

SAFETY DATA SHEET

SureSelect XT Fast Library Prep Kit, ILM 96 Reactions, Part Number 5500-0137

Section 1. Identification

1.1 Product identifier

Product name	: SureSelect XT Fast Library Prep Kit, ILM 96 Reactions, Part Number 5500-0137	
Part No. (Chemical Kit)	: 5500-0137	
Part No.	: 10X End Repair Buffer	5190-3609
	5X T4 DNA Ligase Buffer	5190-3610
	10x Klenow Polymerase Buffer	5190-3611
	T4 DNA Ligase	5190-3612
	Exo(-) Klenow	5190-3613
	T4 DNA Polymerase	5190-3614
	Klenow DNA Polymerase	5190-3615
	T4 Polynucleotide Kinase	5190-3616
	dATP	5190-3617
	SureSelect PCR Primer Mix	5190-8832
	100 mM dNTP Mix (25 mM each dNTP)	200415-51
	5X Herculase II Reaction Buffer	600675-52
	Herculase II Fusion DNA Polymerase	5190-7751
	SureSelect Pre-capture Indexed Adaptor Set A01-H12	5190-7945
Validation date	: 11/17/2017	

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

Material uses	: Analytical reagent.	
	10X End Repair Buffer	1.428 ml (96 reactions)
	5X T4 DNA Ligase Buffer	1.428 ml (96 reactions)
	10x Klenow Polymerase Buffer	0.816 ml (96 reactions)
	T4 DNA Ligase	0.214 ml (96 reactions)
	Exo(-) Klenow	0.49 ml (96 reactions)
	T4 DNA Polymerase	0.143 ml (96 reactions)
	Klenow DNA Polymerase	0.286 ml (96 reactions)
	T4 Polynucleotide Kinase	0.315 ml (96 reactions)
	dATP	0.164 ml (96 reactions)
	SureSelect PCR Primer Mix	0.47 ml (96 reactions)
	100 mM dNTP Mix (25 mM each dNTP)	0.4 ml
	5X Herculase II Reaction Buffer	2 x 1.5 ml
	Herculase II Fusion DNA Polymerase	0.31 ml (192 reactions)
	SureSelect Pre-capture Indexed Adaptor Set A01-H12	96 x 0.015 ml

1.3 Details of the supplier of the safety data sheet

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

In case of emergency	: CHEMTREC®: 1-800-424-9300
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Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status	: 10X End Repair Buffer	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
	5X T4 DNA Ligase Buffer	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	10x Klenow Polymerase Buffer	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
	T4 DNA Ligase	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	Exo(-) Klenow	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	T4 DNA Polymerase	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	Klenow DNA Polymerase	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	T4 Polynucleotide Kinase	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	dATP	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
	SureSelect PCR Primer Mix	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
	100 mM dNTP Mix (25 mM each dNTP)	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
	5X Herculase II Reaction Buffer	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
	Herculase II Fusion DNA Polymerase	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	SureSelect Pre-capture Indexed Adaptor Set A01-H12	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture

Section 2. Hazards identification

5X T4 DNA Ligase Buffer

H319 EYE IRRITATION - Category 2A
 H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

T4 DNA Ligase

H320 EYE IRRITATION - Category 2B

Exo(-) Klenow

H320 EYE IRRITATION - Category 2B

T4 DNA Polymerase

H320 EYE IRRITATION - Category 2B

Klenow DNA Polymerase

H320 EYE IRRITATION - Category 2B

T4 Polynucleotide Kinase

H320 EYE IRRITATION - Category 2B

Herculase II Fusion DNA Polymerase

H320 EYE IRRITATION - Category 2B

Ingredients of unknown toxicity

: 10X End Repair Buffer	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 10 - 30% Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%
5X T4 DNA Ligase Buffer	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 10 - 30% Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%
10x Klenow Polymerase Buffer	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%
T4 DNA Ligase	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60%
Exo(-) Klenow	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60%
T4 DNA Polymerase	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60% Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%
Klenow DNA Polymerase	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60% Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%
T4 Polynucleotide Kinase	Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%

Section 2. Hazards identification

100 mM dNTP Mix (25 mM each dNTP)	(s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60% Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%
5X Herculase II Reaction Buffer	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10%
Herculase II Fusion DNA Polymerase	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60%

2.2 GHS label elements

Hazard pictograms

: 5X T4 DNA Ligase Buffer



Signal word

: 10X End Repair Buffer	No signal word.
5X T4 DNA Ligase Buffer	Warning
10x Klenow Polymerase Buffer	No signal word.
T4 DNA Ligase	Warning
Exo(-) Klenow	Warning
T4 DNA Polymerase	Warning
Klenow DNA Polymerase	Warning
T4 Polynucleotide Kinase	Warning
dATP	No signal word.
SureSelect PCR Primer Mix	No signal word.
100 mM dNTP Mix (25 mM each dNTP)	No signal word.
5X Herculase II Reaction Buffer	No signal word.
Herculase II Fusion DNA Polymerase	Warning
SureSelect Pre-capture Indexed Adaptor Set A01-H12	No signal word.

Hazard statements

: 10X End Repair Buffer	No known significant effects or critical hazards.
5X T4 DNA Ligase Buffer	H319 - Causes serious eye irritation. H335 - May cause respiratory irritation.
10x Klenow Polymerase Buffer	No known significant effects or critical hazards.
T4 DNA Ligase	H320 - Causes eye irritation.
Exo(-) Klenow	H320 - Causes eye irritation.
T4 DNA Polymerase	H320 - Causes eye irritation.
Klenow DNA Polymerase	H320 - Causes eye irritation.
T4 Polynucleotide Kinase	H320 - Causes eye irritation.
dATP	No known significant effects or critical hazards.
SureSelect PCR Primer Mix	No known significant effects or critical hazards.
100 mM dNTP Mix (25 mM each dNTP)	No known significant effects or critical hazards.
5X Herculase II Reaction Buffer	No known significant effects or critical hazards.
Herculase II Fusion DNA Polymerase	H320 - Causes eye irritation.

Section 2. Hazards identification

Precautionary statements

Prevention

SureSelect Pre-capture Indexed Adaptor Set A01-H12

No known significant effects or critical hazards.

: 10X End Repair Buffer
5X T4 DNA Ligase Buffer

Not applicable.

P280 - Wear eye or face protection.

P271 - Use only outdoors or in a well-ventilated area.

P261 - Avoid breathing vapor.

P264 - Wash hands thoroughly after handling.

Not applicable.

10x Klenow Polymerase Buffer
T4 DNA Ligase

P264 - Wash hands thoroughly after handling.

Exo(-) Klenow

P264 - Wash hands thoroughly after handling.

T4 DNA Polymerase

P264 - Wash hands thoroughly after handling.

Klenow DNA Polymerase

P264 - Wash hands thoroughly after handling.

T4 Polynucleotide Kinase

P264 - Wash hands thoroughly after handling.

dATP

Not applicable.

SureSelect PCR Primer Mix

Not applicable.

100 mM dNTP Mix (25 mM each dNTP)

Not applicable.

5X Herculase II Reaction Buffer

Not applicable.

Herculase II Fusion DNA

P264 - Wash hands thoroughly after handling.

Polymerase

SureSelect Pre-capture Indexed Adaptor Set A01-H12

Not applicable.

Response

: 10X End Repair Buffer
5X T4 DNA Ligase Buffer

Not applicable.

P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 - If eye irritation persists: Get medical attention.

10x Klenow Polymerase Buffer
T4 DNA Ligase

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 attention.

Exo(-) Klenow

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 - If eye irritation persists: Get medical attention.

T4 DNA Polymerase

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 - If eye irritation persists: Get medical attention.

Klenow DNA Polymerase

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

Section 2. Hazards identification

Storage

T4 Polynucleotide Kinase	attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
dATP	Not applicable.
SureSelect PCR Primer Mix	Not applicable.
100 mM dNTP Mix (25 mM each dNTP)	Not applicable.
5X Herculase II Reaction Buffer	Not applicable.
Herculase II Fusion DNA Polymerase	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
SureSelect Pre-capture Indexed Adaptor Set A01-H12	Not applicable.

Disposal

<p>☑ 10X End Repair Buffer</p> <p>5X T4 DNA Ligase Buffer</p> <p>10x Klenow Polymerase Buffer</p> <p>T4 DNA Ligase</p> <p>Exo(-) Klenow</p> <p>T4 DNA Polymerase</p> <p>Klenow DNA Polymerase</p> <p>T4 Polynucleotide Kinase</p> <p>dATP</p> <p>SureSelect PCR Primer Mix</p> <p>100 mM dNTP Mix (25 mM each dNTP)</p> <p>5X Herculase II Reaction Buffer</p> <p>Herculase II Fusion DNA Polymerase</p> <p>SureSelect Pre-capture Indexed Adaptor Set A01-H12</p>	<p>Not applicable.</p> <p>P405 - Store locked up.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p>
<p>☑ 10X End Repair Buffer</p> <p>5X T4 DNA Ligase Buffer</p> <p>10x Klenow Polymerase Buffer</p> <p>T4 DNA Ligase</p> <p>Exo(-) Klenow</p> <p>T4 DNA Polymerase</p> <p>Klenow DNA Polymerase</p> <p>T4 Polynucleotide Kinase</p> <p>dATP</p> <p>SureSelect PCR Primer Mix</p> <p>100 mM dNTP Mix (25 mM each dNTP)</p> <p>5X Herculase II Reaction Buffer</p> <p>Herculase II Fusion DNA Polymerase</p> <p>SureSelect Pre-capture Indexed Adaptor Set A01-H12</p>	<p>Not applicable.</p> <p>P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p>

Section 2. Hazards identification

Supplemental label elements	:	10X End Repair Buffer	None known.
		5X T4 DNA Ligase Buffer	None known.
		10x Klenow Polymerase Buffer	None known.
		T4 DNA Ligase	None known.
		Exo(-) Klenow	None known.
		T4 DNA Polymerase	None known.
		Klenow DNA Polymerase	None known.
		T4 Polynucleotide Kinase	None known.
		dATP	None known.
		SureSelect PCR Primer Mix	None known.
		100 mM dNTP Mix (25 mM each dNTP)	None known.
		5X Herculase II Reaction Buffer	None known.
		Herculase II Fusion DNA Polymerase	None known.
		SureSelect Pre-capture Indexed Adaptor Set A01-H12	None known.

