

SAFETY DATA SHEET

SSEL XT HS2 TE Kit, ILM Hyb Module, Box 2 (Post PCR), 96 Rxns, Part Number 5191-6688

Section 1. Identification

Product identifier	: SSEL XT HS2 TE Kit, ILM Hyb Module, Box 2 (Post PCR), 96 Rxns, Part Number 5191-6688
Part no. (chemical kit)	: 5191-6688
Part no.	: SureSelect XT HS2 Blocker Mix 5191-6679 SureSelect Fast Hybridization Buffer 5190-7330 SureSelect RNase Block 5972-3700 SureSelect Post-Capture Primer Mix 5190-9732 Herculase II Fusion DNA Polymerase 5600-3761 5X Herculase II Reaction Buffer with dNTPs 5191-6681
Material uses	: Analytical reagent. For Research Use Only. Not for use in diagnostic procedures. <input checked="" type="checkbox"/> SureSelect XT HS2 Blocker Mix 0.7 ml (96 reactions) SureSelect Fast Hybridization Buffer 0.918 ml (96 reactions) SureSelect RNase Block 0.08 ml SureSelect Post-Capture Primer Mix 0.14 ml (96 reactions) Herculase II Fusion DNA Polymerase 0.14 ml (96 reactions) 5X Herculase II Reaction Buffer with dNTPs 1.5 ml (96 reactions)
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

SureSelect RNase Block
H320 EYE IRRITATION - Category 2B

Herculase II Fusion DNA
Polymerase
H320 EYE IRRITATION - Category 2B

GHS label elements

Signal word	: SureSelect XT HS2 Blocker Mix No signal word.
	: SureSelect Fast Hybridization Buffer No signal word.
	: SureSelect RNase Block Warning
	: SureSelect Post-Capture Primer Mix No signal word.
	: Herculase II Fusion DNA Polymerase Warning
	: 5X Herculase II Reaction Buffer with dNTPs No signal word.

Section 2. Hazard identification

Hazard statements	: SureSelect XT HS2 Blocker Mix SureSelect Fast Hybridization Buffer SureSelect RNase Block SureSelect Post-Capture Primer Mix Herculase II Fusion DNA Polymerase 5X Herculase II Reaction Buffer with dNTPs	No known significant effects or critical hazards. No known significant effects or critical hazards. H320 - Causes eye irritation. No known significant effects or critical hazards. H320 - Causes eye irritation. No known significant effects or critical hazards.
<u>Precautionary statements</u>		
Prevention	: SureSelect XT HS2 Blocker Mix SureSelect Fast Hybridization Buffer SureSelect RNase Block SureSelect Post-Capture Primer Mix Herculase II Fusion DNA Polymerase 5X Herculase II Reaction Buffer with dNTPs	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Response	: SureSelect XT HS2 Blocker Mix SureSelect Fast Hybridization Buffer SureSelect RNase Block SureSelect Post-Capture Primer Mix Herculase II Fusion DNA Polymerase 5X Herculase II Reaction Buffer with dNTPs	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. 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. Not applicable.
Storage	: SureSelect XT HS2 Blocker Mix SureSelect Fast Hybridization Buffer SureSelect RNase Block SureSelect Post-Capture Primer Mix Herculase II Fusion DNA Polymerase 5X Herculase II Reaction Buffer with dNTPs	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.

Section 2. Hazard identification

Disposal	: SureSelect XT HS2 Blocker Mix SureSelect Fast Hybridization Buffer SureSelect RNase Block SureSelect Post-Capture Primer Mix Herculase II Fusion DNA Polymerase 5X Herculase II Reaction Buffer with dNTPs	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Supplemental label elements	: SureSelect XT HS2 Blocker Mix SureSelect Fast Hybridization Buffer SureSelect RNase Block SureSelect Post-Capture Primer Mix Herculase II Fusion DNA Polymerase 5X Herculase II Reaction Buffer with dNTPs <input checked="" type="checkbox"/> SureSelect Fast Hybridization Buffer 5X Herculase II Reaction Buffer with dNTPs	None known. None known. None known. None known. None known. None known. Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 31.3% Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 5.3%
Other hazards which do not result in classification	: SureSelect XT HS2 Blocker Mix SureSelect Fast Hybridization Buffer SureSelect RNase Block SureSelect Post-Capture Primer Mix Herculase II Fusion DNA Polymerase 5X Herculase II Reaction Buffer with dNTPs	None known. None known. None known. None known. None known. None known.

