenyl ether	Triton X-100	≤0.1	9002-93-1

Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

Section 3. Composition/information on ingredients

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.

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

Section 4. First-aid measures

Description of necessary first aid measures

Eye contact	: 2X Priming 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.
	First Strand Master Mix	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
	Second Strand Enzyme Mix	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
	Second Strand Oligo Mix	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	: 2X Priming 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.
	First Strand Master Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	Second Strand Enzyme Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	Second Strand Oligo Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Section 4. First-aid measures

Skin contact	: 2X Priming Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	First Strand Master Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Second Strand Enzyme Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Second Strand Oligo Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: 2X Priming Buffer	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.
	First Strand Master Mix	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.
	Second Strand Enzyme Mix	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.
	Second Strand Oligo Mix	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: 2X Priming Buffer	No known significant effects or critical hazards.
	First Strand Master Mix	Causes eye irritation.
	Second Strand Enzyme Mix	Causes eye irritation.
	Second Strand Oligo Mix	No known significant effects or critical hazards.

Section 4. First-aid measures

Inhalation	: 2X Priming Buffer	No known significant effects or critical hazards.
	First Strand Master Mix	No known significant effects or critical hazards.
	Second Strand Enzyme Mix	No known significant effects or critical hazards.
	Second Strand Oligo Mix	No known significant effects or critical hazards.
Skin contact	: 2X Priming Buffer	No known significant effects or critical hazards.
	First Strand Master Mix	No known significant effects or critical hazards.
	Second Strand Enzyme Mix	No known significant effects or critical hazards.
	Second Strand Oligo Mix	No known significant effects or critical hazards.
Ingestion	: 2X Priming Buffer	No known significant effects or critical hazards.
	First Strand Master Mix	No known significant effects or critical hazards.
	Second Strand Enzyme Mix	No known significant effects or critical hazards.
	Second Strand Oligo Mix	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: 2X Priming Buffer	No specific data.
	First Strand Master Mix	Adverse symptoms may include the following: irritation watering redness
	Second Strand Enzyme Mix	Adverse symptoms may include the following: irritation watering redness
	Second Strand Oligo Mix	No specific data.
Inhalation	: 2X Priming Buffer	No specific data.
	First Strand Master Mix	No specific data.
	Second Strand Enzyme Mix	No specific data.
	Second Strand Oligo Mix	No specific data.
Skin contact	: 2X Priming Buffer	No specific data.
	First Strand Master Mix	No specific data.
	Second Strand Enzyme Mix	No specific data.
	Second Strand Oligo Mix	No specific data.
Ingestion	: 2X Priming Buffer	No specific data.
	First Strand Master Mix	No specific data.
	Second Strand Enzyme Mix	No specific data.
	Second Strand Oligo Mix	No specific data.

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

Notes to physician	: 2X Priming 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.
	First Strand Master Mix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Second Strand Enzyme Mix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Second Strand Oligo Mix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: 2X Priming Buffer	No specific treatment.
	First Strand Master Mix	No specific treatment.
	Second Strand Enzyme Mix	No specific treatment.
	Second Strand Oligo Mix	No specific treatment.

Section 4. First-aid measures

Protection of first-aiders	: 2X Priming Buffer	No action shall be taken involving any personal risk or without suitable training.
	First Strand 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.
	Second Strand Enzyme 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.
	Second Strand Oligo Mix	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	: 2X Priming Buffer	Use an extinguishing agent suitable for the surrounding fire.
	First Strand Master Mix	Use an extinguishing agent suitable for the surrounding fire.
	Second Strand Enzyme Mix	Use an extinguishing agent suitable for the surrounding fire.
	Second Strand Oligo Mix	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: 2X Priming Buffer	None known.
	First Strand Master Mix	None known.
	Second Strand Enzyme Mix	None known.
	Second Strand Oligo Mix	None known.

Specific hazards arising from the chemical

: 2X Priming Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
First Strand Master Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
Second Strand Enzyme Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
Second Strand Oligo Mix	In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products

: 2X Priming Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
First Strand Master Mix	Decomposition products may include the following materials: carbon dioxide carbon monoxide
Second Strand Enzyme Mix	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
Second Strand Oligo Mix	No specific data.

Section 5. Fire-fighting measures

Special protective actions for fire-fighters : 2X Priming Buffer

First Strand Master Mix

Second Strand Enzyme Mix

Second Strand Oligo 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.