2.3 Other hazards

Hazards not otherwise classified	:	10X End Repair Buffer	None known.
		5X T4 DNA Ligase Buffer	None known.
		10x Klenow Polymerase Buffer	None known.
		T4 DNA Ligase	None known.
		Exo(-) Klenow	None known.
		T4 DNA Polymerase	None known.
		Klenow DNA Polymerase	None known.
		T4 Polynucleotide Kinase	None known.
		dATP	None known.
		SureSelect PCR Primer Mix	None known.
		100 mM dNTP Mix (25 mM each dNTP)	None known.
		5X Herculase II Reaction Buffer	None known.
		Herculase II Fusion DNA Polymerase	None known.
		SureSelect Pre-capture Indexed Adaptor Set A01-H12	None known.

Section 3. Composition/information on ingredients

Substance/mixture	:	10X End Repair Buffer	Mixture
		5X T4 DNA Ligase Buffer	Mixture
		10x Klenow Polymerase Buffer	Mixture
		T4 DNA Ligase	Mixture
		Exo(-) Klenow	Mixture
		T4 DNA Polymerase	Mixture
		Klenow DNA Polymerase	Mixture
		T4 Polynucleotide Kinase	Mixture
		dATP	Mixture
		SureSelect PCR Primer Mix	Mixture
		100 mM dNTP Mix (25 mM each dNTP)	Mixture
		5X Herculase II Reaction Buffer	Mixture
		Herculase II Fusion DNA Polymerase	Mixture
		SureSelect Pre-capture Indexed Adaptor Set A01-H12	Mixture

Section 3. Composition/information on ingredients

Ingredient name	%	CAS number
10X End Repair Buffer 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride (R*,R*)-1,4-Dimercaptobutane-2,3-diol	≤8.3 ≤1.6	1185-53-1 3483-12-3
5X T4 DNA Ligase Buffer Polyethylene glycol 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	≥25 - ≤50 ≤5	25322-68-3 1185-53-1
10x Klenow Polymerase Buffer 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	<10	1185-53-1
T4 DNA Ligase Glycerol	≥50 - ≤75	56-81-5
Exo(-) Klenow Glycerol	≥50 - ≤75	56-81-5
T4 DNA Polymerase Glycerol	≥50 - ≤75	56-81-5
Klenow DNA Polymerase Glycerol	≥50 - ≤75	56-81-5
T4 Polynucleotide Kinase Glycerol rATP	≥50 - ≤75 ≤3	56-81-5 -
5X Herculanse II Reaction Buffer Trometamol Ammonium sulphate	≤3 ≤3	77-86-1 7783-20-2
Herculanse II Fusion DNA Polymerase Glycerol	≥50 - ≤75	56-81-5

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

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

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

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact	: 10X End Repair 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.
	5X T4 DNA Ligase Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
	10x Klenow Polymerase 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.
	T4 DNA Ligase	Immediately flush eyes with plenty of water,

Section 4. First aid measures

	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.
Exo(-) Klenow	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.
T4 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.
Klenow 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.
T4 Polynucleotide Kinase	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.
dATP	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 PCR 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.
100 mM dNTP Mix (25 mM each dNTP)	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
5X Herculase II Reaction 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.
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.
SureSelect Pre-capture Indexed Adaptor Set A01-H12	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	
: 70X End Repair 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.
5X T4 DNA Ligase Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the

Section 4. First aid measures

	rescuer should wear an appropriate mask or self-contained breathing apparatus. 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 necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
10x Klenow Polymerase 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.
T4 DNA Ligase	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.
Exo(-) Klenow	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.
T4 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.
Klenow DNA Polymerase	Remove victim to fresh air and keep at rest in a

Section 4. First aid measures

	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.
T4 Polynucleotide Kinase	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. 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.
dATP	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
SureSelect PCR Primer Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
100 mM dNTP Mix (25 mM each dNTP)	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.
5X Herculase II Reaction 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.
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.

Section 4. First aid measures

	SureSelect Pre-capture Indexed Adaptor Set A01-H12	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	: 10X End Repair Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	5X T4 DNA Ligase Buffer	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.
	10x Klenow Polymerase Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	T4 DNA Ligase	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.
	Exo(-) Klenow	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.
	T4 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.
	Klenow 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.
	T4 Polynucleotide Kinase	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.
	dATP	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	SureSelect PCR Primer Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	100 mM dNTP Mix (25 mM each dNTP)	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	5X Herculase II Reaction Buffer	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.
	SureSelect Pre-capture Indexed Adaptor Set A01-H12	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Section 4. First aid measures

Ingestion

: 10X End Repair Buffer

Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

5X T4 DNA Ligase Buffer

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

10x Klenow Polymerase Buffer

Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

T4 DNA Ligase

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Exo(-) Klenow

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get

Section 4. First aid measures

T4 DNA Polymerase	<p>medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p> <p>Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
Klenow DNA Polymerase	<p>Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
T4 Polynucleotide Kinase	<p>Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
dATP	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.</p>
SureSelect PCR Primer Mix	<p>Wash out mouth with water. Remove victim to</p>

Section 4. First aid measures

100 mM dNTP Mix (25 mM each dNTP)

fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

5X Herculase II Reaction Buffer

Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Herculase II Fusion DNA Polymerase

Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

SureSelect Pre-capture Indexed Adaptor Set A01-H12

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact

: 10X End Repair Buffer
5X T4 DNA Ligase Buffer
10x Klenow Polymerase Buffer
T4 DNA Ligase
Exo(-) Klenow
T4 DNA Polymerase
Klenow DNA Polymerase
T4 Polynucleotide Kinase
dATP
SureSelect PCR Primer Mix
100 mM dNTP Mix (25 mM each dNTP)

No known significant effects or critical hazards. Causes serious eye irritation.

No known significant effects or critical hazards. Causes eye irritation.

Causes eye irritation.

Causes eye irritation.

Causes eye irritation.

Causes eye irritation.

No known significant effects or critical hazards.

No known significant effects or critical hazards.

No known significant effects or critical hazards.

Section 4. First aid measures

	5X Herculase II Reaction Buffer Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards. Causes eye irritation.
	SureSelect Pre-capture Indexed Adaptor Set A01-H12	No known significant effects or critical hazards.
Inhalation	: 10X End Repair Buffer 5X T4 DNA Ligase Buffer 10x Klenow Polymerase Buffer T4 DNA Ligase Exo(-) Klenow T4 DNA Polymerase Klenow DNA Polymerase T4 Polynucleotide Kinase dATP SureSelect PCR Primer Mix 100 mM dNTP Mix (25 mM each dNTP)	No known significant effects or critical hazards. May cause respiratory irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. 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.
	5X Herculase II Reaction Buffer Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards. No known significant effects or critical hazards.
	SureSelect Pre-capture Indexed Adaptor Set A01-H12	No known significant effects or critical hazards.
Skin contact	: 10X End Repair Buffer 5X T4 DNA Ligase Buffer 10x Klenow Polymerase Buffer T4 DNA Ligase Exo(-) Klenow T4 DNA Polymerase Klenow DNA Polymerase T4 Polynucleotide Kinase dATP SureSelect PCR Primer Mix 100 mM dNTP Mix (25 mM each dNTP)	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. 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.
	5X Herculase II Reaction Buffer Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards. No known significant effects or critical hazards.
	SureSelect Pre-capture Indexed Adaptor Set A01-H12	No known significant effects or critical hazards.
Ingestion	: 10X End Repair Buffer 5X T4 DNA Ligase Buffer 10x Klenow Polymerase Buffer T4 DNA Ligase Exo(-) Klenow T4 DNA Polymerase Klenow DNA Polymerase T4 Polynucleotide Kinase dATP SureSelect PCR Primer Mix 100 mM dNTP Mix (25 mM each dNTP)	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. 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.
	5X Herculase II Reaction Buffer Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards. No known significant effects or critical hazards.
	SureSelect Pre-capture Indexed Adaptor Set A01-H12	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Section 4. First aid measures

Eye contact

: 10X End Repair Buffer 5X T4 DNA Ligase Buffer	No specific data. Adverse symptoms may include the following: pain or irritation watering redness
10x Klenow Polymerase Buffer T4 DNA Ligase	No specific data. Adverse symptoms may include the following: irritation watering redness
Exo(-) Klenow	Adverse symptoms may include the following: irritation watering redness
T4 DNA Polymerase	Adverse symptoms may include the following: irritation watering redness
Klenow DNA Polymerase	Adverse symptoms may include the following: irritation watering redness
T4 Polynucleotide Kinase	Adverse symptoms may include the following: irritation watering redness
dATP	No specific data.
SureSelect PCR Primer Mix	No specific data.
100 mM dNTP Mix (25 mM each dNTP)	No specific data.
5X Herculase II Reaction Buffer	No specific data.
Herculase II Fusion DNA Polymerase	Adverse symptoms may include the following: irritation watering redness
SureSelect Pre-capture Indexed Adaptor Set A01-H12	No specific data.