Section 3. Composition/information on ingredients

Substance/mixture	: SureSelect XT HS2 Blocker Mix SureSelect Fast Hybridization Buffer SureSelect RNase Block SureSelect Post-Capture Primer Mix Herculase II Fusion DNA Polymerase 5X Herculase II Reaction Buffer with dNTPs	Mixture Mixture Mixture Mixture Mixture Mixture
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Section 3. Composition/information on ingredients

Ingredient name	% (w/w)	CAS number
SureSelect RNase Block Glycerol	30 - 60	56-81-5
Herculase II Fusion DNA Polymerase Glycerol	30 - 60	56-81-5
5X Herculase II Reaction Buffer with dNTPs Trometamol	1 - 5	77-86-1
Ammonium sulphate	0.5 - 1.5	7783-20-2
Hexadecan-1-ol, ethoxylated	0.1 - 1	9004-95-9

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

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

Section 4. First-aid measures

Description of necessary first aid measures

Eye contact	: SureSelect XT HS2 Blocker 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.
	SureSelect Fast Hybridization 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.
	SureSelect RNase Block	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
	SureSelect Post-Capture Primer 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.
	Herculase II Fusion 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.
	5X Herculase II Reaction Buffer with dNTPs	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	: SureSelect XT HS2 Blocker Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	SureSelect Fast Hybridization 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.
	SureSelect RNase Block	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained

Section 4. First-aid measures

		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.
	SureSelect Post-Capture Primer Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Herculase II Fusion 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.
	5X Herculase II Reaction Buffer with dNTPs	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.
Skin contact	: SureSelect XT HS2 Blocker Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	SureSelect Fast Hybridization Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	SureSelect RNase Block	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	SureSelect Post-Capture Primer Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Herculase II Fusion 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.
	5X Herculase II Reaction Buffer with dNTPs	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: SureSelect XT HS2 Blocker 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.
	SureSelect Fast Hybridization 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.
	SureSelect RNase Block	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

Section 4. First-aid measures

SureSelect Post-Capture Primer Mix	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.
Herculase II Fusion DNA Polymerase	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.
5X Herculase II Reaction Buffer with dNTPs	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	: SureSelect XT HS2 Blocker Mix SureSelect Fast Hybridization Buffer SureSelect RNase Block SureSelect Post-Capture Primer Mix Herculase II Fusion DNA Polymerase 5X Herculase II Reaction Buffer with dNTPs	No known significant effects or critical hazards. No known significant effects or critical hazards. Causes eye irritation. No known significant effects or critical hazards. Causes eye irritation. No known significant effects or critical hazards.
Inhalation	: SureSelect XT HS2 Blocker Mix SureSelect Fast Hybridization Buffer SureSelect RNase Block SureSelect Post-Capture Primer Mix Herculase II Fusion DNA Polymerase 5X Herculase II Reaction	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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	Buffer with dNTPs	
Skin contact	: SureSelect XT HS2 Blocker Mix	No known significant effects or critical hazards.
	SureSelect Fast Hybridization Buffer	No known significant effects or critical hazards.
	SureSelect RNase Block	No known significant effects or critical hazards.
	SureSelect Post-Capture Primer Mix	No known significant effects or critical hazards.
	Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards.
	5X Herculase II Reaction Buffer with dNTPs	No known significant effects or critical hazards.
Ingestion	: SureSelect XT HS2 Blocker Mix	No known significant effects or critical hazards.
	SureSelect Fast Hybridization Buffer	No known significant effects or critical hazards.
	SureSelect RNase Block	No known significant effects or critical hazards.
	SureSelect Post-Capture Primer Mix	No known significant effects or critical hazards.
	Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards.
	5X Herculase II Reaction Buffer with dNTPs	No known significant effects or critical hazards.
<u>Over-exposure signs/symptoms</u>		
Eye contact	: SureSelect XT HS2 Blocker Mix	No specific data.
	SureSelect Fast Hybridization Buffer	No specific data.
	SureSelect RNase Block	Adverse symptoms may include the following: irritation watering redness
	SureSelect Post-Capture Primer Mix	No specific data.
	Herculase II Fusion DNA Polymerase	Adverse symptoms may include the following: irritation watering redness
	5X Herculase II Reaction Buffer with dNTPs	No specific data.
Inhalation	: SureSelect XT HS2 Blocker Mix	No specific data.
	SureSelect Fast Hybridization Buffer	No specific data.
	SureSelect RNase Block	No specific data.
	SureSelect Post-Capture Primer Mix	No specific data.
	Herculase II Fusion DNA Polymerase	No specific data.
	5X Herculase II Reaction Buffer with dNTPs	No specific data.

Section 4. First-aid measures

Skin contact	: SureSelect XT HS2 Blocker Mix	No specific data.
	SureSelect Fast Hybridization Buffer	No specific data.
	SureSelect RNase Block	No specific data.
	SureSelect Post-Capture Primer Mix	No specific data.
	Herculase II Fusion DNA Polymerase	No specific data.
	5X Herculase II Reaction Buffer with dNTPs	No specific data.

