

# SAFETY DATA SHEET



HaloPlex ILM Pre-Pack - 96 Reactions, Part Number 5190-8636

## Section 1. Identification

<b>Product identifier</b>	: HaloPlex ILM Pre-Pack - 96 Reactions, Part Number 5190-8636																												
<b>Part no. (chemical kit)</b>	: 5190-8636																												
<b>Part no.</b>	: <table> <tr><td>BE Buffer</td><td>5190-4997</td></tr> <tr><td>SSC Buffer</td><td>5190-5356</td></tr> <tr><td>BSA Solution</td><td>5190-5409</td></tr> <tr><td>DNA Ligase</td><td>5190-7830</td></tr> <tr><td>Ligation Solution</td><td>5190-7833</td></tr> <tr><td>Wash Solution</td><td>5190-4994</td></tr> <tr><td>Capture Solution</td><td>5190-4995</td></tr> <tr><td>Primer 1</td><td>5190-5354</td></tr> <tr><td>Primer 2</td><td>5190-5355</td></tr> <tr><td>HaloPlex Indexing Primer A01 - H12</td><td>5190-8025</td></tr> <tr><td>Hybridization Solution</td><td>5190-5352</td></tr> <tr><td>Enrichment Control DNA</td><td>5190-5353</td></tr> <tr><td>Enzyme Strip 1</td><td>5190-5357</td></tr> <tr><td>Enzyme Strip 2</td><td>5190-5358</td></tr> </table>	BE Buffer	5190-4997	SSC Buffer	5190-5356	BSA Solution	5190-5409	DNA Ligase	5190-7830	Ligation Solution	5190-7833	Wash Solution	5190-4994	Capture Solution	5190-4995	Primer 1	5190-5354	Primer 2	5190-5355	HaloPlex Indexing Primer A01 - H12	5190-8025	Hybridization Solution	5190-5352	Enrichment Control DNA	5190-5353	Enzyme Strip 1	5190-5357	Enzyme Strip 2	5190-5358
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Enzyme Strip 1	5190-5357																												
Enzyme Strip 2	5190-5358																												

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

<b>Identified uses</b>	: Analytical reagent.																												
	<table> <tr><td>BE Buffer</td><td>4.8 ml (96 reactions)</td></tr> <tr><td>SSC Buffer</td><td>2 x 8.15 ml (96 reactions)</td></tr> <tr><td>BSA Solution</td><td>0.115 ml (96 reactions)</td></tr> <tr><td>DNA Ligase</td><td>0.34 ml (96 reactions)</td></tr> <tr><td>Ligation Solution</td><td>6.5 ml (96 reactions)</td></tr> <tr><td>Wash Solution</td><td>14 ml (96 reactions)</td></tr> <tr><td>Capture Solution</td><td>4.8 ml (96 reactions)</td></tr> <tr><td>Primer 1</td><td>0.13 ml (96 reactions)</td></tr> <tr><td>Primer 2</td><td>0.13 ml (96 reactions)</td></tr> <tr><td>HaloPlex Indexing Primer A01 - H12</td><td>96 x 0.015 ml</td></tr> <tr><td>Hybridization Solution</td><td>7 ml (96 reactions)</td></tr> <tr><td>Enrichment Control DNA</td><td>0.48 ml (96 reactions)</td></tr> <tr><td>Enzyme Strip 1</td><td>8 x 0.075 ml (96 reactions)</td></tr> <tr><td>Enzyme Strip 2</td><td>8 x 0.075 ml (96 reactions)</td></tr> </table>	BE Buffer	4.8 ml (96 reactions)	SSC Buffer	2 x 8.15 ml (96 reactions)	BSA Solution	0.115 ml (96 reactions)	DNA Ligase	0.34 ml (96 reactions)	Ligation Solution	6.5 ml (96 reactions)	Wash Solution	14 ml (96 reactions)	Capture Solution	4.8 ml (96 reactions)	Primer 1	0.13 ml (96 reactions)	Primer 2	0.13 ml (96 reactions)	HaloPlex Indexing Primer A01 - H12	96 x 0.015 ml	Hybridization Solution	7 ml (96 reactions)	Enrichment Control DNA	0.48 ml (96 reactions)	Enzyme Strip 1	8 x 0.075 ml (96 reactions)	Enzyme Strip 2	8 x 0.075 ml (96 reactions)
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<b>Supplier/Manufacturer</b>	: Agilent Technologies Australia Pty Ltd 679 Springvale Road Mulgrave Victoria 3170, Australia 1800 802 402
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<b>Emergency telephone number (with hours of operation)</b>	: CHEMTREC®: +(61)-290372994
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## Section 2. Hazard(s) identification

### Classification of the substance or mixture

#### DNA Ligase

H320 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B

#### Wash Solution

H351 CARCINOGENICITY - Category 2  
 H360 REPRODUCTIVE TOXICITY - Category 1  
 H373 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2

## Section 2. Hazard(s) identification

### Hybridization Solution

H351	CARCINOGENICITY - Category 2
H360	REPRODUCTIVE TOXICITY - Category 1
H373	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2

### Enzyme Strip 1

H320	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B
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### Enzyme Strip 2

H320	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B
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### GHS label elements


#### Hazard pictograms

:  Wash Solution


Hybridization Solution



#### Signal word

:  RE Buffer	No signal word.
SSC Buffer	No signal word.
BSA Solution	No signal word.
DNA Ligase	WARNING
Ligation Solution	No signal word.
Wash Solution	DANGER
Capture Solution	No signal word.
Primer 1	No signal word.
Primer 2	No signal word.
HaloPlex Indexing Primer A01 - H12	No signal word.
Hybridization Solution	DANGER
Enrichment Control DNA	No signal word.
Enzyme Strip 1	WARNING
Enzyme Strip 2	WARNING

#### Hazard statements

:  RE Buffer	No known significant effects or critical hazards.
SSC Buffer	No known significant effects or critical hazards.
BSA Solution	No known significant effects or critical hazards.
DNA Ligase	H320 - Causes eye irritation.
Ligation Solution	No known significant effects or critical hazards.
Wash Solution	H351 - Suspected of causing cancer. H360 - May damage fertility or the unborn child. H373 - May cause damage to organs through prolonged or repeated exposure.
Capture Solution	No known significant effects or critical hazards.
Primer 1	No known significant effects or critical hazards.
Primer 2	No known significant effects or critical hazards.
HaloPlex Indexing Primer A01 - H12	No known significant effects or critical hazards.
Hybridization Solution	H351 - Suspected of causing cancer. H360 - May damage fertility or the unborn child. H373 - May cause damage to organs through prolonged or repeated exposure.
Enrichment Control DNA	No known significant effects or critical hazards.
Enzyme Strip 1	H320 - Causes eye irritation.
Enzyme Strip 2	H320 - Causes eye irritation.

### Precautionary statements

## Section 2. Hazard(s) identification

### Prevention

RE Buffer	Not applicable.
SSC Buffer	Not applicable.
BSA Solution	Not applicable.
DNA Ligase	Not applicable.
Ligation Solution	Not applicable.
Wash Solution	P201 - Obtain special instructions before use. P280 - Wear protective gloves, protective clothing and eye or face protection. P260 - Do not breathe vapour.
Capture Solution	Not applicable.
Primer 1	Not applicable.
Primer 2	Not applicable.
HaloPlex Indexing Primer A01 - H12	Not applicable.
Hybridization Solution	P201 - Obtain special instructions before use. P280 - Wear protective gloves, protective clothing and eye or face protection. P260 - Do not breathe vapour.
Enrichment Control DNA	Not applicable.
Enzyme Strip 1	Not applicable.
Enzyme Strip 2	Not applicable.