Inhalation

: 10X End Repair Buffer 5X T4 DNA Ligase Buffer	No specific data. Adverse symptoms may include the following: respiratory tract irritation coughing
10x Klenow Polymerase Buffer	No specific data.
T4 DNA Ligase	No specific data.
Exo(-) Klenow	No specific data.
T4 DNA Polymerase	No specific data.
Klenow DNA Polymerase	No specific data.
T4 Polynucleotide Kinase	No specific data.
dATP	No specific data.
SureSelect PCR Primer Mix	No specific data.
100 mM dNTP Mix (25 mM each dNTP)	No specific data.
5X Herculase II Reaction Buffer	No specific data.
Herculase II Fusion DNA Polymerase	No specific data.
SureSelect Pre-capture Indexed Adaptor Set A01-H12	No specific data.

Section 4. First aid measures

Skin contact	:	10X End Repair Buffer	No specific data.
		5X T4 DNA Ligase Buffer	No specific data.
		10x Klenow Polymerase Buffer	No specific data.
		T4 DNA Ligase	No specific data.
		Exo(-) Klenow	No specific data.
		T4 DNA Polymerase	No specific data.
		Klenow DNA Polymerase	No specific data.
		T4 Polynucleotide Kinase	No specific data.
		dATP	No specific data.
		SureSelect PCR Primer Mix	No specific data.
		100 mM dNTP Mix (25 mM each dNTP)	No specific data.
		5X Herculase II Reaction Buffer	No specific data.
		Herculase II Fusion DNA Polymerase	No specific data.
		SureSelect Pre-capture Indexed Adaptor Set A01-H12	No specific data.
	Ingestion	:	10X End Repair Buffer
		5X T4 DNA Ligase Buffer	No specific data.
		10x Klenow Polymerase Buffer	No specific data.
		T4 DNA Ligase	No specific data.
		Exo(-) Klenow	No specific data.
		T4 DNA Polymerase	No specific data.
		Klenow DNA Polymerase	No specific data.
		T4 Polynucleotide Kinase	No specific data.
		dATP	No specific data.
		SureSelect PCR Primer Mix	No specific data.
		100 mM dNTP Mix (25 mM each dNTP)	No specific data.
		5X Herculase II Reaction Buffer	No specific data.
		Herculase II Fusion DNA Polymerase	No specific data.
		SureSelect Pre-capture Indexed Adaptor Set A01-H12	No specific data.

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

Notes to physician	:	10X End Repair 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.
		5X T4 DNA Ligase 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.
		10x Klenow Polymerase 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.
		T4 DNA Ligase	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Exo(-) Klenow	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		T4 DNA Polymerase	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Klenow DNA Polymerase	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Section 4. First aid measures

specialist immediately if large quantities have been ingested or inhaled.

T4 Polynucleotide Kinase
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.

dATP
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

SureSelect PCR Primer Mix
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

100 mM dNTP Mix (25 mM each dNTP)
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.

5X Herculase II Reaction 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.

Herculase II Fusion DNA Polymerase
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

SureSelect Pre-capture Indexed Adaptor Set A01-H12
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments

- : 10X End Repair Buffer No specific treatment.
- 5X T4 DNA Ligase Buffer No specific treatment.
- 10x Klenow Polymerase Buffer No specific treatment.
- T4 DNA Ligase No specific treatment.
- Exo(-) Klenow No specific treatment.
- T4 DNA Polymerase No specific treatment.
- Klenow DNA Polymerase No specific treatment.
- T4 Polynucleotide Kinase No specific treatment.
- dATP No specific treatment.
- SureSelect PCR Primer Mix No specific treatment.
- 100 mM dNTP Mix (25 mM each dNTP) No specific treatment.
- 5X Herculase II Reaction Buffer No specific treatment.
- Herculase II Fusion DNA Polymerase No specific treatment.
- SureSelect Pre-capture Indexed Adaptor Set A01-H12 No specific treatment.

Protection of first-aiders

- : 10X End Repair Buffer No action shall be taken involving any personal risk or without suitable training.
- 5X T4 DNA Ligase Buffer No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
- 10x Klenow Polymerase Buffer No action shall be taken involving any personal risk or without suitable training.
- T4 DNA Ligase 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.
- Exo(-) Klenow No action shall be taken involving any personal risk or without suitable training. It may be dangerous to

Section 4. First aid measures

T4 DNA Polymerase	the person providing aid to give mouth-to-mouth resuscitation. 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.
Klenow DNA Polymerase	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
T4 Polynucleotide Kinase	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.
dATP	No action shall be taken involving any personal risk or without suitable training.
SureSelect PCR Primer Mix	No action shall be taken involving any personal risk or without suitable training.
100 mM dNTP Mix (25 mM each dNTP)	No action shall be taken involving any personal risk or without suitable training.
5X Herculase II Reaction Buffer	No action shall be taken involving any personal risk or without suitable training.
Herculase II Fusion DNA Polymerase	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
SureSelect Pre-capture Indexed Adaptor Set A01-H12	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

: 10X End Repair Buffer	Use an extinguishing agent suitable for the surrounding fire.
5X T4 DNA Ligase Buffer	Use an extinguishing agent suitable for the surrounding fire.
10x Klenow Polymerase Buffer	Use an extinguishing agent suitable for the surrounding fire.
T4 DNA Ligase	Use an extinguishing agent suitable for the surrounding fire.
Exo(-) Klenow	Use an extinguishing agent suitable for the surrounding fire.
T4 DNA Polymerase	Use an extinguishing agent suitable for the surrounding fire.
Klenow DNA Polymerase	Use an extinguishing agent suitable for the surrounding fire.
T4 Polynucleotide Kinase	Use an extinguishing agent suitable for the surrounding fire.
dATP	Use an extinguishing agent suitable for the surrounding fire.
SureSelect PCR Primer Mix	Use an extinguishing agent suitable for the surrounding fire.
100 mM dNTP Mix (25 mM each dNTP)	Use an extinguishing agent suitable for the surrounding fire.
5X Herculase II Reaction Buffer	Use an extinguishing agent suitable for the surrounding fire.
Herculase II Fusion DNA	Use an extinguishing agent suitable for the

Section 5. Fire-fighting measures

	Polymerase	surrounding fire.
	SureSelect Pre-capture Indexed Adaptor Set A01-H12	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: 10X End Repair Buffer	None known.
	5X T4 DNA Ligase Buffer	None known.
	10x Klenow Polymerase Buffer	None known.
	T4 DNA Ligase	None known.
	Exo(-) Klenow	None known.
	T4 DNA Polymerase	None known.
	Klenow DNA Polymerase	None known.
	T4 Polynucleotide Kinase	None known.
	dATP	None known.
	SureSelect PCR Primer Mix	None known.
	100 mM dNTP Mix (25 mM each dNTP)	None known.
	5X Herculase II Reaction Buffer	None known.
	Herculase II Fusion DNA Polymerase	None known.
	SureSelect Pre-capture Indexed Adaptor Set A01-H12	None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	: 10X End Repair Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	5X T4 DNA Ligase Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	10x Klenow Polymerase Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	T4 DNA Ligase	In a fire or if heated, a pressure increase will occur and the container may burst.
	Exo(-) Klenow	In a fire or if heated, a pressure increase will occur and the container may burst.
	T4 DNA Polymerase	In a fire or if heated, a pressure increase will occur and the container may burst.
	Klenow DNA Polymerase	In a fire or if heated, a pressure increase will occur and the container may burst.
	T4 Polynucleotide Kinase	In a fire or if heated, a pressure increase will occur and the container may burst.
	dATP	In a fire or if heated, a pressure increase will occur and the container may burst.
	SureSelect PCR Primer Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
	100 mM dNTP Mix (25 mM each dNTP)	In a fire or if heated, a pressure increase will occur and the container may burst.
	5X Herculase II Reaction Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	Herculase II Fusion DNA Polymerase	In a fire or if heated, a pressure increase will occur and the container may burst.
	SureSelect Pre-capture Indexed Adaptor Set A01-H12	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: 10X End Repair Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides halogenated compounds metal oxide/oxides

Section 5. Fire-fighting measures

5X T4 DNA Ligase Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
10x Klenow Polymerase Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
T4 DNA Ligase	Decomposition products may include the following materials: carbon dioxide carbon monoxide
Exo(-) Klenow	Decomposition products may include the following materials: carbon dioxide carbon monoxide
T4 DNA Polymerase	Decomposition products may include the following materials: carbon dioxide carbon monoxide
Klenow DNA Polymerase	Decomposition products may include the following materials: carbon dioxide carbon monoxide
T4 Polynucleotide Kinase	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides
dATP	No specific data.
SureSelect PCR Primer Mix	No specific data.
100 mM dNTP Mix (25 mM each dNTP)	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides
5X Herculase II Reaction Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides metal oxide/oxides
Herculase II Fusion DNA Polymerase	Decomposition products may include the following materials: carbon dioxide carbon monoxide
SureSelect Pre-capture Indexed Adaptor Set A01-H12	No specific data.