Ingestion	: SureSelect XT HS2 Blocker Mix	No specific data.
	SureSelect Fast Hybridization Buffer	No specific data.
	SureSelect RNase Block	No specific data.
	SureSelect Post-Capture Primer Mix	No specific data.
	Herculase II Fusion DNA Polymerase	No specific data.
	5X Herculase II Reaction Buffer with dNTPs	No specific data.

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

Notes to physician	: SureSelect XT HS2 Blocker Mix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	SureSelect Fast Hybridization 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.
	SureSelect RNase Block	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	SureSelect Post-Capture Primer Mix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Herculase II Fusion DNA Polymerase	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	5X Herculase II Reaction Buffer with dNTPs	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.

Specific treatments	: SureSelect XT HS2 Blocker Mix	No specific treatment.
	SureSelect Fast Hybridization Buffer	No specific treatment.
	SureSelect RNase Block	No specific treatment.
	SureSelect Post-Capture Primer Mix	No specific treatment.
	Herculase II Fusion DNA Polymerase	No specific treatment.
	5X Herculase II Reaction Buffer with dNTPs	No specific treatment.

Section 4. First-aid measures

Protection of first-aiders	: SureSelect XT HS2 Blocker Mix SureSelect Fast Hybridization Buffer SureSelect RNase Block	No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	SureSelect Post-Capture Primer Mix Herculase II Fusion DNA Polymerase	No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	5X Herculase II Reaction Buffer with dNTPs	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	: SureSelect XT HS2 Blocker Mix SureSelect Fast Hybridization Buffer SureSelect RNase Block	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
	SureSelect Post-Capture Primer Mix Herculase II Fusion DNA Polymerase 5X Herculase II Reaction Buffer with dNTPs	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: SureSelect XT HS2 Blocker Mix SureSelect Fast Hybridization Buffer SureSelect RNase Block SureSelect Post-Capture Primer Mix Herculase II Fusion DNA Polymerase 5X Herculase II Reaction Buffer with dNTPs	None known. None known. None known. None known. None known. None known.

Specific hazards arising from the chemical

: SureSelect XT HS2 Blocker Mix SureSelect Fast Hybridization Buffer SureSelect RNase Block	In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst.
SureSelect Post-Capture Primer Mix Herculase II Fusion DNA Polymerase 5X Herculase II Reaction Buffer with dNTPs	In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst.

Section 5. Fire-fighting measures

Hazardous thermal decomposition products	: SureSelect XT HS2 Blocker Mix	No specific data.
	SureSelect Fast Hybridization Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
	SureSelect RNase Block	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	SureSelect Post-Capture Primer Mix	No specific data.
	Herculase II Fusion DNA Polymerase	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	5X Herculase II Reaction Buffer with dNTPs	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides phosphorus oxides metal oxide/oxides
Special protective actions for fire-fighters	: SureSelect XT HS2 Blocker 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.
	SureSelect Fast Hybridization 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.
	SureSelect RNase Block	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	SureSelect Post-Capture Primer 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.
	Herculase II Fusion 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.
	5X Herculase II Reaction Buffer with dNTPs	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	: SureSelect XT HS2 Blocker Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	SureSelect Fast Hybridization Buffer	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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SureSelect RNase Block	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
SureSelect Post-Capture Primer Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Herculase II Fusion 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.
5X Herculase II Reaction Buffer with dNTPs	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

For non-emergency personnel	: SureSelect XT HS2 Blocker 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.
	SureSelect Fast Hybridization 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 spilled material. Put on appropriate personal protective equipment.
	SureSelect RNase Block	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	SureSelect Post-Capture Primer 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.
	Herculase II Fusion 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 spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	5X Herculase II Reaction Buffer with dNTPs	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.

Section 6. Accidental release measures

For emergency responders	: SureSelect XT HS2 Blocker Mix	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	SureSelect Fast Hybridization Buffer	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".
	SureSelect RNase Block	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".
	SureSelect Post-Capture Primer Mix	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Herculase II Fusion DNA Polymerase	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".
	5X Herculase II Reaction Buffer with dNTPs	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	: SureSelect XT HS2 Blocker 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).
	SureSelect Fast Hybridization Buffer	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).
	SureSelect RNase Block	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	SureSelect Post-Capture Primer 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).
	Herculase II Fusion DNA Polymerase	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).
	5X Herculase II Reaction Buffer with dNTPs	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).