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Special protective equipment for fire-fighters : 2X Priming Buffer

First Strand Master Mix

Second Strand Enzyme Mix

Second Strand Oligo Mix

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : 2X Priming Buffer

First Strand Master Mix

Second Strand Enzyme Mix

Second Strand Oligo Mix

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding

Section 6. Accidental release measures

For emergency responders : 2X Priming Buffer

First Strand Master Mix

Second Strand Enzyme Mix

Second Strand Oligo Mix

areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

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

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

Environmental precautions : 2X Priming Buffer

First Strand Master Mix

Second Strand Enzyme Mix

Second Strand Oligo 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).

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).

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Methods and materials for containment and cleaning up

Methods for cleaning up : 2X Priming Buffer

First Strand Master Mix

Second Strand Enzyme 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.

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Section 6. Accidental release measures

Second Strand Oligo Mix

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

: 2X Priming Buffer

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

First Strand Master Mix

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

Second Strand Enzyme Mix

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

Second Strand Oligo Mix

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

Advice on general occupational hygiene

: 2X Priming 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.

First Strand Master Mix

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

Second Strand Enzyme Mix

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

Second Strand Oligo Mix

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

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : 2X Priming Buffer

First Strand 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. See Section 10 for incompatible materials before handling or use.

Second Strand Enzyme 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. See Section 10 for incompatible materials before handling or use.

Second Strand Oligo 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. See Section 10 for incompatible materials before handling or use.

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Section 8. Exposure controls/personal protection

[Control parameters](#)

[Occupational exposure limits](#)

Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
First Strand Master Mix Glycerol	CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 10 mg/m ³ 8 hours. Form: Mist CA Quebec Provincial (Canada, 6/2022). TWAEV: 10 mg/m ³ 8 hours. Form: mist CA Saskatchewan Provincial (Canada, 7/2013). STEL: 20 mg/m ³ 15 minutes. Form: mist TWA: 10 mg/m ³ 8 hours. Form: mist CA British Columbia Provincial (Canada, 6/2022). TWA: 3 mg/m ³ 8 hours. Form: respirable mist TWA: 10 mg/m ³ 8 hours. Form: total mist
Second Strand Enzyme Mix Glycerol	CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 10 mg/m ³ 8 hours. Form: Mist CA Quebec Provincial (Canada, 6/2022). TWAEV: 10 mg/m ³ 8 hours. Form: mist CA Saskatchewan Provincial (Canada, 7/2013). STEL: 20 mg/m ³ 15 minutes. Form: mist TWA: 10 mg/m ³ 8 hours. Form: mist CA British Columbia Provincial (Canada, 6/2022). TWA: 3 mg/m ³ 8 hours. Form: respirable mist TWA: 10 mg/m ³ 8 hours. Form: total mist

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.

Eye/face protection

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

Skin protection

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.
- 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

- | | | | |
|--|---|--------------------------|----------------|
| Physical state | : | 2X Priming Buffer | Liquid. |
| | | First Strand Master Mix | Liquid. |
| | | Second Strand Enzyme Mix | Liquid. |
| | | Second Strand Oligo Mix | Liquid. |
| Color | : | 2X Priming Buffer | Not available. |
| | | First Strand Master Mix | Not available. |
| | | Second Strand Enzyme Mix | Not available. |
| | | Second Strand Oligo Mix | Not available. |
| Odor | : | 2X Priming Buffer | Not available. |
| | | First Strand Master Mix | Not available. |
| | | Second Strand Enzyme Mix | Not available. |
| | | Second Strand Oligo Mix | Not available. |
| Odor threshold | : | 2X Priming Buffer | Not available. |
| | | First Strand Master Mix | Not available. |
| | | Second Strand Enzyme Mix | Not available. |
| | | Second Strand Oligo Mix | Not available. |
| pH | : | 2X Priming Buffer | 8.3 |
| | | First Strand Master Mix | 8.3 |
| | | Second Strand Enzyme Mix | 8.3 |
| | | Second Strand Oligo Mix | 7.5 |
| Melting point/freezing point | : | 2X Priming Buffer | 0°C (32°F) |
| | | First Strand Master Mix | Not available. |
| | | Second Strand Enzyme Mix | Not available. |
| | | Second Strand Oligo Mix | Not available. |
| Boiling point, initial boiling point, and boiling range | : | 2X Priming Buffer | 100°C (212°F) |
| | | First Strand Master Mix | Not available. |
| | | Second Strand Enzyme Mix | Not available. |
| | | Second Strand Oligo Mix | Not available. |
| Flash point | : | | |

Section 9. Physical and chemical properties and safety characteristics

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
First Strand Master Mix						
Glycerol	-	-	-	177	350.6	-
Second Strand Enzyme Mix						
Glycerol	-	-	-	177	350.6	-

Evaporation rate : 2X Priming Buffer Not available.
 First Strand Master Mix Not available.
 Second Strand Enzyme Mix Not available.
 Second Strand Oligo Mix Not available.