[5.3 Advice for firefighters](#)

Section 5. Fire-fighting measures

Special protective actions for fire-fighters

: 10X End Repair 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.
5X T4 DNA Ligase 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.
10x Klenow Polymerase 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.
T4 DNA Ligase	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.
Exo(-) Klenow	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.
T4 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.
Klenow 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.
T4 Polynucleotide Kinase	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.
dATP	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 PCR 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.
100 mM dNTP Mix (25 mM each dNTP)	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
5X Herculase II Reaction 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.
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.
SureSelect Pre-capture Indexed Adaptor Set A01-H12	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.

Section 5. Fire-fighting measures

Special protective equipment for fire-fighters

10X End Repair Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
5X T4 DNA Ligase Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
10x Klenow Polymerase Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
T4 DNA Ligase	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Exo(-) Klenow	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
T4 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.
Klenow 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.
T4 Polynucleotide Kinase	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
dATP	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
SureSelect PCR 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.
100 mM dNTP Mix (25 mM each dNTP)	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
5X Herculase II Reaction Buffer	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.
SureSelect Pre-capture Indexed Adaptor Set A01-H12	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: 10X End Repair 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.

5X T4 DNA Ligase 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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

10x Klenow Polymerase 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.

T4 DNA Ligase

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.

Exo(-) Klenow

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.

T4 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.

Klenow 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.

Section 6. Accidental release measures

T4 Polynucleotide Kinase	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.
dATP	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 PCR 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.
100 mM dNTP Mix (25 mM each dNTP)	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
5X Herculase II Reaction 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.
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.
SureSelect Pre-capture Indexed Adaptor Set A01-H12	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.
For emergency responders : 10X End Repair 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".
5X T4 DNA Ligase 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".
10x Klenow Polymerase 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

Section 6. Accidental release measures

T4 DNA Ligase	the information in "For non-emergency personnel". If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Exo(-) Klenow	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".
T4 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".
Klenow 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".
T4 Polynucleotide Kinase	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".
dATP	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 PCR 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".
100 mM dNTP Mix (25 mM each dNTP)	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	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".
SureSelect Pre-capture Indexed Adaptor Set A01-H12	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".

6.2 Environmental precautions

10X End Repair 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).
5X T4 DNA Ligase 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).
10x Klenow Polymerase Buffer	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has

Section 6. Accidental release measures

	caused environmental pollution (sewers, waterways, soil or air).
T4 DNA Ligase	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).
Exo(-) Klenow	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).
T4 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).
Klenow 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).
T4 Polynucleotide Kinase	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).
dATP	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 PCR 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).
100 mM dNTP Mix (25 mM each dNTP)	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	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).
SureSelect Pre-capture Indexed Adaptor Set A01-H12	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).

Section 6. Accidental release measures

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : 10X End Repair Buffer

5X T4 DNA Ligase 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.
10x Klenow Polymerase 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.
T4 DNA Ligase	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.
Exo(-) Klenow	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.
T4 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.
Klenow 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.
T4 Polynucleotide Kinase	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.
dATP	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 PCR 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.

Section 6. Accidental release measures

100 mM dNTP Mix (25 mM each dNTP)	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.
5X Herculase II Reaction 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.
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.
SureSelect Pre-capture Indexed Adaptor Set A01-H12	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures

10X End Repair Buffer	Put on appropriate personal protective equipment (see Section 8).
5X T4 DNA Ligase Buffer	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
10x Klenow Polymerase Buffer	Put on appropriate personal protective equipment (see Section 8).
T4 DNA Ligase	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.
Exo(-) Klenow	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

Section 7. Handling and storage

Advice on general occupational hygiene

T4 DNA Polymerase	not reuse container. 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.
Klenow DNA Polymerase	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.
T4 Polynucleotide Kinase	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.
dATP	Put on appropriate personal protective equipment (see Section 8).
SureSelect PCR Primer Mix	Put on appropriate personal protective equipment (see Section 8).
100 mM dNTP Mix (25 mM each dNTP)	Put on appropriate personal protective equipment (see Section 8).
5X Herculase II Reaction Buffer	Put on appropriate personal protective equipment (see Section 8).
Herculase II Fusion DNA Polymerase	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 Pre-capture Indexed Adaptor Set A01-H12	Put on appropriate personal protective equipment (see Section 8).
10X End Repair 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.
5X T4 DNA Ligase 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.
10x Klenow Polymerase Buffer	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and

Section 7. Handling and storage

T4 DNA Ligase	processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Exo(-) Klenow	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.
T4 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.
Klenow 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.
T4 Polynucleotide Kinase	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.
dATP	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 PCR 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.
100 mM dNTP Mix (25 mM each dNTP)	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment

Section 7. Handling and storage

5X Herculase II Reaction Buffer

Herculase II Fusion DNA
Polymerase

SureSelect Pre-capture Indexed
Adaptor Set A01-H12

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

7.2 Conditions for safe storage, including any incompatibilities

: 10X End Repair Buffer

5X T4 DNA Ligase Buffer

10x Klenow Polymerase Buffer

T4 DNA Ligase

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

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

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

Store in accordance with local regulations. Store in

Section 7. Handling and storage

Exo(-) Klenow	original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
T4 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.
Klenow 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.
T4 Polynucleotide Kinase	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.
dATP	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

Section 7. Handling and storage

SureSelect PCR Primer Mix	until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
100 mM dNTP Mix (25 mM each dNTP)	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	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.
SureSelect Pre-capture Indexed Adaptor Set A01-H12	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

Section 7. Handling and storage

environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations

: 10X End Repair Buffer	Industrial applications, Professional applications.
5X T4 DNA Ligase Buffer	Industrial applications, Professional applications.
10x Klenow Polymerase Buffer	Industrial applications, Professional applications.
T4 DNA Ligase	Industrial applications, Professional applications.
Exo(-) Klenow	Industrial applications, Professional applications.
T4 DNA Polymerase	Industrial applications, Professional applications.
Klenow DNA Polymerase	Industrial applications, Professional applications.
T4 Polynucleotide Kinase	Industrial applications, Professional applications.
dATP	Industrial applications, Professional applications.
SureSelect PCR Primer Mix	Industrial applications, Professional applications.
100 mM dNTP Mix (25 mM each dNTP)	Industrial applications, Professional applications.
5X Herculase II Reaction Buffer	Industrial applications, Professional applications.
Herculase II Fusion DNA Polymerase	Industrial applications, Professional applications.
SureSelect Pre-capture Indexed Adaptor Set A01-H12	Industrial applications, Professional applications.

Industrial sector specific solutions

: 10X End Repair Buffer	Not applicable.
5X T4 DNA Ligase Buffer	Not applicable.
10x Klenow Polymerase Buffer	Not applicable.
T4 DNA Ligase	Not applicable.
Exo(-) Klenow	Not applicable.
T4 DNA Polymerase	Not applicable.
Klenow DNA Polymerase	Not applicable.
T4 Polynucleotide Kinase	Not applicable.
dATP	Not applicable.
SureSelect PCR Primer Mix	Not applicable.
100 mM dNTP Mix (25 mM each dNTP)	Not applicable.
5X Herculase II Reaction Buffer	Not applicable.
Herculase II Fusion DNA Polymerase	Not applicable.
SureSelect Pre-capture Indexed Adaptor Set A01-H12	Not applicable.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
10X End Repair Buffer 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride (R*,R*)-1,4-Dimercaptobutane-2,3-diol	None. None.
5X T4 DNA Ligase Buffer Polyethylene glycol 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	AIHA WEEL (United States, 10/2011). TWA: 10 mg/m ³ 8 hours. Form: Aerosol None.
10x Klenow Polymerase Buffer 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	None.
T4 DNA Ligase	None.

Section 8. Exposure controls/personal protection

<p>Glycerol</p>	<p>OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust OSHA PEL (United States, 6/2016). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust</p>
<p>Exo(-) Klenow Glycerol</p>	<p>OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust OSHA PEL (United States, 6/2016). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust</p>
<p>T4 DNA Polymerase Glycerol</p>	<p>OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust OSHA PEL (United States, 6/2016). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust</p>
<p>Klenow DNA Polymerase Glycerol</p>	<p>OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust OSHA PEL (United States, 6/2016). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust</p>
<p>T4 Polynucleotide Kinase Glycerol</p>	<p>OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust OSHA PEL (United States, 6/2016). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust</p>
<p>rATP</p>	<p>None.</p>
<p>5X Herculase II Reaction Buffer Trometamol Ammonium sulphate</p>	<p>None. None.</p>
<p>Herculase II Fusion DNA Polymerase Glycerol</p>	<p>OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m³ 8 hours. Form: Respirable</p>

Section 8. Exposure controls/personal protection

fraction
 TWA: 10 mg/m³ 8 hours. Form: Total dust
OSHA PEL (United States, 6/2016).
 TWA: 5 mg/m³ 8 hours. Form: Respirable
 fraction
 TWA: 15 mg/m³ 8 hours. Form: Total dust

8.2 Exposure controls

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

Individual protection measures

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

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

Skin protection

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

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

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

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Section 9. Physical and chemical properties