Methods and materials for containment and cleaning up

Section 6. Accidental release measures

Methods for cleaning up	: SureSelect XT HS2 Blocker 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.
	SureSelect Fast Hybridization Buffer	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.
	SureSelect RNase Block	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	SureSelect Post-Capture Primer 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.
	Herculase II Fusion 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.
	5X Herculase II Reaction Buffer with dNTPs	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	: SureSelect XT HS2 Blocker Mix SureSelect Fast Hybridization Buffer SureSelect RNase Block	Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). 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.
	SureSelect Post-Capture Primer Mix Herculase II Fusion DNA Polymerase	Put on appropriate personal protective equipment (see Section 8). 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

Section 7. Handling and storage

Advice on general occupational hygiene

5X Herculase II Reaction Buffer with dNTPs

retain product residue and can be hazardous. Do not reuse container.

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

: SureSelect XT HS2 Blocker 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.

SureSelect Fast Hybridization 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.

SureSelect RNase Block

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.

SureSelect Post-Capture Primer 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.

Herculase II Fusion 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.

5X Herculase II Reaction Buffer with dNTPs

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.

Conditions for safe storage, including any incompatibilities

: SureSelect XT HS2 Blocker 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.

SureSelect Fast

Store in accordance with local regulations. Store in

Section 7. Handling and storage

Hybridization Buffer	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.
SureSelect RNase Block	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
SureSelect Post-Capture Primer 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.
Herculase II Fusion DNA Polymerase	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.
5X Herculase II Reaction Buffer with dNTPs	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.

Section 8. Exposure controls/personal protection

[Control parameters](#)

[Occupational exposure limits](#)

Ingredient name	Exposure limits
SureSelect RNase Block Glycerol	CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 10 mg/m ³ 8 hours. Form: Mist CA Quebec Provincial (Canada, 7/2019). 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, 1/2021). TWA: 3 mg/m ³ 8 hours. Form: respirable mist TWA: 10 mg/m ³ 8 hours. Form: total mist
Herculase II Fusion DNA Polymerase Glycerol	CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 10 mg/m ³ 8 hours. Form: Mist CA Quebec Provincial (Canada, 7/2019). 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, 1/2021). TWA: 3 mg/m ³ 8 hours. Form: respirable mist TWA: 10 mg/m ³ 8 hours. Form: total mist

[Appropriate engineering controls](#)

: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

[Environmental exposure controls](#)

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

[Individual protection measures](#)

[Hygiene measures](#)

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

[Eye/face protection](#)

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

[Skin protection](#)

Section 8. Exposure controls/personal protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : 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 | SureSelect XT HS2 Blocker Mix | Liquid. | |
| | SureSelect Fast Hybridization Buffer | Liquid. | |
| | SureSelect RNase Block | Liquid. | |
| | SureSelect Post-Capture Primer Mix | Liquid. | |
| | Herculase II Fusion DNA Polymerase | Liquid. | |
| | 5X Herculase II Reaction Buffer with dNTPs | Liquid. | |
| | Color | SureSelect XT HS2 Blocker Mix | Not available. |
| | | SureSelect Fast Hybridization Buffer | Not available. |
| | | SureSelect RNase Block | Not available. |
| | | SureSelect Post-Capture Primer Mix | Not available. |
| Herculase II Fusion DNA Polymerase | | Not available. | |
| 5X Herculase II Reaction Buffer with dNTPs | | Not available. | |
| Odor | | SureSelect XT HS2 Blocker Mix | Not available. |
| | SureSelect Fast Hybridization Buffer | Not available. | |
| | SureSelect RNase Block | Not available. | |
| | SureSelect Post-Capture Primer Mix | Not available. | |
| | Herculase II Fusion DNA Polymerase | Not available. | |
| | 5X Herculase II Reaction Buffer with dNTPs | Not available. | |

Section 9. Physical and chemical properties and safety characteristics

Odor threshold : SureSelect XT HS2 Blocker Mix Not available.
 SureSelect Fast Hybridization Buffer Not available.
 SureSelect RNase Block SureSelect Post-Capture Primer Mix Not available.
 Herculase II Fusion DNA Polymerase Not available.
 5X Herculase II Reaction Buffer with dNTPs Not available.

pH : SureSelect XT HS2 Blocker Mix 7.5
 SureSelect Fast Hybridization Buffer Not available.
 SureSelect RNase Block 7.6
 SureSelect Post-Capture Primer Mix 7.5
 Herculase II Fusion DNA Polymerase 8.2
 5X Herculase II Reaction Buffer with dNTPs 10

Melting point/freezing point : SureSelect XT HS2 Blocker Mix 0°C (32°F)
 SureSelect Fast Hybridization Buffer Not available.
 SureSelect RNase Block SureSelect Post-Capture Primer Mix 0°C (32°F)
 Herculase II Fusion DNA Polymerase Not available.
 5X Herculase II Reaction Buffer with dNTPs Not available.