### Response

RE Buffer	Not applicable.
SSC Buffer	Not applicable.
BSA Solution	Not applicable.
DNA Ligase	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
Ligation Solution	Not applicable.
Wash Solution	P308 + P313 - IF exposed or concerned: Get medical advice or attention.
Capture Solution	Not applicable.
Primer 1	Not applicable.
Primer 2	Not applicable.
HaloPlex Indexing Primer A01 - H12	Not applicable.
Hybridization Solution	P308 + P313 - IF exposed or concerned: Get medical advice or attention.
Enrichment Control DNA	Not applicable.
Enzyme Strip 1	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
Enzyme Strip 2	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.


### Storage

RE Buffer	Not applicable.
SSC Buffer	Not applicable.
BSA Solution	Not applicable.
DNA Ligase	Not applicable.
Ligation Solution	Not applicable.
Wash Solution	Not applicable.
Capture Solution	Not applicable.
Primer 1	Not applicable.
Primer 2	Not applicable.
HaloPlex Indexing Primer A01 - H12	Not applicable.
Hybridization Solution	Not applicable.


## Section 2. Hazard(s) identification

<b>Disposal</b>		Enrichment Control DNA	Not applicable.
		Enzyme Strip 1	Not applicable.
		Enzyme Strip 2	Not applicable.
	:	RE Buffer	Not applicable.
		SSC Buffer	Not applicable.
		BSA Solution	Not applicable.
		DNA Ligase	Not applicable.
		Ligation Solution	Not applicable.
		Wash Solution	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
		Capture Solution	Not applicable.
<b>Supplemental label elements</b>		Primer 1	Not applicable.
		Primer 2	Not applicable.
		HaloPlex Indexing Primer A01 - H12	Not applicable.
		Hybridization Solution	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
		Enrichment Control DNA	Not applicable.
		Enzyme Strip 1	Not applicable.
		Enzyme Strip 2	Not applicable.
	:	RE Buffer	Not applicable.
		SSC Buffer	Not applicable.
		BSA Solution	Not applicable.
<b>Additional warning phrases</b>		DNA Ligase	Not applicable.
		Ligation Solution	Not applicable.
		Wash Solution	Not applicable.
		Capture Solution	Not applicable.
		Primer 1	Not applicable.
		Primer 2	Not applicable.
		HaloPlex Indexing Primer A01 - H12	Not applicable.
		Hybridization Solution	Not applicable.
		Enrichment Control DNA	Not applicable.
		Enzyme Strip 1	Not applicable.
<b>Other hazards which do not result in classification</b>		Enzyme Strip 2	Not applicable.
	:	RE Buffer	None known.
		SSC Buffer	None known.
		BSA Solution	None known.
		DNA Ligase	None known.
		Ligation Solution	None known.
		Wash Solution	None known.
		Capture Solution	None known.
		Primer 1	None known.
		Primer 2	None known.
		HaloPlex Indexing Primer A01 - H12	None known.
		Hybridization Solution	None known.
		Enrichment Control DNA	None known.
		Enzyme Strip 1	None known.
		Enzyme Strip 2	None known.

## Section 3. Composition and ingredient information

<b>Substance/mixture</b>	<b>:</b>	 RE Buffer	Mixture
		SSC Buffer	Mixture
		BSA Solution	Mixture
		DNA Ligase	Mixture
		Ligation Solution	Mixture
		Wash Solution	Mixture
		Capture Solution	Mixture
		Primer 1	Mixture
		Primer 2	Mixture
		HaloPlex Indexing Primer	Mixture
		A01 - H12	
		Hybridization Solution	Mixture
		Enrichment Control DNA	Mixture
		Enzyme Strip 1	Mixture
		Enzyme Strip 2	Mixture

### CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
 <b>BSA Solution</b>		
Glycerol	<10	56-81-5
<b>DNA Ligase</b>		
Glycerol	≥30 - ≤60	56-81-5
<b>Wash Solution</b>		
Formamide	≥10 - ≤30	75-12-7
<b>Hybridization Solution</b>		
Formamide	≥30 - ≤60	75-12-7
<b>Enzyme Strip 1</b>		
Glycerol	≥30 - ≤60	56-81-5
<b>Enzyme Strip 2</b>		
Glycerol	≥30 - ≤60	56-81-5

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

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

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

## Section 4. First aid measures

### Description of necessary first aid measures

## Section 4. First aid measures

### Eye contact

: RE 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.

SSC 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.

BSA Solution

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.

DNA Ligase

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.

Ligation Solution

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.

Wash Solution

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.

Capture Solution

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.

Primer 1

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.

Primer 2

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.

HaloPlex Indexing Primer  
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.

Hybridization Solution

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.

Enrichment Control DNA

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.

Enzyme Strip 1

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.

Enzyme Strip 2

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.

## Section 4. First aid measures

<b>Inhalation</b>	: RE Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	SSC Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	BSA Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	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.
	Ligation Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Wash Solution	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 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.
	Capture Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Primer 1	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Primer 2	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	HaloPlex Indexing Primer A01 - H12	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Hybridization Solution	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 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.



## Section 4. First aid measures

	Enrichment Control DNA	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Enzyme Strip 1	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.
	Enzyme Strip 2	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
<b>Skin contact</b>	: RE Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	SSC Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	BSA Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	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.
	Ligation Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Wash Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Capture Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Primer 1	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Primer 2	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	HaloPlex Indexing Primer A01 - H12	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Hybridization Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before



## Section 4. First aid measures

removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Enrichment Control DNA

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Enzyme Strip 1

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.

Enzyme Strip 2

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.

### Ingestion

: RE Buffer

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

SSC Buffer

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

BSA Solution

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

DNA Ligase

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

Ligation Solution

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

Wash Solution

Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. 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.

Capture Solution

Wash out mouth with water. If material has been

## Section 4. First aid measures

Primer 1

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.

Primer 2

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

HaloPlex Indexing Primer  
A01 - H12

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

Hybridization Solution

Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. 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.

Enrichment Control DNA

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

Enzyme Strip 1

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

Enzyme Strip 2

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

## Section 4. First aid measures

airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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

#### Potential acute health effects

<b>Eye contact</b>	<b>:</b>	<b>RE Buffer</b>	No known significant effects or critical hazards.
		SSC Buffer	No known significant effects or critical hazards.
<b>Inhalation</b>		BSA Solution	No known significant effects or critical hazards.
		DNA Ligase	Causes eye irritation.
		Ligation Solution	No known significant effects or critical hazards.
		Wash Solution	No known significant effects or critical hazards.
		Capture Solution	No known significant effects or critical hazards.
		Primer 1	No known significant effects or critical hazards.
		Primer 2	No known significant effects or critical hazards.
		HaloPlex Indexing Primer A01 - H12	No known significant effects or critical hazards.
		Hybridization Solution	No known significant effects or critical hazards.
		Enrichment Control DNA	Causes eye irritation.
		Enzyme Strip 1	Causes eye irritation.
		Enzyme Strip 2	No known significant effects or critical hazards.
		RE Buffer	No known significant effects or critical hazards.
		SSC Buffer	No known significant effects or critical hazards.
<b>Skin contact</b>		BSA Solution	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		Ligation Solution	No known significant effects or critical hazards.
		Wash Solution	No known significant effects or critical hazards.
		Capture Solution	No known significant effects or critical hazards.
		Primer 1	No known significant effects or critical hazards.
		Primer 2	No known significant effects or critical hazards.
		HaloPlex Indexing Primer A01 - H12	No known significant effects or critical hazards.
		Hybridization Solution	No known significant effects or critical hazards.
		Enrichment Control DNA	No known significant effects or critical hazards.
		Enzyme Strip 1	No known significant effects or critical hazards.
		Enzyme Strip 2	No known significant effects or critical hazards.
		RE Buffer	No known significant effects or critical hazards.
		SSC Buffer	No known significant effects or critical hazards.
<b>Ingestion</b>		BSA Solution	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		Ligation Solution	No known significant effects or critical hazards.
		Wash Solution	No known significant effects or critical hazards.
		Capture Solution	No known significant effects or critical hazards.
		Primer 1	No known significant effects or critical hazards.
		Primer 2	No known significant effects or critical hazards.
		HaloPlex Indexing Primer A01 - H12	No known significant effects or critical hazards.
		Hybridization Solution	No known significant effects or critical hazards.
		Enrichment Control DNA	No known significant effects or critical hazards.
		Enzyme Strip 1	No known significant effects or critical hazards.
		Enzyme Strip 2	No known significant effects or critical hazards.
		RE Buffer	No known significant effects or critical hazards.
		SSC Buffer	No known significant effects or critical hazards.