Physical state	:	10X End Repair Buffer	Liquid.
		5X T4 DNA Ligase Buffer	Liquid.
		10x Klenow Polymerase Buffer	Liquid.
		T4 DNA Ligase	Liquid.
		Exo(-) Klenow	Liquid.
		T4 DNA Polymerase	Liquid.
		Klenow DNA Polymerase	Liquid.
		T4 Polynucleotide Kinase	Liquid.
		dATP	Liquid.
		SureSelect PCR Primer Mix	Liquid.
		100 mM dNTP Mix (25 mM each dNTP)	Liquid.
		5X Herculase II Reaction Buffer	Liquid.
		Herculase II Fusion DNA Polymerase	Liquid.
		SureSelect Pre-capture Indexed Adaptor Set A01-H12	Liquid.
	Color	:	10X End Repair Buffer
		5X T4 DNA Ligase Buffer	Not available.
		10x Klenow Polymerase Buffer	Not available.
		T4 DNA Ligase	Not available.
		Exo(-) Klenow	Not available.
		T4 DNA Polymerase	Not available.
		Klenow DNA Polymerase	Not available.
		T4 Polynucleotide Kinase	Not available.
		dATP	Not available.
		SureSelect PCR Primer Mix	Not available.
		100 mM dNTP Mix (25 mM each dNTP)	Not available.
		5X Herculase II Reaction Buffer	Not available.
		Herculase II Fusion DNA Polymerase	Not available.
		SureSelect Pre-capture Indexed Adaptor Set A01-H12	Not available.
Odor		:	10X End Repair Buffer
		5X T4 DNA Ligase Buffer	Not available.
		10x Klenow Polymerase Buffer	Not available.
		T4 DNA Ligase	Not available.
		Exo(-) Klenow	Not available.
		T4 DNA Polymerase	Not available.
		Klenow DNA Polymerase	Not available.
		T4 Polynucleotide Kinase	Not available.
		dATP	Not available.
		SureSelect PCR Primer Mix	Not available.
		100 mM dNTP Mix (25 mM each dNTP)	Not available.
		5X Herculase II Reaction Buffer	Not available.
		Herculase II Fusion DNA Polymerase	Not available.
		SureSelect Pre-capture Indexed Adaptor Set A01-H12	Not available.
	Odor threshold	:	10X End Repair Buffer
		5X T4 DNA Ligase Buffer	Not available.
		10x Klenow Polymerase Buffer	Not available.
		T4 DNA Ligase	Not available.
		Exo(-) Klenow	Not available.
		T4 DNA Polymerase	Not available.
		Klenow DNA Polymerase	Not available.
	T4 Polynucleotide Kinase	Not available.	

Section 9. Physical and chemical properties

	dATP	Not available.
	SureSelect PCR Primer Mix	Not available.
	100 mM dNTP Mix (25 mM each dNTP)	Not available.
	5X Herculase II Reaction Buffer	Not available.
	Herculase II Fusion DNA Polymerase	Not available.
	SureSelect Pre-capture Indexed Adaptor Set A01-H12	Not available.
pH	: 10X End Repair Buffer	7 to 8
	5X T4 DNA Ligase Buffer	7 to 8
	10x Klenow Polymerase Buffer	7 to 8
	T4 DNA Ligase	7 to 8
	Exo(-) Klenow	6.5 to 7.5
	T4 DNA Polymerase	6 to 7
	Klenow DNA Polymerase	6.5 to 7.5
	T4 Polynucleotide Kinase	6.9 to 7.9
	dATP	7 to 8
	SureSelect PCR Primer Mix	7 to 8
	100 mM dNTP Mix (25 mM each dNTP)	6.9 to 7.9
	5X Herculase II Reaction Buffer	9.5 to 10.5
	Herculase II Fusion DNA Polymerase	7.5 to 8.7
	SureSelect Pre-capture Indexed Adaptor Set A01-H12	7 to 8
Melting point	: 10X End Repair Buffer	Not available.
	5X T4 DNA Ligase Buffer	Not available.
	10x Klenow Polymerase Buffer	Not available.
	T4 DNA Ligase	Not available.
	Exo(-) Klenow	Not available.
	T4 DNA Polymerase	Not available.
	Klenow DNA Polymerase	Not available.
	T4 Polynucleotide Kinase	Not available.
	dATP	0°C (32°F)
	SureSelect PCR Primer Mix	0°C (32°F)
	100 mM dNTP Mix (25 mM each dNTP)	Not available.
	5X Herculase II Reaction Buffer	Not available.
	Herculase II Fusion DNA Polymerase	Not available.
	SureSelect Pre-capture Indexed Adaptor Set A01-H12	0°C (32°F)
Boiling point	: 10X End Repair Buffer	Not available.
	5X T4 DNA Ligase Buffer	Not available.
	10x Klenow Polymerase Buffer	Not available.
	T4 DNA Ligase	Not available.
	Exo(-) Klenow	Not available.
	T4 DNA Polymerase	Not available.
	Klenow DNA Polymerase	Not available.
	T4 Polynucleotide Kinase	Not available.
	dATP	100°C (212°F)
	SureSelect PCR Primer Mix	100°C (212°F)
	100 mM dNTP Mix (25 mM each dNTP)	Not available.
	5X Herculase II Reaction Buffer	Not available.
	Herculase II Fusion DNA Polymerase	Not available.

Section 9. Physical and chemical properties

	SureSelect Pre-capture Indexed Adaptor Set A01-H12	100°C (212°F)
Flash point	: 10X End Repair Buffer	Not available.
	5X T4 DNA Ligase Buffer	Not available.
	10x Klenow Polymerase Buffer	Not available.
	T4 DNA Ligase	Not available.
	Exo(-) Klenow	Not available.
	T4 DNA Polymerase	Not available.
	Klenow DNA Polymerase	Not available.
	T4 Polynucleotide Kinase	Not available.
	dATP	Not available.
	SureSelect PCR Primer Mix	Not available.
	100 mM dNTP Mix (25 mM each dNTP)	Not available.
	5X Herculase II Reaction Buffer	Not available.
	Herculase II Fusion DNA Polymerase	Not available.
	SureSelect Pre-capture Indexed Adaptor Set A01-H12	Not available.
Evaporation rate	: 10X End Repair Buffer	Not available.
	5X T4 DNA Ligase Buffer	Not available.
	10x Klenow Polymerase Buffer	Not available.
	T4 DNA Ligase	Not available.
	Exo(-) Klenow	Not available.
	T4 DNA Polymerase	Not available.
	Klenow DNA Polymerase	Not available.
	T4 Polynucleotide Kinase	Not available.
	dATP	Not available.
	SureSelect PCR Primer Mix	Not available.
	100 mM dNTP Mix (25 mM each dNTP)	Not available.
	5X Herculase II Reaction Buffer	Not available.
	Herculase II Fusion DNA Polymerase	Not available.
	SureSelect Pre-capture Indexed Adaptor Set A01-H12	Not available.
Flammability (solid, gas)	: 10X End Repair Buffer	Not applicable.
	5X T4 DNA Ligase Buffer	Not applicable.
	10x Klenow Polymerase Buffer	Not applicable.
	T4 DNA Ligase	Not applicable.
	Exo(-) Klenow	Not applicable.
	T4 DNA Polymerase	Not applicable.
	Klenow DNA Polymerase	Not applicable.
	T4 Polynucleotide Kinase	Not applicable.
	dATP	Not applicable.
	SureSelect PCR Primer Mix	Not applicable.
	100 mM dNTP Mix (25 mM each dNTP)	Not applicable.
	5X Herculase II Reaction Buffer	Not applicable.
	Herculase II Fusion DNA Polymerase	Not applicable.
	SureSelect Pre-capture Indexed Adaptor Set A01-H12	Not applicable.

Section 9. Physical and chemical properties

Lower and upper explosive (flammable) limits	:	10X End Repair Buffer	Not available.
		5X T4 DNA Ligase Buffer	Not available.
		10x Klenow Polymerase Buffer	Not available.
		T4 DNA Ligase	Not available.
		Exo(-) Klenow	Not available.
		T4 DNA Polymerase	Not available.
		Klenow DNA Polymerase	Not available.
		T4 Polynucleotide Kinase	Not available.
		dATP	Not available.
		SureSelect PCR Primer Mix	Not available.
		100 mM dNTP Mix (25 mM each dNTP)	Not available.
		5X Herculase II Reaction Buffer	Not available.
		Herculase II Fusion DNA Polymerase	Not available.
		SureSelect Pre-capture Indexed Adaptor Set A01-H12	Not available.
Vapor pressure	:	10X End Repair Buffer	Not available.
		5X T4 DNA Ligase Buffer	Not available.
		10x Klenow Polymerase Buffer	Not available.
		T4 DNA Ligase	Not available.
		Exo(-) Klenow	Not available.
		T4 DNA Polymerase	Not available.
		Klenow DNA Polymerase	Not available.
		T4 Polynucleotide Kinase	Not available.
		dATP	Not available.
		SureSelect PCR Primer Mix	Not available.
		100 mM dNTP Mix (25 mM each dNTP)	Not available.
		5X Herculase II Reaction Buffer	Not available.
		Herculase II Fusion DNA Polymerase	Not available.
		SureSelect Pre-capture Indexed Adaptor Set A01-H12	Not available.
Vapor density	:	10X End Repair Buffer	Not available.
		5X T4 DNA Ligase Buffer	Not available.
		10x Klenow Polymerase Buffer	Not available.
		T4 DNA Ligase	Not available.
		Exo(-) Klenow	Not available.
		T4 DNA Polymerase	Not available.
		Klenow DNA Polymerase	Not available.
		T4 Polynucleotide Kinase	Not available.
		dATP	Not available.
		SureSelect PCR Primer Mix	Not available.
		100 mM dNTP Mix (25 mM each dNTP)	Not available.
		5X Herculase II Reaction Buffer	Not available.
		Herculase II Fusion DNA Polymerase	Not available.
		SureSelect Pre-capture Indexed Adaptor Set A01-H12	Not available.
Relative density	:	10X End Repair Buffer	Not available.
		5X T4 DNA Ligase Buffer	Not available.
		10x Klenow Polymerase Buffer	Not available.
		T4 DNA Ligase	Not available.
		Exo(-) Klenow	Not available.
		T4 DNA Polymerase	Not available.
	Klenow DNA Polymerase	Not available.	