Boiling point, initial boiling point, and boiling range : SureSelect XT HS2 Blocker Mix 100°C (212°F)
 SureSelect Fast Hybridization Buffer Not available.
 SureSelect RNase Block SureSelect Post-Capture Primer Mix 100°C (212°F)
 Herculase II Fusion DNA Polymerase Not available.
 5X Herculase II Reaction Buffer with dNTPs Not available.

Flash point :

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
SureSelect XT HS2 Blocker Mix						
Edetic acid	>100	>212	DIN 51758			
SureSelect RNase Block						
(R*,R*) -1,4-Dimercaptobutane-2,3-diol	>110	>230				
Glycerol			Pensky-	177	350.6	

Section 9. Physical and chemical properties and safety characteristics

				Martens			
	SureSelect Post-Capture Primer Mix						
	Edetic acid	>100	>212	DIN 51758			
	Herculase II Fusion DNA Polymerase						
	Edetic acid	>100	>212	DIN 51758			
	(R*,R*) -1,4-Dimercaptobutane-2,3-diol	>110	>230				

Evaporation rate :

- SureSelect XT HS2 Blocker Mix: Not available.
- SureSelect Fast Hybridization Buffer: Not available.
- SureSelect RNase Block: Not available.
- SureSelect Post-Capture Primer Mix: Not available.
- Herculase II Fusion DNA Polymerase: Not available.
- 5X Herculase II Reaction Buffer with dNTPs: Not available.

Flammability :

- SureSelect XT HS2 Blocker Mix: Not applicable.
- SureSelect Fast Hybridization Buffer: Not applicable.
- SureSelect RNase Block: Not applicable.
- SureSelect Post-Capture Primer Mix: Not applicable.
- Herculase II Fusion DNA Polymerase: Not applicable.
- 5X Herculase II Reaction Buffer with dNTPs: Not applicable.

Lower and upper explosion limit/flammability limit :

- SureSelect XT HS2 Blocker Mix: Not available.
- SureSelect Fast Hybridization Buffer: Not available.
- SureSelect RNase Block: Not available.
- SureSelect Post-Capture Primer Mix: Not available.
- Herculase II Fusion DNA Polymerase: Not available.
- 5X Herculase II Reaction Buffer with dNTPs: Not available.

Vapor pressure :

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
SureSelect XT HS2 Blocker Mix						
Water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	

Section 9. Physical and chemical properties and safety characteristics

SureSelect Fast Hybridization Buffer					
Water	23.8	3.2		92.258	12.3
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001
SureSelect RNase Block					
Water	23.8	3.2		92.258	12.3
Glycerol	0.000075	0.00001		0.0025	0.00033
SureSelect Post-Capture Primer Mix					
Water	23.8	3.2		92.258	12.3
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001
Herculase II Fusion DNA Polymerase					
Water	23.8	3.2		92.258	12.3
Glycerol	0.000075	0.00001		0.0025	0.00033
5X Herculase II Reaction Buffer with dNTPs					
Water	23.8	3.2		92.258	12.3
Sulfuric acid, magnesium salt, hydrate (1:1:7)	<0.1	<0.013			

Relative vapor density :

- SureSelect XT HS2 Blocker Mix Not available.
- SureSelect Fast Hybridization Buffer Not available.
- SureSelect RNase Block Not available.
- SureSelect Post-Capture Primer Mix Not available.
- Herculase II Fusion DNA Polymerase Not available.
- 5X Herculase II Reaction Buffer with dNTPs Not available.

Relative density :

- SureSelect XT HS2 Blocker Mix Not available.
- SureSelect Fast Hybridization Buffer Not available.
- SureSelect RNase Block Not available.
- SureSelect Post-Capture Primer Mix Not available.
- Herculase II Fusion DNA Polymerase Not available.
- 5X Herculase II Reaction Buffer with dNTPs Not available.

Section 9. Physical and chemical properties and safety characteristics

Solubility	: SureSelect XT HS2 Blocker Mix	Easily soluble in the following materials: cold water and hot water.
	SureSelect Fast Hybridization Buffer	Easily soluble in the following materials: cold water and hot water.
	SureSelect RNase Block	Easily soluble in the following materials: cold water and hot water.
	SureSelect Post-Capture Primer Mix	Easily soluble in the following materials: cold water and hot water.
	Herculase II Fusion DNA Polymerase	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: SureSelect XT HS2 Blocker Mix	Not applicable.
	SureSelect Fast Hybridization Buffer	Not applicable.
	SureSelect RNase Block	Not applicable.
	SureSelect Post-Capture Primer Mix	Not applicable.
	Herculase II Fusion DNA Polymerase	Not applicable.
Auto-ignition temperature	: SureSelect XT HS2 Blocker Mix	Not applicable.
	SureSelect Fast Hybridization Buffer	Not applicable.
	SureSelect RNase Block	Not applicable.
	SureSelect Post-Capture Primer Mix	Not applicable.
	Herculase II Fusion DNA Polymerase	Not applicable.

