

# SAFETY DATA SHEET



Avida DNA Reagent Kit with 1-16 Index Primer Pairs for ILM, 16 Reactions, Part Number G9409A

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name** : Avida DNA Reagent Kit with 1-16 Index Primer Pairs for ILM, 16 Reactions, Part Number G9409A

### UK (GB) REACH Registration number

Registration number	Legal entity
<b>Nuclease-Free Water</b> Exempt from REACH: According to the provisions of Article 2(7)(a) and Annex IV of REACH	-

**CAS number** :

Nuclease-Free Water	7732-18-5
Library Wash Buffer	Not applicable.
Hyb Wash Buffer 1	Not applicable.
Hyb Wash Buffer 2	Not applicable.
Resuspension Buffer	Not applicable.
End Prep Buffer	Not applicable.
End Prep Enzyme	Not applicable.
Ligation Buffer	Not applicable.
Ligation Enzyme	Not applicable.
Adapter for ILM	Not applicable.
Hyb Blocker	Not applicable.
Hyb Buffer	Not applicable.
Hyb Enhancer	Not applicable.
2X Amplification Mastermix	Not applicable.
Library Binding Beads	Not applicable.
Capture Beads	Not applicable.
Index Primer Mix for ILM 1-8	Not applicable.
Index Primer Mix for ILM 9-16	Not applicable.

**Part no. (chemical kit)** : G9409A

<b>Part no.</b>	: <u>Avida DNA and Duo Reagent Box 2, 16 reactions</u>	<u>5282-0141</u>
	Nuclease-Free Water	5271-0107
	Library Wash Buffer	5271-0103
	Hyb Wash Buffer 1	5271-0104
	Hyb Wash Buffer 2	5271-0105
	Resuspension Buffer	5271-0106
	<u>Avida DNA Reagent Box 1, 16 Reactions</u>	<u>5282-0139</u>
	End Prep Buffer	5271-0094
	End Prep Enzyme	5271-0095
	Ligation Buffer	5271-0096
	Ligation Enzyme	5271-0097
	Adapter for ILM	5271-0112
	Hyb Blocker	5271-0099
	Hyb Buffer	5271-0100
	Hyb Enhancer	5271-0101
	2X Amplification Mastermix	5271-0102
	<u>Avida Beads Box, 16 Reactions</u>	<u>5282-0143</u>
	Library Binding Beads	5271-0108
	Capture Beads	5271-0109
	<u>Avida Index Primer Pairs 1-16 for ILM</u>	<u>5280-0052</u>
	Index Primer Mix for ILM 1-8	5274-0075
	Index Primer Mix for ILM 9-16	5274-0076

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

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

<b>Identified uses</b>	: Analytical reagent. For research use only. Nuclease-Free Water 0.88 ml (16 reactions) Library Wash Buffer 6.336 ml (16 reactions) Hyb Wash Buffer 1 2 x 5.280 ml (16 reactions) Hyb Wash Buffer 2 2 x 2.64 ml (16 reactions) Resuspension Buffer 0.352 ml (16 reactions) End Prep Buffer 0.124 ml (16 reactions) End Prep Enzyme 0.053 ml (16 reactions) Ligation Buffer 0.44 ml (16 reactions) Ligation Enzyme 0.106 ml (16 reactions) Adapter for ILM 0.088 ml (16 reactions) Hyb Blocker 0.044 ml (16 reactions) Hyb Buffer 0.81 ml (16 reactions) Hyb Enhancer 0.132 ml (16 reactions) 2X Amplification Mastermix 0.44 ml (16 reactions) Library Binding Beads 1.532 ml (16 reactions) Capture Beads 0.141 ml (16 reactions) Index Primer Mix for ILM 1-8 8 x 0.005 ml Index Primer Mix for ILM 9-16 8 x 0.005 ml
<b>Uses advised against</b>	: Not for use in diagnostic procedures.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies LDA UK Ltd.  
 5500 Lakeside Cheadle Royal Business Park,  
 Cheadle, Cheshire, SK8 3GR  
 United Kingdom  
 Tel: +44 (0) 345 712 5292

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +(44)-870-8200418

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

<b>Product definition</b>	: Nuclease-Free Water Mono-constituent substance Library Wash Buffer Mixture Hyb Wash Buffer 1 Mixture Hyb Wash Buffer 2 Mixture Resuspension Buffer Mixture End Prep Buffer Mixture End Prep Enzyme Mixture Ligation Buffer Mixture Ligation Enzyme Mixture Adapter for ILM Mixture Hyb Blocker Mixture Hyb Buffer Mixture Hyb Enhancer Mixture 2X Amplification Mastermix Mixture Library Binding Beads Mixture Capture Beads Mixture Index Primer Mix for ILM 1-8 Mixture
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## SECTION 2: Hazards identification