## Section 4. First aid measures

Hybridization Solution	No known significant effects or critical hazards.
Enrichment Control DNA	No known significant effects or critical hazards.
Enzyme Strip 1	No known significant effects or critical hazards.
Enzyme Strip 2	No known significant effects or critical hazards.

### Over-exposure signs/symptoms

#### Eye contact

RE Buffer	No specific data.
SSC Buffer	No specific data.
BSA Solution	No specific data.
DNA Ligase	Adverse symptoms may include the following: irritation watering redness
Ligation Solution	No specific data.
Wash Solution	No specific data.
Capture Solution	No specific data.
Primer 1	No specific data.
Primer 2	No specific data.
HaloPlex Indexing Primer A01 - H12	No specific data.
Hybridization Solution	No specific data.
Enrichment Control DNA	No specific data.
Enzyme Strip 1	Adverse symptoms may include the following: irritation watering redness
Enzyme Strip 2	Adverse symptoms may include the following: irritation watering redness

#### Inhalation

RE Buffer	No specific data.
SSC Buffer	No specific data.
BSA Solution	No specific data.
DNA Ligase	No specific data.
Ligation Solution	No specific data.
Wash Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
Capture Solution	No specific data.
Primer 1	No specific data.
Primer 2	No specific data.
HaloPlex Indexing Primer A01 - H12	No specific data.
Hybridization Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
Enrichment Control DNA	No specific data.
Enzyme Strip 1	No specific data.
Enzyme Strip 2	No specific data.

#### Skin contact

RE Buffer	No specific data.
SSC Buffer	No specific data.
BSA Solution	No specific data.
DNA Ligase	No specific data.
Ligation Solution	No specific data.
Wash Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
Capture Solution	No specific data.
Primer 1	No specific data.
Primer 2	No specific data.

## Section 4. First aid measures

Ingestion		HaloPlex Indexing Primer A01 - H12	No specific data.
		Hybridization Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
		Enrichment Control DNA	No specific data.
		Enzyme Strip 1	No specific data.
		Enzyme Strip 2	No specific data.
	:	RE Buffer	No specific data.
		SSC Buffer	No specific data.
		BSA Solution	No specific data.
		DNA Ligase	No specific data.
		Ligation Solution	No specific data.
		Wash Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
		Capture Solution	No specific data.
		Primer 1	No specific data.
		Primer 2	No specific data.
		HaloPlex Indexing Primer A01 - H12	No specific data.
		Hybridization Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
		Enrichment Control DNA	No specific data.
		Enzyme Strip 1	No specific data.
		Enzyme Strip 2	No specific data.

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

Notes to physician	:	RE Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		SSC Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		BSA Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		DNA Ligase	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Ligation Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Wash Solution	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.
		Capture Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Primer 1	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Primer 2	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		HaloPlex Indexing Primer A01 - H12	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

## Section 4. First aid measures

	Hybridization Solution	<p>ingested or inhaled.</p> <p>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.</p>
	Enrichment Control DNA	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Enzyme Strip 1	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Enzyme Strip 2	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	: RE Buffer	No specific treatment.
	SSC Buffer	No specific treatment.
	BSA Solution	No specific treatment.
	DNA Ligase	No specific treatment.
	Ligation Solution	No specific treatment.
	Wash Solution	No specific treatment.
	Capture Solution	No specific treatment.
	Primer 1	No specific treatment.
	Primer 2	No specific treatment.
	HaloPlex Indexing Primer A01 - H12	No specific treatment.
	Hybridization Solution	No specific treatment.
	Enrichment Control DNA	No specific treatment.
<b>Protection of first-aiders</b>	: RE Buffer	No action shall be taken involving any personal risk or without suitable training.
	SSC Buffer	No action shall be taken involving any personal risk or without suitable training.
	BSA Solution	No action shall be taken involving any personal risk or without suitable training.
	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.
	Ligation Solution	No action shall be taken involving any personal risk or without suitable training.
	Wash Solution	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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
	Capture Solution	No action shall be taken involving any personal risk or without suitable training.
	Primer 1	No action shall be taken involving any personal risk or without suitable training.
	Primer 2	No action shall be taken involving any personal risk or without suitable training.
	HaloPlex Indexing Primer A01 - H12	No action shall be taken involving any personal risk or without suitable training.
	Hybridization Solution	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.



## Section 4. First aid measures

Enrichment Control DNA	Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
Enzyme Strip 1	No action shall be taken involving any personal risk or without suitable training.
Enzyme Strip 2	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.

See toxicological information (Section 11)

## Section 5. Firefighting measures

### Extinguishing media

#### Suitable extinguishing media

: RE Buffer	Use an extinguishing agent suitable for the surrounding fire.
SSC Buffer	Use an extinguishing agent suitable for the surrounding fire.
BSA Solution	Use an extinguishing agent suitable for the surrounding fire.
DNA Ligase	Use an extinguishing agent suitable for the surrounding fire.
Ligation Solution	Use an extinguishing agent suitable for the surrounding fire.
Wash Solution	Use an extinguishing agent suitable for the surrounding fire.
Capture Solution	Use an extinguishing agent suitable for the surrounding fire.
Primer 1	Use an extinguishing agent suitable for the surrounding fire.
Primer 2	Use an extinguishing agent suitable for the surrounding fire.
HaloPlex Indexing Primer A01 - H12	Use an extinguishing agent suitable for the surrounding fire.
Hybridization Solution	Use an extinguishing agent suitable for the surrounding fire.
Enrichment Control DNA	Use an extinguishing agent suitable for the surrounding fire.
Enzyme Strip 1	Use an extinguishing agent suitable for the surrounding fire.
Enzyme Strip 2	Use an extinguishing agent suitable for the surrounding fire.

#### Unsuitable extinguishing media

: RE Buffer	None known.
SSC Buffer	None known.
BSA Solution	None known.
DNA Ligase	None known.
Ligation Solution	None known.
Wash Solution	None known.
Capture Solution	None known.
Primer 1	None known.
Primer 2	None known.
HaloPlex Indexing Primer A01 - H12	None known.
Hybridization Solution	None known.
Enrichment Control DNA	None known.
Enzyme Strip 1	None known.
Enzyme Strip 2	None known.



## Section 5. Firefighting measures

### Specific hazards arising from the chemical

RE Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
SSC Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
BSA Solution	In a fire or if heated, a pressure increase will occur and the container may burst.
DNA Ligase	In a fire or if heated, a pressure increase will occur and the container may burst.
Ligation Solution	In a fire or if heated, a pressure increase will occur and the container may burst.
Wash Solution	In a fire or if heated, a pressure increase will occur and the container may burst.
Capture Solution	In a fire or if heated, a pressure increase will occur and the container may burst.
Primer 1	In a fire or if heated, a pressure increase will occur and the container may burst.
Primer 2	In a fire or if heated, a pressure increase will occur and the container may burst.
HaloPlex Indexing Primer A01 - H12	In a fire or if heated, a pressure increase will occur and the container may burst.
Hybridization Solution	In a fire or if heated, a pressure increase will occur and the container may burst.
Enrichment Control DNA	In a fire or if heated, a pressure increase will occur and the container may burst.
Enzyme Strip 1	In a fire or if heated, a pressure increase will occur and the container may burst.
Enzyme Strip 2	In a fire or if heated, a pressure increase will occur and the container may burst.