Flammability : 2X Priming Buffer Not applicable.
 First Strand Master Mix Not applicable.
 Second Strand Enzyme Mix Not applicable.
 Second Strand Oligo Mix Not applicable.

Lower and upper explosion limit/flammability limit : 2X Priming Buffer Not available.
 First Strand Master Mix Not available.
 Second Strand Enzyme Mix Not available.
 Second Strand Oligo Mix Not available.

Vapor pressure :

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
2X Priming Buffer						
water	17.5	2.3	-	92.258	12.3	-
2-Amino-2-(hydroxymethyl) propane-1,3-diol hydrochloride	0	0	-	0.000007501	0.000001	-
First Strand Master Mix						
water	17.5	2.3	-	92.258	12.3	-
Glycerol	0.000075	0.00001	-	0.0025	0.00033	-
Second Strand Enzyme Mix						
water	17.5	2.3	-	92.258	12.3	-
Glycerol	0.000075	0.00001	-	0.0025	0.00033	-
Second Strand Oligo Mix						

Section 9. Physical and chemical properties and safety characteristics

	water	17.5	2.3	-	92.258	12.3	-
Relative vapor density	: 2X Priming Buffer	Not available.					
	First Strand Master Mix	Not available.					
	Second Strand Enzyme Mix	Not available.					
	Second Strand Oligo Mix	Not available.					
Relative density	: 2X Priming Buffer	Not available.					
	First Strand Master Mix	Not available.					
	Second Strand Enzyme Mix	Not available.					
	Second Strand Oligo Mix	Not available.					
Solubility(ies)	: Media	Result					
	2X Priming Buffer						
	water						
	First Strand Master Mix						
	water						
	Second Strand Enzyme Mix						
	water	Soluble					
	Second Strand Oligo Mix	Soluble					
	water	Soluble					
Partition coefficient: n-octanol/water	: 2X Priming Buffer	Not applicable.					
	First Strand Master Mix	Not applicable.					
	Second Strand Enzyme Mix	Not applicable.					
	Second Strand Oligo Mix	Not applicable.					
Auto-ignition temperature	: Ingredient name	°C	°F	Method			
	First Strand Master Mix						
	Glycerol						
	Second Strand Enzyme Mix						
	Glycerol						
		370	698	-			
		370	698	-			
Decomposition temperature	: 2X Priming Buffer	Not available.					
	First Strand Master Mix	Not available.					
	Second Strand Enzyme Mix	Not available.					
	Second Strand Oligo Mix	Not available.					
Viscosity	: 2X Priming Buffer	Not available.					
	First Strand Master Mix	Not available.					
	Second Strand Enzyme Mix	Not available.					
	Second Strand Oligo Mix	Not available.					
Particle characteristics							
Median particle size	: 2X Priming Buffer	Not applicable.					
	First Strand Master Mix	Not applicable.					
	Second Strand Enzyme Mix	Not applicable.					
	Second Strand Oligo Mix	Not applicable.					

Section 10. Stability and reactivity

Reactivity	: 2X Priming Buffer	No specific test data related to reactivity available for this product or its ingredients.					
	First Strand Master Mix	No specific test data related to reactivity available for this product or its ingredients.					
	Second Strand Enzyme Mix	No specific test data related to reactivity available for this product or its ingredients.					
	Second Strand Oligo Mix	No specific test data related to reactivity available for this product or its ingredients.					