Ingredient name	°C	°F	Method
SureSelect XT HS2 Blocker Mix			
Edetic acid	>400	>752	VDI 2263
SureSelect RNase Block			
Glycerol	370	698	
4-(2-Hydroxyethyl)piperazin-1-ylethanesulphonic acid	>400	>752	EU A.16
SureSelect Post-Capture Primer Mix			
Edetic acid	>400	>752	VDI 2263
Herculase II Fusion DNA Polymerase			
Glycerol	370	698	
Edetic acid	>400	>752	VDI 2263

Decomposition temperature	: SureSelect XT HS2 Blocker Mix	Not available.
	SureSelect Fast Hybridization Buffer	Not available.
	SureSelect RNase Block	Not available.
	SureSelect Post-Capture Primer Mix	Not available.
	Herculase II Fusion DNA Polymerase	Not available.
5X Herculase II Reaction Buffer with dNTPs	: SureSelect XT HS2 Blocker Mix	Not available.
	SureSelect Fast Hybridization Buffer	Not available.

Section 9. Physical and chemical properties and safety characteristics

Viscosity	: SureSelect XT HS2 Blocker Mix	Not available.
	SureSelect Fast Hybridization Buffer	Not available.
	SureSelect RNase Block	Not available.
	SureSelect Post-Capture Primer Mix	Not available.
	Herculase II Fusion DNA Polymerase	Not available.
	5X Herculase II Reaction Buffer with dNTPs	Not available.

Particle characteristics

Median particle size	: SureSelect XT HS2 Blocker Mix	Not applicable.
	SureSelect Fast Hybridization Buffer	Not applicable.
	SureSelect RNase Block	Not applicable.
	SureSelect Post-Capture Primer Mix	Not applicable.
	Herculase II Fusion DNA Polymerase	Not applicable.
	5X Herculase II Reaction Buffer with dNTPs	Not applicable.

Section 10. Stability and reactivity

Reactivity	: SureSelect XT HS2 Blocker Mix	No specific test data related to reactivity available for this product or its ingredients.
	SureSelect Fast Hybridization Buffer	No specific test data related to reactivity available for this product or its ingredients.
	SureSelect RNase Block	No specific test data related to reactivity available for this product or its ingredients.
	SureSelect Post-Capture Primer Mix	No specific test data related to reactivity available for this product or its ingredients.
	Herculase II Fusion DNA Polymerase	No specific test data related to reactivity available for this product or its ingredients.
	5X Herculase II Reaction Buffer with dNTPs	No specific test data related to reactivity available for this product or its ingredients.

Chemical stability	: SureSelect XT HS2 Blocker Mix	The product is stable.
	SureSelect Fast Hybridization Buffer	The product is stable.
	SureSelect RNase Block	The product is stable.
	SureSelect Post-Capture Primer Mix	The product is stable.
	Herculase II Fusion DNA Polymerase	The product is stable.
	5X Herculase II Reaction Buffer with dNTPs	The product is stable.

Section 10. Stability and reactivity

Possibility of hazardous reactions	: SureSelect XT HS2 Blocker Mix SureSelect Fast Hybridization Buffer SureSelect RNase Block SureSelect Post-Capture Primer Mix Herculase II Fusion DNA Polymerase 5X Herculase II Reaction Buffer with dNTPs	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. Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: SureSelect XT HS2 Blocker Mix SureSelect Fast Hybridization Buffer SureSelect RNase Block SureSelect Post-Capture Primer Mix Herculase II Fusion DNA Polymerase 5X Herculase II Reaction Buffer with dNTPs	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Incompatible materials	: SureSelect XT HS2 Blocker Mix SureSelect Fast Hybridization Buffer SureSelect RNase Block SureSelect Post-Capture Primer Mix Herculase II Fusion DNA Polymerase 5X Herculase II Reaction Buffer with dNTPs	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. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials.
Hazardous decomposition products	: SureSelect XT HS2 Blocker Mix SureSelect Fast Hybridization Buffer SureSelect RNase Block SureSelect Post-Capture Primer Mix Herculase II Fusion DNA Polymerase 5X Herculase II Reaction Buffer with dNTPs	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
SureSelect RNase Block Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Herculase II Fusion DNA Polymerase Glycerol	LD50 Oral	Rat	12600 mg/kg	-
5X Herculase II Reaction Buffer with dNTPs Trometamol Ammonium sulphate Hexadecan-1-ol, ethoxylated	LD50 Dermal	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	2840 mg/kg	-
	LD50 Oral	Rat	2500 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
SureSelect RNase Block Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Herculase II Fusion DNA Polymerase Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
5X Herculase II Reaction Buffer with dNTPs Trometamol	Skin - Moderate irritant	Rabbit	-	25 %	-
	Skin - Severe irritant	Rabbit	-	500 mg	-