### Hazardous thermal decomposition products

RE Buffer	No specific data.
SSC Buffer	No specific data.
BSA Solution	Decomposition products may include the following materials: carbon dioxide carbon monoxide
DNA Ligase	Decomposition products may include the following materials: carbon dioxide carbon monoxide
Ligation Solution	No specific data.
Wash Solution	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
Capture Solution	Decomposition products may include the following materials: halogenated compounds metal oxide/oxides
Primer 1	No specific data.
Primer 2	No specific data.
HaloPlex Indexing Primer A01 - H12	No specific data.
Hybridization Solution	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
Enrichment Control DNA	No specific data.
Enzyme Strip 1	Decomposition products may include the following

## Section 5. Firefighting measures

		materials: carbon dioxide carbon monoxide Decomposition products may include the following materials: carbon dioxide carbon monoxide
	Enzyme Strip 2	
Special protective actions for fire-fighters	: RE 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.
	SSC 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.
	BSA Solution	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.
	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.
	Ligation Solution	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.
	Wash Solution	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.
	Capture Solution	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.
	Primer 1	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.
	Primer 2	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.
	HaloPlex Indexing Primer 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.
	Hybridization Solution	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.
	Enrichment Control DNA	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.
	Enzyme Strip 1	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.
	Enzyme Strip 2	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

## Section 5. Firefighting measures

### Special protective equipment for fire-fighters

: RE Buffer

without suitable training.

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

SSC Buffer

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

BSA Solution

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

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.

Ligation Solution

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

Wash Solution

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

Capture Solution

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

Primer 1

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

Primer 2

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

HaloPlex Indexing Primer 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.

Hybridization Solution

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

Enrichment Control DNA

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

Enzyme Strip 1

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

Enzyme Strip 2

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

## Section 5. Firefighting measures

<b>Hazchem code</b>	:	RE Buffer	Not available.
		SSC Buffer	Not available.
		BSA Solution	Not available.
		DNA Ligase	Not available.
		Ligation Solution	Not available.
		Wash Solution	Not available.
		Capture Solution	Not available.
		Primer 1	Not available.
		Primer 2	Not available.
		HaloPlex Indexing Primer A01 - H12	Not available.
		Hybridization Solution	Not available.
		Enrichment Control DNA	Not available.
		Enzyme Strip 1	Not available.
		Enzyme Strip 2	Not available.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	:	RE Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
		SSC Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
		BSA Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
		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 spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
		Ligation Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
		Wash Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
		Capture Solution	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

## Section 6. Accidental release measures

Primer 1	through spilt material. Put on appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Primer 2	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
HaloPlex Indexing Primer 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 spilt material. Put on appropriate personal protective equipment.
Hybridization Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Enrichment Control DNA	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Enzyme Strip 1	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Enzyme Strip 2	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
<b>For emergency responders :</b> RE Buffer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
SSC Buffer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
BSA Solution	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
DNA Ligase	If specialised clothing is required to deal with the

## Section 6. Accidental release measures

Ligation Solution

spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Wash Solution

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

Capture Solution

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

Primer 1

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

Primer 2

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

HaloPlex Indexing Primer  
A01 - H12

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

Hybridization Solution

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

Enrichment Control DNA

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

Enzyme Strip 1

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

Enzyme Strip 2

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

**Environmental precautions** :  RE Buffer

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

SSC Buffer

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

BSA Solution

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

DNA Ligase

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways,



## Section 6. Accidental release measures

Ligation Solution	soil or air). Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Wash Solution	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Capture Solution	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Primer 1	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Primer 2	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
HaloPlex Indexing Primer A01 - H12	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Hybridization Solution	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Enrichment Control DNA	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Enzyme Strip 1	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Enzyme Strip 2	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and material for containment and cleaning up

Methods for cleaning up :  RE 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.

SSC 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



## Section 6. Accidental release measures

	inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
BSA Solution	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.
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.
Ligation Solution	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.
Wash Solution	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.
Capture Solution	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.
Primer 1	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.
Primer 2	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.
HaloPlex Indexing Primer 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.
Hybridization Solution	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.
Enrichment Control DNA	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 6. Accidental release measures

Enzyme Strip 1	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.
Enzyme Strip 2	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

## Section 7. Handling and storage

### Precautions for safe handling

#### Protective measures

RE Buffer	Put on appropriate personal protective equipment (see Section 8).
SSC Buffer	Put on appropriate personal protective equipment (see Section 8).
BSA Solution	Put on appropriate personal protective equipment (see Section 8).
DNA Ligase	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Ligation Solution	Put on appropriate personal protective equipment (see Section 8).
Wash Solution	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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.
Capture Solution	Put on appropriate personal protective equipment (see Section 8).
Primer 1	Put on appropriate personal protective equipment (see Section 8).
Primer 2	Put on appropriate personal protective equipment (see Section 8).
HaloPlex Indexing Primer A01 - H12	Put on appropriate personal protective equipment (see Section 8).
Hybridization Solution	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made

## Section 7. Handling and storage

		from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
	Enrichment Control DNA	Put on appropriate personal protective equipment (see Section 8).
	Enzyme Strip 1	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
	Enzyme Strip 2	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	: RE 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.
	SSC 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.
	BSA Solution	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.
	DNA Ligase	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.
	Ligation Solution	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.
	Wash Solution	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

## Section 7. Handling and storage

Capture Solution	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.
Primer 1	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.
Primer 2	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.
HaloPlex Indexing Primer A01 - H12	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.
Hybridization Solution	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.
Enrichment Control DNA	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.
Enzyme Strip 1	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.
Enzyme Strip 2	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

## Section 7. Handling and storage

Conditions for safe storage, : RE Buffer  
including any  
incompatibilities

SSC 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

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

BSA Solution

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

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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Ligation Solution

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

Wash Solution

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 unlabelled

## Section 7. Handling and storage

### Capture Solution

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

### Primer 1

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

### Primer 2

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

### HaloPlex Indexing Primer 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### Hybridization Solution

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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### Enrichment Control DNA

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



## Section 7. Handling and storage

Enzyme Strip 1

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

Enzyme Strip 2

## Section 8. Exposure controls and personal protection

### [Control parameters](#)

### [Occupational exposure limits](#)

Ingredient name	Exposure limits
<b>BSA Solution</b> Glycerol	<b>Safe Work Australia (Australia, 10/2022).</b> TWA: 10 mg/m <sup>3</sup> 8 hours.
<b>DNA Ligase</b> Glycerol	<b>Safe Work Australia (Australia, 10/2022).</b> TWA: 10 mg/m <sup>3</sup> 8 hours.
<b>Wash Solution</b> Formamide	<b>Safe Work Australia (Australia, 10/2022).</b> <b>Absorbed through skin.</b> TWA: 18 mg/m <sup>3</sup> 8 hours. TWA: 10 ppm 8 hours.
<b>Hybridization Solution</b> Formamide	<b>Safe Work Australia (Australia, 10/2022).</b> <b>Absorbed through skin.</b> TWA: 18 mg/m <sup>3</sup> 8 hours. TWA: 10 ppm 8 hours.
<b>Enzyme Strip 1</b> Glycerol	<b>Safe Work Australia (Australia, 10/2022).</b> TWA: 10 mg/m <sup>3</sup> 8 hours.
<b>Enzyme Strip 2</b> Glycerol	<b>Safe Work Australia (Australia, 10/2022).</b>



## Section 8. Exposure controls and personal protection

TWA: 10 mg/m<sup>3</sup> 8 hours.

### Biological exposure indices

No exposure indices known.

- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

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

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




### Appearance


- Physical state** :
- |                   |                  |
|-------------------|------------------|
| RE Buffer         | Liquid.          |
| SSC Buffer        | Liquid.          |
| BSA Solution      | Liquid. [Clear.] |
| DNA Ligase        | Liquid.          |
| Ligation Solution | Liquid.          |
| Wash Solution     | Liquid.          |
| Capture Solution  | Liquid.          |
| Primer 1          | Liquid.          |
| Primer 2          | Liquid.          |

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

		HaloPlex Indexing Primer A01 - H12	Liquid.
		Hybridization Solution	Liquid.
		Enrichment Control DNA	Liquid.
		Enzyme Strip 1	Liquid.
		Enzyme Strip 2	Liquid.
Colour	:	RE Buffer	Not available.
		SSC Buffer	Not available.
		BSA Solution	Colourless.
		DNA Ligase	Not available.
		Ligation Solution	Not available.
		Wash Solution	Not available.
		Capture Solution	Not available.
		Primer 1	Not available.
		Primer 2	Not available.
		HaloPlex Indexing Primer A01 - H12	Not available.
		Hybridization Solution	Not available.
		Enrichment Control DNA	Not available.
		Enzyme Strip 1	Not available.
		Enzyme Strip 2	Not available.
Odour	:	RE Buffer	Not available.
		SSC Buffer	Not available.
		BSA Solution	Odourless.
		DNA Ligase	Not available.
		Ligation Solution	Not available.
		Wash Solution	Not available.
		Capture Solution	Not available.
		Primer 1	Not available.
		Primer 2	Not available.
		HaloPlex Indexing Primer A01 - H12	Not available.
		Hybridization Solution	Not available.
		Enrichment Control DNA	Not available.
		Enzyme Strip 1	Not available.
		Enzyme Strip 2	Not available.
Odour threshold	:	RE Buffer	Not available.
		SSC Buffer	Not available.
		BSA Solution	Not available.
		DNA Ligase	Not available.
		Ligation Solution	Not available.
		Wash Solution	Not available.
		Capture Solution	Not available.
		Primer 1	Not available.
		Primer 2	Not available.
		HaloPlex Indexing Primer A01 - H12	Not available.
		Hybridization Solution	Not available.
		Enrichment Control DNA	Not available.
		Enzyme Strip 1	Not available.
		Enzyme Strip 2	Not available.
pH	:	RE Buffer	7.9
		SSC Buffer	Not available.
		BSA Solution	Not available.
		DNA Ligase	7.4
		Ligation Solution	Not available.
		Wash Solution	7.5
		Capture Solution	Not available.
		Primer 1	Not available.
		Primer 2	Not available.
		HaloPlex Indexing Primer	Not available.

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

	A01 - H12	
	Hybridization Solution	7.5
	Enrichment Control DNA	Not available.
	Enzyme Strip 1	7.4
	Enzyme Strip 2	7.4
<b>Melting point/freezing point</b>	 RE Buffer	0°C (32°F)
	SSC Buffer	0°C (32°F)
	BSA Solution	20°C (68°F)
	DNA Ligase	Not available.
	Ligation Solution	0°C (32°F)
	Wash Solution	Not available.
	Capture Solution	Not available.
	Primer 1	0°C (32°F)
	Primer 2	0°C (32°F)
	HaloPlex Indexing Primer	0°C (32°F)
	A01 - H12	
	Hybridization Solution	Not available.
	Enrichment Control DNA	0°C (32°F)
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
<b>Boiling point, initial boiling point, and boiling range</b>	 RE Buffer	100°C (212°F)
	SSC Buffer	100°C (212°F)
	BSA Solution	182°C (359.6°F)
	DNA Ligase	Not available.
	Ligation Solution	100°C (212°F)
	Wash Solution	Not available.
	Capture Solution	Not available.
	Primer 1	100°C (212°F)
	Primer 2	100°C (212°F)
	HaloPlex Indexing Primer	100°C (212°F)
	A01 - H12	
	Hybridization Solution	Not available.
	Enrichment Control DNA	100°C (212°F)
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
<b>Flash point</b>	 RE Buffer	Not available.
	SSC Buffer	Not available.
	BSA Solution	Closed cup: 160°C (320°F)
	DNA Ligase	Not available.
	Ligation Solution	Not available.
	Wash Solution	Not available.
	Capture Solution	Not available.
	Primer 1	Not available.
	Primer 2	Not available.
	HaloPlex Indexing Primer	Not available.
	A01 - H12	
	Hybridization Solution	Not available.
	Enrichment Control DNA	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
 DNA Ligase						
Glycerol	-	-	-	177	350.6	-
<b>Wash Solution</b>						
Formamide	150	302	-	152	305.6	DIN EN

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

							ISO 2592
	<b>Hybridization Solution</b>						
	Formamide	150	302	-	152	305.6	DIN EN ISO 2592
	<b>Enzyme Strip 1</b>						
	Glycerol	-	-	-	177	350.6	-
	<b>Enzyme Strip 2</b>						
	Glycerol	-	-	-	177	350.6	-

### Evaporation rate

RE Buffer	Not available.
SSC Buffer	Not available.
BSA Solution	Not available.
DNA Ligase	Not available.
Ligation Solution	Not available.
Wash Solution	Not available.
Capture Solution	Not available.
Primer 1	Not available.
Primer 2	Not available.
HaloPlex Indexing Primer A01 - H12	Not available.
Hybridization Solution	Not available.
Enrichment Control DNA	Not available.
Enzyme Strip 1	Not available.
Enzyme Strip 2	Not available.

### Flammability

RE Buffer	Not applicable.
SSC Buffer	Not applicable.
BSA Solution	Not applicable.
DNA Ligase	Not applicable.
Ligation Solution	Not applicable.
Wash Solution	Not applicable.
Capture Solution	Not applicable.
Primer 1	Not applicable.
Primer 2	Not applicable.
HaloPlex Indexing Primer A01 - H12	Not applicable.
Hybridization Solution	Not applicable.
Enrichment Control DNA	Not applicable.
Enzyme Strip 1	Not applicable.
Enzyme Strip 2	Not applicable.

### Lower and upper explosion limit/flammability limit

RE Buffer	Not available.
SSC Buffer	Not available.
BSA Solution	Not available.
DNA Ligase	Not available.
Ligation Solution	Not available.
Wash Solution	Not available.
Capture Solution	Not available.
Primer 1	Not available.
Primer 2	Not available.
HaloPlex Indexing Primer A01 - H12	Not available.
Hybridization Solution	Not available.
Enrichment Control DNA	Not available.
Enzyme Strip 1	Not available.

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

### Vapour pressure

Enzyme Strip 2

Not available.

:  SA Solution


&lt;0.13 kPa (&lt;1 mm Hg)

Enzyme Strip 1

&lt;0.13 kPa (&lt;1 mm Hg)

Enzyme Strip 2

&lt;0.13 kPa (&lt;1 mm Hg)

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
 RE Buffer						
water	17.5	2.3	-	92.258	12.3	-
<b>SSC Buffer</b>						
water	17.5	2.3	-	92.258	12.3	-
<b>DNA Ligase</b>						
water	17.5	2.3	-	92.258	12.3	-
Glycerol	0.000075	0.00001	-	0.0025	0.00033	-
<b>Ligation Solution</b>						
water	17.5	2.3	-	92.258	12.3	-
<b>Wash Solution</b>						
water	17.5	2.3	-	92.258	12.3	-
Formamide	0.045	0.006	-	-	-	-
<b>Capture Solution</b>						
water	17.5	2.3	-	92.258	12.3	-
<b>Primer 1</b>						
water	17.5	2.3	-	92.258	12.3	-
<b>Primer 2</b>						
water	17.5	2.3	-	92.258	12.3	-
<b>HaloPlex Indexing Primer A01 - H12</b>						
water	17.5	2.3	-	92.258	12.3	-
<b>Hybridization Solution</b>						
water	17.5	2.3	-	92.258	12.3	-