Section 10. Stability and reactivity

Chemical stability	: 2X Priming Buffer First Strand Master Mix Second Strand Enzyme Mix Second Strand Oligo Mix	The product is stable. The product is stable. The product is stable. The product is stable.
Possibility of hazardous reactions	: 2X Priming Buffer First Strand Master Mix Second Strand Enzyme Mix Second Strand Oligo Mix	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.
Conditions to avoid	: 2X Priming Buffer First Strand Master Mix Second Strand Enzyme Mix Second Strand Oligo Mix	No specific data. No specific data. No specific data. No specific data.
Incompatible materials	: 2X Priming Buffer First Strand Master Mix Second Strand Enzyme Mix Second Strand Oligo Mix	May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials.
Hazardous decomposition products	: 2X Priming Buffer First Strand Master Mix Second Strand Enzyme Mix Second Strand Oligo Mix	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
2X Priming Buffer Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-
First Strand Master Mix Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Polyoxyethylene octyl phenyl ether	LD50 Oral	Rat	1800 mg/kg	-
Second Strand Enzyme Mix Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-
Polyoxyethylene octyl phenyl ether	LD50 Oral	Rat	1800 mg/kg	-

Section 11. Toxicological information

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2X Priming Buffer Potassium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
First Strand Master Mix Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Polyoxyethylene octyl phenyl ether	Skin - Mild irritant	Rabbit	-	24 hours 500 uL	-
Second Strand Enzyme Mix Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Potassium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
Polyoxyethylene octyl phenyl ether	Skin - Mild irritant	Rabbit	-	24 hours 500 uL	-

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

☒ Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

: ☒ 2X Priming Buffer
First Strand Master Mix
Second Strand Enzyme Mix
Second Strand Oligo Mix

Not available.
Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
Not available.

Potential acute health effects

Section 11. Toxicological information

Eye contact	: 2X Priming Buffer	No known significant effects or critical hazards.
	First Strand Master Mix	Causes eye irritation.
	Second Strand Enzyme Mix	Causes eye irritation.
	Second Strand Oligo Mix	No known significant effects or critical hazards.
Inhalation	: 2X Priming Buffer	No known significant effects or critical hazards.
	First Strand Master Mix	No known significant effects or critical hazards.
	Second Strand Enzyme Mix	No known significant effects or critical hazards.
	Second Strand Oligo Mix	No known significant effects or critical hazards.
Skin contact	: 2X Priming Buffer	No known significant effects or critical hazards.
	First Strand Master Mix	No known significant effects or critical hazards.
	Second Strand Enzyme Mix	No known significant effects or critical hazards.
	Second Strand Oligo Mix	No known significant effects or critical hazards.
Ingestion	: 2X Priming Buffer	No known significant effects or critical hazards.
	First Strand Master Mix	No known significant effects or critical hazards.
	Second Strand Enzyme Mix	No known significant effects or critical hazards.
	Second Strand Oligo Mix	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: 2X Priming Buffer	No specific data.
	First Strand Master Mix	Adverse symptoms may include the following: irritation watering redness
	Second Strand Enzyme Mix	Adverse symptoms may include the following: irritation watering redness
	Second Strand Oligo Mix	No specific data.
Inhalation	: 2X Priming Buffer	No specific data.
	First Strand Master Mix	No specific data.
	Second Strand Enzyme Mix	No specific data.
	Second Strand Oligo Mix	No specific data.
Skin contact	: 2X Priming Buffer	No specific data.
	First Strand Master Mix	No specific data.
	Second Strand Enzyme Mix	No specific data.
	Second Strand Oligo Mix	No specific data.
Ingestion	: 2X Priming Buffer	No specific data.
	First Strand Master Mix	No specific data.
	Second Strand Enzyme Mix	No specific data.
	Second Strand Oligo Mix	No specific data.

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	: 2X Priming Buffer	No known significant effects or critical hazards.
	First Strand Master Mix	No known significant effects or critical hazards.
	Second Strand Enzyme Mix	No known significant effects or critical hazards.
	Second Strand Oligo Mix	No known significant effects or critical hazards.

Section 11. Toxicological information

Carcinogenicity	: 2X Priming Buffer	No known significant effects or critical hazards.
	First Strand Master Mix	No known significant effects or critical hazards.
	Second Strand Enzyme Mix	No known significant effects or critical hazards.
	Second Strand Oligo Mix	No known significant effects or critical hazards.
Mutagenicity	: 2X Priming Buffer	No known significant effects or critical hazards.
	First Strand Master Mix	No known significant effects or critical hazards.
	Second Strand Enzyme Mix	No known significant effects or critical hazards.
	Second Strand Oligo Mix	No known significant effects or critical hazards.
Reproductive toxicity	: 2X Priming Buffer	No known significant effects or critical hazards.
	First Strand Master Mix	No known significant effects or critical hazards.
	Second Strand Enzyme Mix	No known significant effects or critical hazards.
	Second Strand Oligo Mix	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 (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
2X Priming Buffer					
2X Priming Buffer	232558.1	N/A	N/A	N/A	N/A
Potassium chloride	2600	N/A	N/A	N/A	N/A
First Strand Master Mix					
Glycerol	12600	N/A	N/A	N/A	N/A
Polyoxyethylene octyl phenyl ether	1800	N/A	N/A	N/A	N/A
Second Strand Enzyme Mix					
Second Strand Enzyme Mix	192592.6	N/A	N/A	N/A	N/A
Glycerol	12600	N/A	N/A	N/A	N/A
Potassium chloride	2600	N/A	N/A	N/A	N/A
Polyoxyethylene octyl phenyl ether	1800	N/A	N/A	N/A	N/A