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)

Name	Category	Route of exposure	Target organs
5X Herculase II Reaction Buffer with dNTPs Trometamol	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Section 11. Toxicological information

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure	: SureSelect XT HS2 Blocker Mix	Not available.
	SureSelect Fast Hybridization Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
	SureSelect RNase Block SureSelect Post-Capture Primer Mix	Routes of entry anticipated: Oral, Dermal, Inhalation. Not available.
	Herculase II Fusion DNA Polymerase	Routes of entry anticipated: Oral, Dermal, Inhalation.
	5X Herculase II Reaction Buffer with dNTPs	Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact

: SureSelect XT HS2 Blocker Mix	No known significant effects or critical hazards.
SureSelect Fast Hybridization Buffer	No known significant effects or critical hazards.
SureSelect RNase Block SureSelect Post-Capture Primer Mix	Causes eye irritation. No known significant effects or critical hazards.
Herculase II Fusion DNA Polymerase	Causes eye irritation.
5X Herculase II Reaction Buffer with dNTPs	No known significant effects or critical hazards.

Inhalation

: SureSelect XT HS2 Blocker Mix	No known significant effects or critical hazards.
SureSelect Fast Hybridization Buffer	No known significant effects or critical hazards.
SureSelect RNase Block SureSelect Post-Capture Primer Mix	No known significant effects or critical hazards. No known significant effects or critical hazards.
Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards.
5X Herculase II Reaction Buffer with dNTPs	No known significant effects or critical hazards.

Skin contact

: SureSelect XT HS2 Blocker Mix	No known significant effects or critical hazards.
SureSelect Fast Hybridization Buffer	No known significant effects or critical hazards.
SureSelect RNase Block SureSelect Post-Capture Primer Mix	No known significant effects or critical hazards. No known significant effects or critical hazards.
Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards.
5X Herculase II Reaction Buffer with dNTPs	No known significant effects or critical hazards.

Ingestion

: SureSelect XT HS2 Blocker Mix	No known significant effects or critical hazards.
SureSelect Fast Hybridization Buffer	No known significant effects or critical hazards.
SureSelect RNase Block SureSelect Post-Capture Primer Mix	No known significant effects or critical hazards. No known significant effects or critical hazards.
Herculase II Fusion DNA	No known significant effects or critical hazards.

Section 11. Toxicological information

Polymerase
5X Herculase II Reaction
Buffer with dNTPs

No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: SureSelect XT HS2 Blocker Mix	No specific data.
	SureSelect Fast Hybridization Buffer	No specific data.
	SureSelect RNase Block	Adverse symptoms may include the following: irritation watering redness
	SureSelect Post-Capture Primer Mix	No specific data.
	Herculase II Fusion DNA Polymerase	Adverse symptoms may include the following: irritation watering redness
Inhalation	5X Herculase II Reaction Buffer with dNTPs	No specific data.
	: SureSelect XT HS2 Blocker Mix	No specific data.
	SureSelect Fast Hybridization Buffer	No specific data.
	SureSelect RNase Block	No specific data.
	SureSelect Post-Capture Primer Mix	No specific data.
Skin contact	Herculase II Fusion DNA Polymerase	No specific data.
	5X Herculase II Reaction Buffer with dNTPs	No specific data.
	: SureSelect XT HS2 Blocker Mix	No specific data.
	SureSelect Fast Hybridization Buffer	No specific data.
	SureSelect RNase Block	No specific data.
Ingestion	SureSelect Post-Capture Primer Mix	No specific data.
	Herculase II Fusion DNA Polymerase	No specific data.
	5X Herculase II Reaction Buffer with dNTPs	No specific data.
	: SureSelect XT HS2 Blocker Mix	No specific data.
	SureSelect Fast Hybridization Buffer	No specific data.

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

Section 11. Toxicological information

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 : SureSelect XT HS2 Blocker Mix No known significant effects or critical hazards.

SureSelect Fast No known significant effects or critical hazards.

Hybridization Buffer

SureSelect RNase Block No known significant effects or critical hazards.

SureSelect Post-Capture No known significant effects or critical hazards.

Primer Mix

Herculase II Fusion DNA No known significant effects or critical hazards.