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

	Formamide	0.045	0.006	-	-	-	-
	<b>Enrichment Control DNA</b>						
	water	17.5	2.3	-	92.258	12.3	-
Relative vapour density	TE Buffer	Not available.					
	SSC Buffer	Not available.					
	BSA Solution	3.1 [Air = 1]					
	DNA Ligase	Not available.					
	Ligation Solution	Not available.					
	Wash Solution	Not available.					
	Capture Solution	Not available.					
	Primer 1	Not available.					
	Primer 2	Not available.					
	HaloPlex Indexing Primer A01 - H12	Not available.					
	Hybridization Solution	Not available.					
	Enrichment Control DNA	Not available.					
	Enzyme Strip 1	Not available.					
	Enzyme Strip 2	Not available.					
Relative density	TE Buffer	Not available.					
	SSC Buffer	Not available.					
	BSA Solution	1.262					
	DNA Ligase	Not available.					
	Ligation Solution	Not available.					
	Wash Solution	Not available.					
	Capture Solution	Not available.					
	Primer 1	Not available.					
	Primer 2	Not available.					
	HaloPlex Indexing Primer A01 - H12	Not available.					
	Hybridization Solution	Not available.					
	Enrichment Control DNA	Not available.					
	Enzyme Strip 1	Not available.					
	Enzyme Strip 2	Not available.					
Solubility(ies)	<b>Media</b>				<b>Result</b>		
	TE Buffer						
	water				Soluble		
	<b>SSC Buffer</b>						
	water				Soluble		
	<b>BSA Solution</b>						
	water				Soluble		
	<b>DNA Ligase</b>						
	water				Soluble		
	<b>Ligation Solution</b>						
	water				Soluble		
	<b>Wash Solution</b>						
	water				Soluble		
	<b>Capture Solution</b>						
	water				Soluble		
	<b>Primer 1</b>						
	water				Soluble		
	<b>Primer 2</b>						
	water				Soluble		
	<b>HaloPlex Indexing Primer A01 - H12</b>						
	water				Soluble		
	<b>Hybridization Solution</b>						
	water				Soluble		

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

	Enrichment Control DNA		Soluble	
	water			
	Enzyme Strip 1			
	water			
	Enzyme Strip 2		Soluble	
	water			
Partition coefficient: n-octanol/water	RE Buffer	Not applicable.		
	SSC Buffer	Not applicable.		
	BSA Solution	Not applicable.		
	DNA Ligase	Not applicable.		
	Ligation Solution	Not applicable.		
	Wash Solution	Not applicable.		
	Capture Solution	Not applicable.		
	Primer 1	Not applicable.		
	Primer 2	Not applicable.		
	HaloPlex Indexing Primer A01 - H12	Not applicable.		
	Hybridization Solution	Not applicable.		
	Enrichment Control DNA	Not applicable.		
	Enzyme Strip 1	Not applicable.		
	Enzyme Strip 2	Not applicable.		
Auto-ignition temperature	BSA Solution	370°C (698°F)		
	Enzyme Strip 1	370°C (698°F)		
	Enzyme Strip 2	370°C (698°F)		
	Ingredient name	°C	°F	Method
	DNA Ligase			
	Glycerol	370	698	-
	Wash Solution			
	Formamide	>500	>932	ASTM D 2155-66
	Hybridization Solution			
Decomposition temperature	Formamide	>500	>932	ASTM D 2155-66
	RE Buffer	Not available.		
	SSC Buffer	Not available.		
	BSA Solution	Not available.		
	DNA Ligase	Not available.		
	Ligation Solution	Not available.		
	Wash Solution	Not available.		
	Capture Solution	Not available.		
	Primer 1	Not available.		
	Primer 2	Not available.		
	HaloPlex Indexing Primer A01 - H12	Not available.		
	Hybridization Solution	Not available.		
	Enrichment Control DNA	Not available.		
	Enzyme Strip 1	Not available.		
Enzyme Strip 2	Not available.			
Viscosity	RE Buffer	Not available.		
	SSC Buffer	Not available.		
	BSA Solution	Not available.		
	DNA Ligase	Not available.		
	Ligation Solution	Not available.		
	Wash Solution	Not available.		
	Capture Solution	Not available.		



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

Primer 1	Not available.
Primer 2	Not available.
HaloPlex Indexing Primer A01 - H12	Not available.
Hybridization Solution	Not available.
Enrichment Control DNA	Not available.
Enzyme Strip 1	Not available.
Enzyme Strip 2	Not available.

### Particle characteristics

#### Median particle size




: RE Buffer	Not applicable.
SSC Buffer	Not applicable.
BSA Solution	Not applicable.
DNA Ligase	Not applicable.
Ligation Solution	Not applicable.
Wash Solution	Not applicable.
Capture Solution	Not applicable.
Primer 1	Not applicable.
Primer 2	Not applicable.
HaloPlex Indexing Primer A01 - H12	Not applicable.
Hybridization Solution	Not applicable.
Enrichment Control DNA	Not applicable.
Enzyme Strip 1	Not applicable.
Enzyme Strip 2	Not applicable.

## Section 10. Stability and reactivity

### Reactivity

: RE Buffer	No specific test data related to reactivity available for this product or its ingredients.
SSC Buffer	No specific test data related to reactivity available for this product or its ingredients.
BSA Solution	No specific test data related to reactivity available for this product or its ingredients.
DNA Ligase	No specific test data related to reactivity available for this product or its ingredients.
Ligation Solution	No specific test data related to reactivity available for this product or its ingredients.
Wash Solution	No specific test data related to reactivity available for this product or its ingredients.
Capture Solution	No specific test data related to reactivity available for this product or its ingredients.
Primer 1	No specific test data related to reactivity available for this product or its ingredients.
Primer 2	No specific test data related to reactivity available for this product or its ingredients.
HaloPlex Indexing Primer A01 - H12	No specific test data related to reactivity available for this product or its ingredients.
Hybridization Solution	No specific test data related to reactivity available for this product or its ingredients.
Enrichment Control DNA	No specific test data related to reactivity available for this product or its ingredients.
Enzyme Strip 1	No specific test data related to reactivity available for this product or its ingredients.
Enzyme Strip 2	No specific test data related to reactivity available for this product or its ingredients.

## Section 10. Stability and reactivity

<b>Chemical stability</b>	 RE Buffer	The product is stable.
	SSC Buffer	The product is stable.
	BSA Solution	The product is stable.
	DNA Ligase	The product is stable.
	Ligation Solution	The product is stable.
	Wash Solution	The product is stable.
	Capture Solution	The product is stable.
	Primer 1	The product is stable.
	Primer 2	The product is stable.
	HaloPlex Indexing Primer A01 - H12	The product is stable.
	Hybridization Solution	The product is stable.
	Enrichment Control DNA	The product is stable.
	Enzyme Strip 1	The product is stable.
	Enzyme Strip 2	The product is stable.
<b>Possibility of hazardous reactions</b>	 RE Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
	SSC Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
	BSA Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
	DNA Ligase	Under normal conditions of storage and use, hazardous reactions will not occur.
	Ligation Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
	Wash Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
	Capture Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
	Primer 1	Under normal conditions of storage and use, hazardous reactions will not occur.
	Primer 2	Under normal conditions of storage and use, hazardous reactions will not occur.
	HaloPlex Indexing Primer A01 - H12	Under normal conditions of storage and use, hazardous reactions will not occur.
	Hybridization Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
	Enrichment Control DNA	Under normal conditions of storage and use, hazardous reactions will not occur.
	Enzyme Strip 1	Under normal conditions of storage and use, hazardous reactions will not occur.
	Enzyme Strip 2	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	 RE Buffer	No specific data.
	SSC Buffer	No specific data.
	BSA Solution	No specific data.
	DNA Ligase	No specific data.
	Ligation Solution	No specific data.
	Wash Solution	No specific data.
	Capture Solution	No specific data.
	Primer 1	No specific data.
	Primer 2	No specific data.
	HaloPlex Indexing Primer A01 - H12	No specific data.
	Hybridization Solution	No specific data.
	Enrichment Control DNA	No specific data.
	Enzyme Strip 1	No specific data.
	Enzyme Strip 2	No specific data.