Section 12. Ecological information

Toxicity


Product/ingredient name	Result	Species	Exposure
2X Priming Buffer			
Potassium chloride	Acute EC50 9.24 g/L Fresh water	Algae - <i>Desmodesmus subspicatus</i>	72 hours
	Acute EC50 1337000 µg/l Fresh water	Algae - <i>Navicula seminulum</i>	96 hours
	Acute LC50 9.68 mg/l Fresh water	Crustaceans - <i>Pseudosida ramosa</i> - Neonate	48 hours
	Acute LC50 93000 µg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 509.65 mg/l Fresh water	Fish - <i>Danio rerio</i>	96 hours
First Strand Master Mix			
Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
Polyoxyethylene octyl phenyl ether	Acute LC50 5.85 mg/l Fresh water	Crustaceans - <i>Ceriodaphnia rigaudi</i> - Neonate	48 hours
	Acute LC50 11.2 mg/l Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	48 hours
	Acute LC50 4500 µg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
	Chronic NOEC 0.004 mg/l Fresh water	Fish - <i>Gambusia holbrooki</i>	28 days

Section 12. Ecological information


Second Strand Enzyme Mix Glycerol Potassium chloride Polyoxyethylene octyl phenyl ether	Acute LC50 54000 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
	Acute EC50 9.24 g/L Fresh water	Algae - <i>Desmodesmus subspicatus</i>	72 hours
	Acute EC50 1337000 µg/l Fresh water	Algae - <i>Navicula seminulum</i>	96 hours
	Acute LC50 9.68 mg/l Fresh water	Crustaceans - <i>Pseudosida ramosa</i> - Neonate	48 hours
	Acute LC50 93000 µg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 509.65 mg/l Fresh water	Fish - <i>Danio rerio</i>	96 hours
	Acute LC50 5.85 mg/l Fresh water	Crustaceans - <i>Ceriodaphnia rigaudi</i> - Neonate	48 hours
	Acute LC50 11.2 mg/l Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	48 hours
	Acute LC50 4500 µg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
	Chronic NOEC 0.004 mg/l Fresh water	Fish - <i>Gambusia holbrooki</i>	28 days

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
First Strand Master Mix Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
Second Strand Enzyme Mix Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
 2X Priming Buffer Potassium chloride	-	-	Readily
First Strand Master Mix Polyoxyethylene octyl phenyl ether	-	-	Readily
Second Strand Enzyme Mix Potassium chloride	-	-	Readily
Polyoxyethylene octyl phenyl ether	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
 2X Priming Buffer Potassium chloride	-0.46	-	Low
First Strand Master Mix Glycerol	-1.76	-	Low
Polyoxyethylene octyl phenyl ether	4.86	-	High
Second Strand Enzyme Mix Glycerol	-1.76	-	Low

Section 12. Ecological information

Potassium chloride	-0.46	-	Low
Polyoxyethylene octyl phenyl ether	4.86	-	High

Mobility in soil

Soil/water partition coefficient (K_{oc}) : 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 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. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

TDG / IMDG / IATA : Not regulated.

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

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

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.

Section 15. Regulatory information

[Inventory list](#)

Canada : Not determined.

United States : Not determined.

Section 16. Other information

[History](#)

Date of issue/Date of revision : 06/29/2023


Date of previous issue : 07/27/2020

Version : 2

Key to abbreviations :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- HPR = Hazardous Products Regulations
- 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
- UN = United Nations

[Procedure used to derive the classification](#)

Classification	Justification
 First Strand Master Mix EYE IRRITATION - Category 2B	Calculation method
Second Strand Enzyme Mix EYE IRRITATION - Category 2B	Calculation method

 Indicates information that has changed from previously issued version.

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