Section 9. Physical and chemical properties

	T4 Polynucleotide Kinase	Not available.
	dATP	Not available.
	SureSelect PCR Primer Mix	Not available.
	100 mM dNTP Mix (25 mM each dNTP)	Not available.
	5X Herculase II Reaction Buffer	Not available.
	Herculase II Fusion DNA Polymerase	Not available.
	SureSelect Pre-capture Indexed Adaptor Set A01-H12	Not available.
Solubility	: 10X End Repair Buffer	Easily soluble in the following materials: cold water and hot water.
	5X T4 DNA Ligase Buffer	Easily soluble in the following materials: cold water and hot water.
	10x Klenow Polymerase Buffer	Easily soluble in the following materials: cold water and hot water.
	T4 DNA Ligase	Soluble in the following materials: cold water and hot water.
	Exo(-) Klenow	Not available.
	T4 DNA Polymerase	Soluble in the following materials: cold water and hot water.
	Klenow DNA Polymerase	Soluble in the following materials: cold water and hot water.
	T4 Polynucleotide Kinase	Soluble in the following materials: cold water and hot water.
	dATP	Easily soluble in the following materials: cold water and hot water.
	SureSelect PCR Primer Mix	Easily soluble in the following materials: cold water and hot water.
	100 mM dNTP Mix (25 mM each dNTP)	Easily soluble in the following materials: cold water and hot water.
	5X Herculase II Reaction Buffer	Easily soluble in the following materials: cold water and hot water.
	Herculase II Fusion DNA Polymerase	Soluble in the following materials: cold water and hot water.
	SureSelect Pre-capture Indexed Adaptor Set A01-H12	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: 10X End Repair Buffer	Not available.
	5X T4 DNA Ligase Buffer	Not available.
	10x Klenow Polymerase Buffer	Not available.
	T4 DNA Ligase	Not available.
	Exo(-) Klenow	Not available.
	T4 DNA Polymerase	Not available.
	Klenow DNA Polymerase	Not available.
	T4 Polynucleotide Kinase	Not available.
	dATP	Not available.
	SureSelect PCR Primer Mix	Not available.
	100 mM dNTP Mix (25 mM each dNTP)	Not available.
	5X Herculase II Reaction Buffer	Not available.
	Herculase II Fusion DNA Polymerase	Not available.
	SureSelect Pre-capture Indexed Adaptor Set A01-H12	Not available.

Section 9. Physical and chemical properties

Auto-ignition temperature	:	10X End Repair Buffer	Not available.
		5X T4 DNA Ligase Buffer	Not available.
		10x Klenow Polymerase Buffer	Not available.
		T4 DNA Ligase	Not available.
		Exo(-) Klenow	Not available.
		T4 DNA Polymerase	Not available.
		Klenow DNA Polymerase	Not available.
		T4 Polynucleotide Kinase	Not available.
		dATP	Not available.
		SureSelect PCR Primer Mix	Not available.
		100 mM dNTP Mix (25 mM each dNTP)	Not available.
		5X Herculase II Reaction Buffer	Not available.
		Herculase II Fusion DNA Polymerase	Not available.
		SureSelect Pre-capture Indexed Adaptor Set A01-H12	Not available.
	Decomposition temperature	:	10X End Repair Buffer
		5X T4 DNA Ligase Buffer	Not available.
		10x Klenow Polymerase Buffer	Not available.
		T4 DNA Ligase	Not available.
		Exo(-) Klenow	Not available.
		T4 DNA Polymerase	Not available.
		Klenow DNA Polymerase	Not available.
		T4 Polynucleotide Kinase	Not available.
		dATP	Not available.
		SureSelect PCR Primer Mix	Not available.
		100 mM dNTP Mix (25 mM each dNTP)	Not available.
		5X Herculase II Reaction Buffer	Not available.
		Herculase II Fusion DNA Polymerase	Not available.
		SureSelect Pre-capture Indexed Adaptor Set A01-H12	Not available.
Viscosity		:	10X End Repair Buffer
		5X T4 DNA Ligase Buffer	Not available.
		10x Klenow Polymerase Buffer	Not available.
		T4 DNA Ligase	Not available.
		Exo(-) Klenow	Not available.
		T4 DNA Polymerase	Not available.
		Klenow DNA Polymerase	Not available.
		T4 Polynucleotide Kinase	Not available.
		dATP	Not available.
		SureSelect PCR Primer Mix	Not available.
		100 mM dNTP Mix (25 mM each dNTP)	Not available.
		5X Herculase II Reaction Buffer	Not available.
		Herculase II Fusion DNA Polymerase	Not available.
		SureSelect Pre-capture Indexed Adaptor Set A01-H12	Not available.

Section 10. Stability and reactivity

10.1 Reactivity	<ul style="list-style-type: none"> : 10X End Repair Buffer 5X T4 DNA Ligase Buffer 10x Klenow Polymerase Buffer T4 DNA Ligase Exo(-) Klenow T4 DNA Polymerase Klenow DNA Polymerase T4 Polynucleotide Kinase dATP SureSelect PCR Primer Mix 100 mM dNTP Mix (25 mM each dNTP) 5X Herculase II Reaction Buffer Herculase II Fusion DNA Polymerase SureSelect Pre-capture Indexed Adaptor Set A01-H12 	<ul style="list-style-type: none"> No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	<ul style="list-style-type: none"> : 10X End Repair Buffer 5X T4 DNA Ligase Buffer 10x Klenow Polymerase Buffer T4 DNA Ligase Exo(-) Klenow T4 DNA Polymerase Klenow DNA Polymerase T4 Polynucleotide Kinase dATP SureSelect PCR Primer Mix 100 mM dNTP Mix (25 mM each dNTP) 5X Herculase II Reaction Buffer Herculase II Fusion DNA Polymerase SureSelect Pre-capture Indexed Adaptor Set A01-H12 	<ul style="list-style-type: none"> The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable.
10.3 Possibility of hazardous reactions	<ul style="list-style-type: none"> : 10X End Repair Buffer 5X T4 DNA Ligase Buffer 10x Klenow Polymerase Buffer T4 DNA Ligase Exo(-) Klenow 	<ul style="list-style-type: none"> 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.

Section 10. Stability and reactivity

T4 DNA Polymerase	Under normal conditions of storage and use, hazardous reactions will not occur.
Klenow DNA Polymerase	Under normal conditions of storage and use, hazardous reactions will not occur.
T4 Polynucleotide Kinase	Under normal conditions of storage and use, hazardous reactions will not occur.
dATP	Under normal conditions of storage and use, hazardous reactions will not occur.
SureSelect PCR Primer Mix	Under normal conditions of storage and use, hazardous reactions will not occur.
100 mM dNTP Mix (25 mM each dNTP)	Under normal conditions of storage and use, hazardous reactions will not occur.
5X Herculase II Reaction Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
Herculase II Fusion DNA Polymerase	Under normal conditions of storage and use, hazardous reactions will not occur.
SureSelect Pre-capture Indexed Adaptor Set A01-H12	Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid	:	10X End Repair Buffer	No specific data.
		5X T4 DNA Ligase Buffer	No specific data.
		10x Klenow Polymerase Buffer	No specific data.
		T4 DNA Ligase	No specific data.
		Exo(-) Klenow	No specific data.
		T4 DNA Polymerase	No specific data.
		Klenow DNA Polymerase	No specific data.
		T4 Polynucleotide Kinase	No specific data.
		dATP	No specific data.
		SureSelect PCR Primer Mix	No specific data.
		100 mM dNTP Mix (25 mM each dNTP)	No specific data.
		5X Herculase II Reaction Buffer	No specific data.
		Herculase II Fusion DNA Polymerase	No specific data.
		SureSelect Pre-capture Indexed Adaptor Set A01-H12	No specific data.