## Section 10. Stability and reactivity

<b>Incompatible materials</b>	:	RE Buffer	May react or be incompatible with oxidising materials.
		SSC Buffer	May react or be incompatible with oxidising materials.
		BSA Solution	May react or be incompatible with oxidising materials.
		DNA Ligase	May react or be incompatible with oxidising materials.
		Ligation Solution	May react or be incompatible with oxidising materials.
		Wash Solution	May react or be incompatible with oxidising materials.
		Capture Solution	May react or be incompatible with oxidising materials.
		Primer 1	May react or be incompatible with oxidising materials.
		Primer 2	May react or be incompatible with oxidising materials.
		HaloPlex Indexing Primer A01 - H12	May react or be incompatible with oxidising materials.
		Hybridization Solution	May react or be incompatible with oxidising materials.
		Enrichment Control DNA	May react or be incompatible with oxidising materials.
		Enzyme Strip 1	May react or be incompatible with oxidising materials.
		Enzyme Strip 2	May react or be incompatible with oxidising materials.
<b>Hazardous decomposition products</b>	:	RE Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		SSC Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		BSA Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		DNA Ligase	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Ligation Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Wash Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Capture Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Primer 1	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Primer 2	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		HaloPlex Indexing Primer A01 - H12	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Hybridization Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Enrichment Control DNA	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Enzyme Strip 1	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Enzyme Strip 2	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<b>BSA Solution</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-
<b>DNA Ligase</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-
<b>Wash Solution</b> Formamide	LC50 Inhalation Dusts and mists LD50 Dermal LD50 Oral	Rat - Male Rabbit Rat	>21 mg/l 17 g/kg 5570 mg/kg	4 hours - -
<b>Hybridization Solution</b> Formamide	LC50 Inhalation Dusts and mists LD50 Dermal LD50 Oral	Rat - Male Rabbit Rat	>21 mg/l 17 g/kg 5570 mg/kg	4 hours - -
<b>Enzyme Strip 1</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-
<b>Enzyme Strip 2</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>BSA Solution</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
<b>DNA Ligase</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
<b>Enzyme Strip 1</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
<b>Enzyme Strip 2</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

#### Sensitisation

Not available.

#### Mutagenicity

**Conclusion/Summary** : Not available.

#### Carcinogenicity

**Conclusion/Summary** : Not available.

#### Reproductive toxicity

## Section 11. Toxicological information

**Conclusion/Summary** : Not available.

### Teratogenicity

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
<b>Wash Solution</b> Formamide	Category 2	oral	blood
<b>Hybridization Solution</b> Formamide	Category 2	oral	blood

### Aspiration hazard

Not available.

<b>Information on likely routes of exposure</b>	<b>RE Buffer</b>	Not available.
	SSC Buffer	Not available.
	BSA Solution	Not available.
	DNA Ligase	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
	Ligation Solution	Not available.
	Wash Solution	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
	Capture Solution	Not available.
	Primer 1	Not available.
	Primer 2	Not available.
	HaloPlex Indexing Primer A01 - H12	Not available.
	Hybridization Solution	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
	Enrichment Control DNA	Not available.
	Enzyme Strip 1	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
	Enzyme Strip 2	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

### Potential acute health effects

<b>Eye contact</b>	<b>RE Buffer</b>	No known significant effects or critical hazards.
	SSC Buffer	No known significant effects or critical hazards.
	BSA Solution	No known significant effects or critical hazards.
	DNA Ligase	Causes eye irritation.
	Ligation Solution	No known significant effects or critical hazards.
	Wash Solution	No known significant effects or critical hazards.
	Capture Solution	No known significant effects or critical hazards.
	Primer 1	No known significant effects or critical hazards.
	Primer 2	No known significant effects or critical hazards.
	HaloPlex Indexing Primer A01 - H12	No known significant effects or critical hazards.
	Hybridization Solution	No known significant effects or critical hazards.
	Enrichment Control DNA	No known significant effects or critical hazards.
	Enzyme Strip 1	Causes eye irritation.
	Enzyme Strip 2	Causes eye irritation.

## Section 11. Toxicological information

<b>Inhalation</b>	:	RE Buffer	No known significant effects or critical hazards.
		SSC Buffer	No known significant effects or critical hazards.
		BSA Solution	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		Ligation Solution	No known significant effects or critical hazards.
		Wash Solution	No known significant effects or critical hazards.
		Capture Solution	No known significant effects or critical hazards.
		Primer 1	No known significant effects or critical hazards.
		Primer 2	No known significant effects or critical hazards.
		HaloPlex Indexing Primer A01 - H12	No known significant effects or critical hazards.
		Hybridization Solution	No known significant effects or critical hazards.
		Enrichment Control DNA	No known significant effects or critical hazards.
		Enzyme Strip 1	No known significant effects or critical hazards.
		Enzyme Strip 2	No known significant effects or critical hazards.
<b>Skin contact</b>	:	RE Buffer	No known significant effects or critical hazards.
		SSC Buffer	No known significant effects or critical hazards.
		BSA Solution	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		Ligation Solution	No known significant effects or critical hazards.
		Wash Solution	No known significant effects or critical hazards.
		Capture Solution	No known significant effects or critical hazards.
		Primer 1	No known significant effects or critical hazards.
		Primer 2	No known significant effects or critical hazards.
		HaloPlex Indexing Primer A01 - H12	No known significant effects or critical hazards.
		Hybridization Solution	No known significant effects or critical hazards.
		Enrichment Control DNA	No known significant effects or critical hazards.
		Enzyme Strip 1	No known significant effects or critical hazards.
		Enzyme Strip 2	No known significant effects or critical hazards.
<b>Ingestion</b>	:	RE Buffer	No known significant effects or critical hazards.
		SSC Buffer	No known significant effects or critical hazards.
		BSA Solution	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		Ligation Solution	No known significant effects or critical hazards.
		Wash Solution	No known significant effects or critical hazards.
		Capture Solution	No known significant effects or critical hazards.
		Primer 1	No known significant effects or critical hazards.
		Primer 2	No known significant effects or critical hazards.
		HaloPlex Indexing Primer A01 - H12	No known significant effects or critical hazards.
		Hybridization Solution	No known significant effects or critical hazards.
		Enrichment Control DNA	No known significant effects or critical hazards.
		Enzyme Strip 1	No known significant effects or critical hazards.
		Enzyme Strip 2	No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Eye contact</b>	:	RE Buffer	No specific data.
		SSC Buffer	No specific data.
		BSA Solution	No specific data.
		DNA Ligase	Adverse symptoms may include the following: irritation watering redness
		Ligation Solution	No specific data.
		Wash Solution	No specific data.
		Capture Solution	No specific data.
		Primer 1	No specific data.
		Primer 2	No specific data.
		HaloPlex Indexing Primer A01 - H12	No specific data.
		Hybridization Solution	No specific data.



## Section 11. Toxicological information

	Enrichment Control DNA	No specific data.
	Enzyme Strip 1	Adverse symptoms may include the following: irritation watering redness
	Enzyme Strip 2	Adverse symptoms may include the following: irritation watering redness
Inhalation	: RE Buffer	No specific data.
	SSC Buffer	No specific data.
	BSA Solution	No specific data.
	DNA Ligase	No specific data.
	Ligation Solution	No specific data.
	Wash Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	Capture Solution	No specific data.
	Primer 1	No specific data.
	Primer 2	No specific data.
	HaloPlex Indexing Primer A01 - H12	No specific data.
Skin contact	Hybridization Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	Enrichment Control DNA	No specific data.
	Enzyme Strip 1	No specific data.
	Enzyme Strip 2	No specific data.
	: RE Buffer	No specific data.
	SSC Buffer	No specific data.
	BSA Solution	No specific data.
	DNA Ligase	No specific data.
	Ligation Solution	No specific data.
	Wash Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
Ingestion	Capture Solution	No specific data.
	Primer 1	No specific data.
	Primer 2	No specific data.
	HaloPlex Indexing Primer A01 - H12	No specific data.
	Hybridization Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	Enrichment Control DNA	No specific data.
	Enzyme Strip 1	No specific data.
	Enzyme Strip 2	No specific data.
	: RE Buffer	No specific data.
	SSC Buffer	No specific data.
	BSA Solution	No specific data.
	DNA Ligase	No specific data.
	Ligation Solution	No specific data.
	Wash Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	Capture Solution	No specific data.
	Primer 1	No specific data.