Polymerase

5X Herculase II Reaction No known significant effects or critical hazards.

Buffer with dNTPs

Carcinogenicity : SureSelect XT HS2 Blocker Mix No known significant effects or critical hazards.

SureSelect Fast No known significant effects or critical hazards.

Hybridization Buffer

SureSelect RNase Block No known significant effects or critical hazards.

SureSelect Post-Capture No known significant effects or critical hazards.

Primer Mix

Herculase II Fusion DNA No known significant effects or critical hazards.

Polymerase

5X Herculase II Reaction No known significant effects or critical hazards.

Buffer with dNTPs

Mutagenicity : SureSelect XT HS2 Blocker Mix No known significant effects or critical hazards.

SureSelect Fast No known significant effects or critical hazards.

Hybridization Buffer

SureSelect RNase Block No known significant effects or critical hazards.

SureSelect Post-Capture No known significant effects or critical hazards.

Primer Mix

Herculase II Fusion DNA No known significant effects or critical hazards.

Polymerase

5X Herculase II Reaction No known significant effects or critical hazards.

Buffer with dNTPs

Reproductive toxicity : SureSelect XT HS2 Blocker Mix No known significant effects or critical hazards.

SureSelect Fast No known significant effects or critical hazards.

Hybridization Buffer

SureSelect RNase Block No known significant effects or critical hazards.

SureSelect Post-Capture No known significant effects or critical hazards.

Primer Mix

Herculase II Fusion DNA No known significant effects or critical hazards.

Polymerase

5X Herculase II Reaction No known significant effects or critical hazards.

Buffer with dNTPs

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
SureSelect RNase Block Glycerol	12600	N/A	N/A	N/A	N/A
Herculase II Fusion DNA Polymerase Glycerol	12600	N/A	N/A	N/A	N/A
5X Herculase II Reaction Buffer with dNTPs 5X Herculase II Reaction Buffer with dNTPs	118512.9	N/A	N/A	N/A	N/A
Ammonium sulphate	2840	N/A	N/A	N/A	N/A
Hexadecan-1-ol, ethoxylated	2500	N/A	N/A	N/A	N/A

Other information	: SureSelect XT HS2 Blocker Mix	Not available.
	SureSelect Fast Hybridization Buffer	Not available.
	SureSelect RNase Block	Adverse symptoms may include the following: May cause skin sensitization.
	SureSelect Post-Capture Primer Mix	Not available.
	Herculase II Fusion DNA Polymerase	Not available.
	5X Herculase II Reaction Buffer with dNTPs	Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
SureSelect RNase Block Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
Herculase II Fusion DNA Polymerase Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
5X Herculase II Reaction Buffer with dNTPs Trometamol	Acute EC50 >980 mg/l Fresh water	Daphnia	48 hours
Ammonium sulphate	Acute NOEC 520 mg/l Fresh water Chronic NOEC 7.5 mg/l Marine water	Daphnia Algae - Phaeodactylum tricornutum - Exponential growth phase	48 hours 96 hours
Hexadecan-1-ol, ethoxylated	Acute LC50 330000 to 1000000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours

Persistence and degradability

Section 12. Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
SureSelect RNase Block Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
Herculase II Fusion DNA Polymerase Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
5X Herculase II Reaction Buffer with dNTPs Trometamol	OECD 301F Ready Biodegradability - Manometric Respirometry Test	97.1 % - Readily - 28 days	30 mg/l	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
5X Herculase II Reaction Buffer with dNTPs Trometamol Ammonium sulphate Hexadecan-1-ol, ethoxylated	- - -	- - -	Readily Readily Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
SureSelect RNase Block Glycerol	-1.76	-	low
Herculase II Fusion DNA Polymerase Glycerol	-1.76	-	low
5X Herculase II Reaction Buffer with dNTPs Trometamol Ammonium sulphate	-2.31 -5.1	- -	low low

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. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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.

Inventory list

Australia : Not determined.

Canada : Not determined.

China : Not determined.

Europe : Not determined.

Japan : **Japan inventory (CSCL):** Not determined.
Japan inventory (ISHL): Not determined.

New Zealand : Not determined.

Philippines : Not determined.

Republic of Korea : Not determined.

Section 15. Regulatory information

Taiwan	: All components are listed or exempted.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: Not determined.
Viet Nam	: Not determined.

Section 16. Other information

History


Date of issue/Date of revision : 04/29/2022

Date of previous issue : 12/17/2019

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
 SureSelect RNase Block EYE IRRITATION - Category 2B	Calculation method
Herculase II Fusion DNA Polymerase EYE IRRITATION - Category 2B	Calculation method

References : Not available.

 Indicates information that has changed from previously issued version.

Notice to reader

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