10.5 Incompatible materials	:	10X End Repair Buffer	May react or be incompatible with oxidizing materials.
		5X T4 DNA Ligase Buffer	May react or be incompatible with oxidizing materials.
		10x Klenow Polymerase Buffer	May react or be incompatible with oxidizing materials.
		T4 DNA Ligase	May react or be incompatible with oxidizing materials.
		Exo(-) Klenow	May react or be incompatible with oxidizing materials.
		T4 DNA Polymerase	May react or be incompatible with oxidizing materials.
		Klenow DNA Polymerase	May react or be incompatible with oxidizing materials.
		T4 Polynucleotide Kinase	May react or be incompatible with oxidizing materials.
		dATP	May react or be incompatible with oxidizing materials.
		SureSelect PCR Primer Mix	May react or be incompatible with oxidizing materials.
		100 mM dNTP Mix (25 mM each	May react or be incompatible with oxidizing

Section 10. Stability and reactivity

dNTP)		materials.
5X Herculase II Reaction Buffer		May react or be incompatible with oxidizing materials.
Herculase II Fusion DNA Polymerase		May react or be incompatible with oxidizing materials.
SureSelect Pre-capture Indexed Adaptor Set A01-H12		May react or be incompatible with oxidizing materials.
10.6 Hazardous decomposition products	:	
10X End Repair Buffer		Under normal conditions of storage and use, hazardous decomposition products should not be produced.
5X T4 DNA Ligase Buffer		Under normal conditions of storage and use, hazardous decomposition products should not be produced.
10x Klenow Polymerase Buffer		Under normal conditions of storage and use, hazardous decomposition products should not be produced.
T4 DNA Ligase		Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Exo(-) Klenow		Under normal conditions of storage and use, hazardous decomposition products should not be produced.
T4 DNA Polymerase		Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Klenow DNA Polymerase		Under normal conditions of storage and use, hazardous decomposition products should not be produced.
T4 Polynucleotide Kinase		Under normal conditions of storage and use, hazardous decomposition products should not be produced.
dATP		Under normal conditions of storage and use, hazardous decomposition products should not be produced.
SureSelect PCR Primer Mix		Under normal conditions of storage and use, hazardous decomposition products should not be produced.
100 mM dNTP Mix (25 mM each dNTP)		Under normal conditions of storage and use, hazardous decomposition products should not be produced.
5X Herculase II Reaction Buffer		Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Herculase II Fusion DNA Polymerase		Under normal conditions of storage and use, hazardous decomposition products should not be produced.
SureSelect Pre-capture Indexed Adaptor Set A01-H12		Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
T4 DNA Ligase Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Exo(-) Klenow Glycerol	LD50 Oral	Rat	12600 mg/kg	-
T4 DNA Polymerase Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Klenow DNA Polymerase Glycerol	LD50 Oral	Rat	12600 mg/kg	-
T4 Polynucleotide Kinase Glycerol	LD50 Oral	Rat	12600 mg/kg	-
5X Herculase II Reaction Buffer Trometamol	LD50 Dermal	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
Ammonium sulphate	LD50 Oral	Rat	2840 mg/kg	-
Herculase II Fusion DNA Polymerase Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
5X T4 DNA Ligase Buffer Polyethylene glycol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
T4 DNA Ligase Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Exo(-) Klenow Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
T4 DNA Polymerase Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Section 11. Toxicological information

Klenow DNA Polymerase Glycerol	Eyes - Mild irritant	Rabbit	-	milligrams	
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
T4 Polynucleotide Kinase Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
5X Herculase II Reaction Buffer Trometamol	Skin - Moderate irritant	Rabbit	-	25 Percent	-
	Skin - Severe irritant	Rabbit	-	500 milligrams	-
Herculase II Fusion DNA Polymerase Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
10X End Repair Buffer 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	Category 3	Not applicable.	Respiratory tract irritation
(R*,R*)-1,4-Dimercaptobutane-2,3-diol	Category 3	Not applicable.	Respiratory tract irritation
5X T4 DNA Ligase Buffer Polyethylene glycol	Category 3	Not applicable.	Respiratory tract irritation
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	Category 3	Not applicable.	Respiratory tract irritation
10x Klenow Polymerase Buffer			

Section 11. Toxicological information

2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	Category 3	Not applicable.	Respiratory tract irritation
5X Herculase II Reaction Buffer Trometamol	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

10X End Repair Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
5X T4 DNA Ligase Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
10x Klenow Polymerase Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
T4 DNA Ligase	Routes of entry anticipated: Oral, Dermal, Inhalation.
Exo(-) Klenow	Routes of entry anticipated: Oral, Dermal, Inhalation.
T4 DNA Polymerase	Routes of entry anticipated: Oral, Dermal, Inhalation.
Klenow DNA Polymerase	Routes of entry anticipated: Oral, Dermal, Inhalation.
T4 Polynucleotide Kinase	Routes of entry anticipated: Oral, Dermal, Inhalation.
dATP	Not available.
SureSelect PCR Primer Mix	Not available.
100 mM dNTP Mix (25 mM each dNTP)	Not available.
5X Herculase II Reaction Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
Herculase II Fusion DNA Polymerase	Routes of entry anticipated: Oral, Dermal, Inhalation.
SureSelect Pre-capture Indexed Adaptor Set A01-H12	Not available.

Potential acute health effects

Eye contact

10X End Repair Buffer	No known significant effects or critical hazards.
5X T4 DNA Ligase Buffer	Causes serious eye irritation.
10x Klenow Polymerase Buffer	No known significant effects or critical hazards.
T4 DNA Ligase	Causes eye irritation.
Exo(-) Klenow	Causes eye irritation.
T4 DNA Polymerase	Causes eye irritation.
Klenow DNA Polymerase	Causes eye irritation.
T4 Polynucleotide Kinase	Causes eye irritation.
dATP	No known significant effects or critical hazards.
SureSelect PCR Primer Mix	No known significant effects or critical hazards.
100 mM dNTP Mix (25 mM each dNTP)	No known significant effects or critical hazards.
5X Herculase II Reaction Buffer	No known significant effects or critical hazards.
Herculase II Fusion DNA Polymerase	Causes eye irritation.
SureSelect Pre-capture Indexed Adaptor Set A01-H12	No known significant effects or critical hazards.

Section 11. Toxicological information

Inhalation	<ul style="list-style-type: none"> : 10X End Repair Buffer 5X T4 DNA Ligase Buffer 10x Klenow Polymerase Buffer T4 DNA Ligase Exo(-) Klenow T4 DNA Polymerase Klenow DNA Polymerase T4 Polynucleotide Kinase dATP SureSelect PCR Primer Mix 100 mM dNTP Mix (25 mM each dNTP) 5X Herculase II Reaction Buffer Herculase II Fusion DNA Polymerase SureSelect Pre-capture Indexed Adaptor Set A01-H12 	<ul style="list-style-type: none"> No known significant effects or critical hazards. May cause respiratory irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. 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. 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.
Skin contact	<ul style="list-style-type: none"> : 10X End Repair Buffer 5X T4 DNA Ligase Buffer 10x Klenow Polymerase Buffer T4 DNA Ligase Exo(-) Klenow T4 DNA Polymerase Klenow DNA Polymerase T4 Polynucleotide Kinase dATP SureSelect PCR Primer Mix 100 mM dNTP Mix (25 mM each dNTP) 5X Herculase II Reaction Buffer Herculase II Fusion DNA Polymerase SureSelect Pre-capture Indexed Adaptor Set A01-H12 	<ul style="list-style-type: none"> 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. 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. No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	<ul style="list-style-type: none"> : 10X End Repair Buffer 5X T4 DNA Ligase Buffer 10x Klenow Polymerase Buffer T4 DNA Ligase Exo(-) Klenow T4 DNA Polymerase Klenow DNA Polymerase T4 Polynucleotide Kinase dATP SureSelect PCR Primer Mix 100 mM dNTP Mix (25 mM each dNTP) 5X Herculase II Reaction Buffer Herculase II Fusion DNA Polymerase SureSelect Pre-capture Indexed Adaptor Set A01-H12 	<ul style="list-style-type: none"> 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. 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. No known significant effects or critical hazards. No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Section 11. Toxicological information

Eye contact

: 10X End Repair Buffer 5X T4 DNA Ligase Buffer 10x Klenow Polymerase Buffer T4 DNA Ligase Exo(-) Klenow T4 DNA Polymerase Klenow DNA Polymerase T4 Polynucleotide Kinase dATP SureSelect PCR Primer Mix 100 mM dNTP Mix (25 mM each dNTP) 5X Herculase II Reaction Buffer Herculase II Fusion DNA Polymerase SureSelect Pre-capture Indexed Adaptor Set A01-H12	No specific data. Adverse symptoms may include the following: pain or irritation watering redness No specific data. Adverse symptoms may include the following: irritation watering redness Adverse symptoms may include the following: irritation watering redness Adverse symptoms may include the following: irritation watering redness Adverse symptoms may include the following: irritation watering redness Adverse symptoms may include the following: irritation watering redness No specific data. No specific data. No specific data. No specific data. Adverse symptoms may include the following: irritation watering redness No specific data.
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Inhalation

: 10X End Repair Buffer 5X T4 DNA Ligase Buffer 10x Klenow Polymerase Buffer T4 DNA Ligase Exo(-) Klenow T4 DNA Polymerase Klenow DNA Polymerase T4 Polynucleotide Kinase dATP SureSelect PCR Primer Mix 100 mM dNTP Mix (25 mM each dNTP) 5X Herculase II Reaction Buffer Herculase II Fusion DNA Polymerase SureSelect Pre-capture Indexed Adaptor Set A01-H12	No specific data. Adverse symptoms may include the following: respiratory tract irritation coughing No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
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Section 11. Toxicological information

Skin contact	: 10X End Repair Buffer 5X T4 DNA Ligase Buffer 10x Klenow Polymerase Buffer T4 DNA Ligase Exo(-) Klenow T4 DNA Polymerase Klenow DNA Polymerase T4 Polynucleotide Kinase dATP SureSelect PCR Primer Mix 100 mM dNTP Mix (25 mM each dNTP) 5X Herculase II Reaction Buffer Herculase II Fusion DNA Polymerase SureSelect Pre-capture Indexed Adaptor Set A01-H12	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Ingestion	: 10X End Repair Buffer 5X T4 DNA Ligase Buffer 10x Klenow Polymerase Buffer T4 DNA Ligase Exo(-) Klenow T4 DNA Polymerase Klenow DNA Polymerase T4 Polynucleotide Kinase dATP SureSelect PCR Primer Mix 100 mM dNTP Mix (25 mM each dNTP) 5X Herculase II Reaction Buffer Herculase II Fusion DNA Polymerase SureSelect Pre-capture Indexed Adaptor Set A01-H12	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	: 10X End Repair Buffer 5X T4 DNA Ligase Buffer 10x Klenow Polymerase Buffer T4 DNA Ligase Exo(-) Klenow T4 DNA Polymerase Klenow DNA Polymerase T4 Polynucleotide Kinase dATP SureSelect PCR Primer Mix	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. 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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Section 11. Toxicological information