## Section 11. Toxicological information

Primer 2	No specific data.
HaloPlex Indexing Primer	No specific data.
A01 - H12	
Hybridization Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
Enrichment Control DNA	No specific data.
Enzyme Strip 1	No specific data.
Enzyme Strip 2	No specific data.

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

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Potential chronic health effects

<b>General</b>	<b>:</b> RE Buffer	No known significant effects or critical hazards.
	SSC Buffer	No known significant effects or critical hazards.
	BSA Solution	No known significant effects or critical hazards.
	DNA Ligase	No known significant effects or critical hazards.
	Ligation Solution	No known significant effects or critical hazards.
	Wash Solution	May cause damage to organs through prolonged or repeated exposure.
	Capture Solution	No known significant effects or critical hazards.
	Primer 1	No known significant effects or critical hazards.
	Primer 2	No known significant effects or critical hazards.
	HaloPlex Indexing Primer	No known significant effects or critical hazards.
	A01 - H12	
	Hybridization Solution	May cause damage to organs through prolonged or repeated exposure.
	Enrichment Control DNA	No known significant effects or critical hazards.
	Enzyme Strip 1	No known significant effects or critical hazards.
	Enzyme Strip 2	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	<b>:</b> RE Buffer	No known significant effects or critical hazards.
	SSC Buffer	No known significant effects or critical hazards.
	BSA Solution	No known significant effects or critical hazards.
	DNA Ligase	No known significant effects or critical hazards.
	Ligation Solution	No known significant effects or critical hazards.
	Wash Solution	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
	Capture Solution	No known significant effects or critical hazards.
	Primer 1	No known significant effects or critical hazards.
	Primer 2	No known significant effects or critical hazards.
	HaloPlex Indexing Primer	No known significant effects or critical hazards.
	A01 - H12	
	Hybridization Solution	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
	Enrichment Control DNA	No known significant effects or critical hazards.
	Enzyme Strip 1	No known significant effects or critical hazards.
	Enzyme Strip 2	No known significant effects or critical hazards.

## Section 11. Toxicological information

<b>Mutagenicity</b>	<b>:</b>	<b>RE Buffer</b>	No known significant effects or critical hazards.
		SSC Buffer	No known significant effects or critical hazards.
		BSA Solution	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		Ligation Solution	No known significant effects or critical hazards.
		Wash Solution	No known significant effects or critical hazards.
		Capture Solution	No known significant effects or critical hazards.
		Primer 1	No known significant effects or critical hazards.
		Primer 2	No known significant effects or critical hazards.
		HaloPlex Indexing Primer A01 - H12	No known significant effects or critical hazards.
		Hybridization Solution	No known significant effects or critical hazards.
		Enrichment Control DNA	No known significant effects or critical hazards.
		Enzyme Strip 1	No known significant effects or critical hazards.
		Enzyme Strip 2	No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	<b>:</b>	<b>RE Buffer</b>	No known significant effects or critical hazards.
		SSC Buffer	No known significant effects or critical hazards.
		BSA Solution	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		Ligation Solution	No known significant effects or critical hazards.
		Wash Solution	May damage fertility or the unborn child.
		Capture Solution	No known significant effects or critical hazards.
		Primer 1	No known significant effects or critical hazards.
		Primer 2	No known significant effects or critical hazards.
		HaloPlex Indexing Primer A01 - H12	No known significant effects or critical hazards.
		Hybridization Solution	May damage fertility or the unborn child.
		Enrichment Control DNA	No known significant effects or critical hazards.
		Enzyme Strip 1	No known significant effects or critical hazards.
		Enzyme Strip 2	No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
<b>BSA Solution</b> Glycerol	12600	N/A	N/A	N/A	N/A
<b>DNA Ligase</b> Glycerol	12600	N/A	N/A	N/A	N/A
<b>Wash Solution</b> Formamide	5570	17000	N/A	N/A	N/A
<b>Hybridization Solution</b> Formamide	5570	17000	N/A	N/A	N/A
<b>Enzyme Strip 1</b> Glycerol	12600	N/A	N/A	N/A	N/A
<b>Enzyme Strip 2</b> Glycerol	12600	N/A	N/A	N/A	N/A

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
<b>BSA Solution</b> Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
<b>DNA Ligase</b> Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
<b>Wash Solution</b> Formamide	Acute EC50 >500 mg/l Fresh water Acute EC50 >500 mg/l Fresh water Acute LC50 6569 mg/l Fresh water Acute NOEC 4640 mg/l Fresh water Acute NOEC 4640 mg/l Fresh water	Algae Daphnia Fish Algae Fish	72 hours 48 hours 96 hours 72 hours 96 hours
<b>Hybridization Solution</b> Formamide	Acute EC50 >500 mg/l Fresh water Acute EC50 >500 mg/l Fresh water Acute LC50 6569 mg/l Fresh water Acute NOEC 4640 mg/l Fresh water Acute NOEC 4640 mg/l Fresh water	Algae Daphnia Fish Algae Fish	72 hours 48 hours 96 hours 72 hours 96 hours
<b>Enzyme Strip 1</b> Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
<b>Enzyme Strip 2</b> Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours

### Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<b>BSA Solution</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
<b>DNA Ligase</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
<b>Wash Solution</b> Formamide	OECD 301A Ready Biodegradability - DOC Die-Away Test	99 % - Readily - 28 days	-	-
<b>Hybridization Solution</b> Formamide	OECD 301A Ready Biodegradability - DOC Die-Away Test	99 % - Readily - 28 days	-	-
<b>Enzyme Strip 1</b> Glycerol	301D Ready Biodegradability - Closed Bottle	93 % - 30 days	-	-

## Section 12. Ecological information

<b>Enzyme Strip 2</b> Glycerol	Test  301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability	
<b>Wash Solution</b> Formamide	-	-	Readily	
<b>Hybridization Solution</b> Formamide	-	-	Readily	

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>BSA Solution</b> Glycerol	-1.76	-	Low
<b>DNA Ligase</b> Glycerol	-1.76	-	Low
<b>Wash Solution</b> Formamide	-0.82	-	Low
<b>Hybridization Solution</b> Formamide	-0.82	-	Low
<b>Enzyme Strip 1</b> Glycerol	-1.76	-	Low
<b>Enzyme Strip 2</b> Glycerol	-1.76	-	Low

### Mobility in soil

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

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

## Section 13. Disposal considerations

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

## Section 14. Transport information

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

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

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

## Section 15. Regulatory information

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

Not regulated.

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

No listed substance

### International regulations

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

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

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

Not listed.

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

Not listed.

### Inventory list

**Australia** : Not determined.

**New Zealand** : Not determined.

**United States** : All components are active or exempted.

## Section 16. Any other relevant information

### History

**Date of issue/Date of revision** : 01/02/2024

**Date of previous issue** : 17/02/2021

**Version** : 5

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

## Section 16. Any other relevant information

### Procedure used to derive the classification

Classification	Justification
<b>DNA Ligase</b> SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B	Calculation method
<b>Wash Solution</b> CARCINOGENICITY - Category 2 REPRODUCTIVE TOXICITY - Category 1 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2	Calculation method Calculation method Calculation method
<b>Hybridization Solution</b> CARCINOGENICITY - Category 2 REPRODUCTIVE TOXICITY - Category 1 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2	Calculation method Calculation method Calculation method
<b>Enzyme Strip 1</b> SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B	Calculation method
<b>Enzyme Strip 2</b> SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B	Calculation method

Indicates information that has changed from previously issued version.

### Notice to reader

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