Index Primer Mix for ILM Mixture  
9-16

### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

#### End Prep Buffer

H412 LONG-TERM (CHRONIC) AQUATIC HAZARD Category 3

#### Hyb Buffer

H302 ACUTE TOXICITY (oral) Category 4

H315 SKIN CORROSION/IRRITATION Category 2

H370 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE Category 1

H412 LONG-TERM (CHRONIC) AQUATIC HAZARD Category 3

#### Hyb Enhancer

H351 CARCINOGENICITY Category 2

H360 REPRODUCTIVE TOXICITY Category 1B

H373 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE Category 2

Nuclease-Free Water

The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Library Wash Buffer

The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Hyb Wash Buffer 1

The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Hyb Wash Buffer 2

The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Resuspension Buffer

The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

End Prep Buffer

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

End Prep Enzyme

The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Ligation Buffer

The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Ligation Enzyme

The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Adapter for ILM

The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Hyb Blocker

The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Hyb Buffer

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Hyb Enhancer

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

2X Amplification Mastermix

The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Library Binding Beads

The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Capture Beads

The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Index Primer Mix for ILM 1-8

The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Index Primer Mix for ILM 9-16

The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

#### Ingredients of unknown toxicity

: Library Wash Buffer

Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%

Hyb Wash Buffer 1

Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 1 - 10%

End Prep Buffer

Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 1 - 10%

End Prep Enzyme

Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 30 - 60%

## SECTION 2: Hazards identification

Ligation Buffer	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 30 - 60%
Ligation Enzyme	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 30 - 60%
Hyb Buffer	Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30% Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 1 - 10%
Hyb Enhancer	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 1 - 10%
2X Amplification Mastermix	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 1 - 10%
Library Binding Beads	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 30 - 60%
<b>Ingredients of unknown ecotoxicity</b> : Hyb Buffer	Contains 3.4% of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Hazard pictograms** : Hyb Buffer



Hyb Enhancer



**Signal word**

: Nuclease-Free Water	No signal word.
Library Wash Buffer	No signal word.
Hyb Wash Buffer 1	No signal word.
Hyb Wash Buffer 2	No signal word.
Resuspension Buffer	No signal word.
End Prep Buffer	No signal word.
End Prep Enzyme	No signal word.
Ligation Buffer	No signal word.
Ligation Enzyme	No signal word.
Adapter for ILM	No signal word.
Hyb Blocker	No signal word.
Hyb Buffer	Danger
Hyb Enhancer	Danger
2X Amplification Mastermix	No signal word.
Library Binding Beads	No signal word.
Capture Beads	No signal word.
Index Primer Mix for ILM 1-8	No signal word.
Index Primer Mix for ILM 9-16	No signal word.

**Hazard statements**

: Nuclease-Free Water	No known significant effects or critical hazards.
Library Wash Buffer	No known significant effects or critical hazards.
Hyb Wash Buffer 1	No known significant effects or critical hazards.
Hyb Wash Buffer 2	No known significant effects or critical hazards.
Resuspension Buffer	No known significant effects or critical hazards.
End Prep Buffer	H412 - Harmful to aquatic life with long lasting effects.
End Prep Enzyme	No known significant effects or critical hazards.
Ligation Buffer	No known significant effects or critical hazards.

## SECTION 2: Hazards identification

Ligation Enzyme	No known significant effects or critical hazards.
Adapter for ILM	No known significant effects or critical hazards.
Hyb Blocker	No known significant effects or critical hazards.
Hyb Buffer	H302 - Harmful if swallowed. H315 - Causes skin irritation. H370 - Causes damage to organs. H412 - Harmful to aquatic life with long lasting effects.
Hyb Enhancer	H351 - Suspected of causing cancer. H360 - May damage fertility or the unborn child. H373 - May cause damage to organs through prolonged or repeated exposure.
2X Amplification Mastermix	No known significant effects or critical hazards.
Library Binding Beads	No known significant effects or critical hazards.
Capture Beads	No known significant effects or critical hazards.
Index Primer Mix for ILM 1-8	No known significant effects or critical hazards.
Index Primer Mix for ILM 9-16	No known significant effects or critical hazards.

### Precautionary statements

#### Prevention

Nuclease-Free Water	Not applicable.
Library Wash Buffer	Not applicable.
Hyb Wash Buffer 1	Not applicable.
Hyb Wash Buffer 2	Not applicable.
Resuspension Buffer	Not applicable.
End Prep Buffer	P273 - Avoid release to the environment.
End Prep Enzyme	Not applicable.
Ligation Buffer	Not applicable.
Ligation Enzyme	Not applicable.
Adapter for ILM	Not applicable.
Hyb Blocker	Not applicable.
Hyb Buffer	P280 - Wear protective gloves. P273 - Avoid release to the environment. P260 - Do not breathe vapour. P270 - Do not eat, drink or smoke when using this product.
Hyb Enhancer	P201 - Obtain special instructions before use. P280 - Wear protective gloves, protective clothing and eye or face protection. P260 - Do not breathe vapour.
2X Amplification Mastermix	Not applicable.
Library Binding Beads	Not applicable.
Capture Beads	Not applicable.
Index Primer Mix for ILM 1-8	Not applicable.
Index Primer Mix for ILM 9-16	Not applicable.