	100 mM dNTP Mix (25 mM each dNTP)	No known significant effects or critical hazards.
	5X Herculase II Reaction Buffer	No known significant effects or critical hazards.
	Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards.
Carcinogenicity	SureSelect Pre-capture Indexed Adaptor Set A01-H12	No known significant effects or critical hazards.
	10X End Repair Buffer	No known significant effects or critical hazards.
	5X T4 DNA Ligase Buffer	No known significant effects or critical hazards.
	10x Klenow Polymerase Buffer	No known significant effects or critical hazards.
	T4 DNA Ligase	No known significant effects or critical hazards.
	Exo(-) Klenow	No known significant effects or critical hazards.
	T4 DNA Polymerase	No known significant effects or critical hazards.
	Klenow DNA Polymerase	No known significant effects or critical hazards.
	T4 Polynucleotide Kinase	No known significant effects or critical hazards.
	dATP	No known significant effects or critical hazards.
Mutagenicity	SureSelect PCR Primer Mix	No known significant effects or critical hazards.
	100 mM dNTP Mix (25 mM each dNTP)	No known significant effects or critical hazards.
	5X Herculase II Reaction Buffer	No known significant effects or critical hazards.
	Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards.
	SureSelect Pre-capture Indexed Adaptor Set A01-H12	No known significant effects or critical hazards.
	10X End Repair Buffer	No known significant effects or critical hazards.
	5X T4 DNA Ligase Buffer	No known significant effects or critical hazards.
	10x Klenow Polymerase Buffer	No known significant effects or critical hazards.
	T4 DNA Ligase	No known significant effects or critical hazards.
	Exo(-) Klenow	No known significant effects or critical hazards.
Teratogenicity	T4 DNA Polymerase	No known significant effects or critical hazards.
	Klenow DNA Polymerase	No known significant effects or critical hazards.
	T4 Polynucleotide Kinase	No known significant effects or critical hazards.
	dATP	No known significant effects or critical hazards.
	SureSelect PCR Primer Mix	No known significant effects or critical hazards.
	100 mM dNTP Mix (25 mM each dNTP)	No known significant effects or critical hazards.
	5X Herculase II Reaction Buffer	No known significant effects or critical hazards.
	Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards.
	SureSelect Pre-capture Indexed Adaptor Set A01-H12	No known significant effects or critical hazards.
	10X End Repair Buffer	No known significant effects or critical hazards.
5X T4 DNA Ligase Buffer	No known significant effects or critical hazards.	
10x Klenow Polymerase Buffer	No known significant effects or critical hazards.	
T4 DNA Ligase	No known significant effects or critical hazards.	
Exo(-) Klenow	No known significant effects or critical hazards.	
T4 DNA Polymerase	No known significant effects or critical hazards.	
Klenow DNA Polymerase	No known significant effects or critical hazards.	
T4 Polynucleotide Kinase	No known significant effects or critical hazards.	
dATP	No known significant effects or critical hazards.	
SureSelect PCR Primer Mix	No known significant effects or critical hazards.	
100 mM dNTP Mix (25 mM each dNTP)	No known significant effects or critical hazards.	
5X Herculase II Reaction Buffer	No known significant effects or critical hazards.	
Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards.	
SureSelect Pre-capture Indexed Adaptor Set A01-H12	No known significant effects or critical hazards.	

Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
10X End Repair Buffer (R*,R*)-1, 4-Dimercaptobutane-2,3-diol	Acute LC50 27000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
5X T4 DNA Ligase Buffer Polyethylene glycol	Acute LC50 >1000000 µg/l Fresh water	Fish - Salmo salar - Parr	96 hours
T4 DNA Ligase Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
Exo(-) Klenow Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
T4 DNA Polymerase Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
Klenow DNA Polymerase Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
T4 Polynucleotide Kinase Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
5X Herculanase II Reaction Buffer Trometamol	Acute EC50 >980 mg/l Fresh water Acute NOEC 520 mg/l Fresh water	Daphnia Daphnia	48 hours 48 hours
Ammonium sulphate	Acute LC50 2.6 mg/l Fresh water Acute LC50 14000 µg/l Fresh water Acute LC50 68 µg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Young Daphnia - Daphnia magna - Young Fish - Oncorhynchus gorbuscha - Alevin	48 hours 48 hours 96 hours
	Chronic NOEC 7.5 mg/l Marine water Chronic NOEC 143 µg/l Marine water	Algae - Phaeodactylum tricornutum - Exponential growth phase Fish - Salmo salar - Post-smolt	96 hours 5 weeks
Herculanase II Fusion DNA Polymerase Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
T4 DNA Ligase Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
Exo(-) Klenow Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

Section 12. Ecological information

T4 DNA Polymerase Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
Klenow DNA Polymerase Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
T4 Polynucleotide Kinase 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	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
5X Herculase II Reaction Buffer Ammonium sulphate	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
5X T4 DNA Ligase Buffer Polyethylene glycol	-	3.2	low
T4 DNA Ligase Glycerol	-1.76	-	low
Exo(-) Klenow Glycerol	-1.76	-	low
T4 DNA Polymerase Glycerol	-1.76	-	low
Klenow DNA Polymerase Glycerol	-1.76	-	low
T4 Polynucleotide Kinase Glycerol	-1.76	-	low
5X Herculase II Reaction Buffer Trometamol	-1.56	-	low
Ammonium sulphate	-5.1	-	low
Herculase II Fusion DNA			

Section 12. Ecological information

Polymerase Glycerol	-1.76	-	low
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12.4 Mobility in soil

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

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

Section 13. Disposal considerations

13.1 Waste treatment methods

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

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

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

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

Section 14. Transport information

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

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

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

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

Section 15. Regulatory information

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

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification	<p>10X End Repair Buffer 5X T4 DNA Ligase Buffer</p> <p>10x Klenow Polymerase Buffer T4 DNA Ligase Exo(-) Klenow T4 DNA Polymerase Klenow DNA Polymerase T4 Polynucleotide Kinase dATP SureSelect PCR Primer Mix 100 mM dNTP Mix (25 mM each dNTP) 5X Herculase II Reaction Buffer Herculase II Fusion DNA Polymerase SureSelect Pre-capture Indexed Adaptor Set A01-H12</p>	<p>Not applicable. EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 Not applicable. EYE IRRITATION - Category 2B EYE IRRITATION - Category 2B EYE IRRITATION - Category 2B EYE IRRITATION - Category 2B EYE IRRITATION - Category 2B Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. EYE IRRITATION - Category 2B EYE IRRITATION - Category 2B Not applicable.</p>
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Composition/information on ingredients

Name	%	Classification
10X End Repair Buffer		
2-Amino-2-(hydroxymethyl) propane-1,3-diol hydrochloride	≤8.3	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
(R*,R*)-1,4-Dimercaptobutane-2,3-diol	≤1.6	ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
5X T4 DNA Ligase Buffer		
Polyethylene glycol	≥25 - ≤50	EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
2-Amino-2-(hydroxymethyl) propane-1,3-diol hydrochloride	≤5	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

Section 15. Regulatory information

10x Klenow Polymerase Buffer 2-Amino-2-(hydroxymethyl) propane-1,3-diol hydrochloride	<10	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
T4 DNA Ligase Glycerol	≥50 - ≤75	EYE IRRITATION - Category 2A
Exo(-) Klenow Glycerol	≥50 - ≤75	EYE IRRITATION - Category 2A
T4 DNA Polymerase Glycerol	≥50 - ≤75	EYE IRRITATION - Category 2A
Klenow DNA Polymerase Glycerol	≥50 - ≤75	EYE IRRITATION - Category 2A
T4 Polynucleotide Kinase Glycerol rATP	≥50 - ≤75 ≤3	EYE IRRITATION - Category 2A EYE IRRITATION - Category 2A
5X Herculase II Reaction Buffer Trometamol	≤3	COMBUSTIBLE DUSTS SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 EYE IRRITATION - Category 2A
Ammonium sulphate	≤3	EYE IRRITATION - Category 2A
Herculase II Fusion DNA Polymerase Glycerol	≥50 - ≤75	EYE IRRITATION - Category 2A

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	5X Herculase II Reaction Buffer Ammonium sulphate	7783-20-2	≤3
Supplier notification	5X Herculase II Reaction Buffer Ammonium sulphate	7783-20-2	≤3

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: GLYCERINE MIST
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL
- Pennsylvania** : The following components are listed: 1,2,3-PROPANETRIOL

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Section 15. Regulatory information

Not listed.

[Rotterdam Convention on Prior Informed Consent \(PIC\)](#)

Not listed.

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

Not listed.

[Inventory list](#)

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

Section 16. Other information

[History](#)

Date of issue	:	11/17/2017
Date of previous issue	:	No previous validation
Version	:	2

Indicates information that has changed from previously issued version.

[Notice to reader](#)

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