#### Response

Nuclease-Free Water	Not applicable.
Library Wash Buffer	Not applicable.
Hyb Wash Buffer 1	Not applicable.
Hyb Wash Buffer 2	Not applicable.
Resuspension Buffer	Not applicable.
End Prep Buffer	Not applicable.
End Prep Enzyme	Not applicable.
Ligation Buffer	Not applicable.
Ligation Enzyme	Not applicable.
Adapter for ILM	Not applicable.
Hyb Blocker	Not applicable.
Hyb Buffer	P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor.
Hyb Enhancer	P308 + P313 - IF exposed or concerned: Get medical advice or attention.

## SECTION 2: Hazards identification

	2X Amplification	Not applicable.
	Mastermix	
	Library Binding Beads	Not applicable.
	Capture Beads	Not applicable.
	Index Primer Mix for ILM 1-8	Not applicable.
	Index Primer Mix for ILM 9-16	Not applicable.
<b>Storage</b>	: Nuclease-Free Water	Not applicable.
	Library Wash Buffer	Not applicable.
	Hyb Wash Buffer 1	Not applicable.
	Hyb Wash Buffer 2	Not applicable.
	Resuspension Buffer	Not applicable.
	End Prep Buffer	Not applicable.
	End Prep Enzyme	Not applicable.
	Ligation Buffer	Not applicable.
	Ligation Enzyme	Not applicable.
	Adapter for ILM	Not applicable.
	Hyb Blocker	Not applicable.
	Hyb Buffer	Not applicable.
	Hyb Enhancer	Not applicable.
	2X Amplification	Not applicable.
	Mastermix	
	Library Binding Beads	Not applicable.
	Capture Beads	Not applicable.
	Index Primer Mix for ILM 1-8	Not applicable.
	Index Primer Mix for ILM 9-16	Not applicable.
<b>Disposal</b>	: Nuclease-Free Water	Not applicable.
	Library Wash Buffer	Not applicable.
	Hyb Wash Buffer 1	Not applicable.
	Hyb Wash Buffer 2	Not applicable.
	Resuspension Buffer	Not applicable.
	End Prep Buffer	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	End Prep Enzyme	Not applicable.
	Ligation Buffer	Not applicable.
	Ligation Enzyme	Not applicable.
	Adapter for ILM	Not applicable.
	Hyb Blocker	Not applicable.
	Hyb Buffer	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	Hyb Enhancer	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	2X Amplification	Not applicable.
	Mastermix	
	Library Binding Beads	Not applicable.
	Capture Beads	Not applicable.
	Index Primer Mix for ILM 1-8	Not applicable.
	Index Primer Mix for ILM 9-16	Not applicable.
<b>Hazardous ingredients</b>	: Hyb Buffer	tetramethylammonium chloride
	Hyb Enhancer	formamide
<b>Supplemental label elements</b>	: Nuclease-Free Water	Not applicable.
	Library Wash Buffer	Not applicable.
	Hyb Wash Buffer 1	Not applicable.
	Hyb Wash Buffer 2	Not applicable.
	Resuspension Buffer	Not applicable.
	End Prep Buffer	Not applicable.
	End Prep Enzyme	Safety data sheet available on request.

## SECTION 2: Hazards identification

Ligation Buffer	Not applicable.
Ligation Enzyme	Safety data sheet available on request.
Adapter for ILM	Not applicable.
Hyb Blocker	Not applicable.
Hyb Buffer	Not applicable.
Hyb Enhancer	Not applicable.
2X Amplification	Safety data sheet available on request.
Mastermix	
Library Binding Beads	Not applicable.
Capture Beads	Not applicable.
Index Primer Mix for ILM 1-8	Not applicable.
Index Primer Mix for ILM 9-16	Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

Nuclease-Free Water	Not applicable.
Library Wash Buffer	Not applicable.
Hyb Wash Buffer 1	Not applicable.
Hyb Wash Buffer 2	Not applicable.
Resuspension Buffer	Not applicable.
End Prep Buffer	Not applicable.
End Prep Enzyme	Not applicable.
Ligation Buffer	Not applicable.
Ligation Enzyme	Not applicable.
Adapter for ILM	Not applicable.
Hyb Blocker	Not applicable.
Hyb Buffer	Not applicable.
Hyb Enhancer	Restricted to professional users.
2X Amplification	Not applicable.
Mastermix	
Library Binding Beads	Not applicable.
Capture Beads	Not applicable.
Index Primer Mix for ILM 1-8	Not applicable.
Index Primer Mix for ILM 9-16	Not applicable.

**Special packaging requirements**

**Containers to be fitted with child-resistant fastenings**

Nuclease-Free Water	Not applicable.
Library Wash Buffer	Not applicable.
Hyb Wash Buffer 1	Not applicable.
Hyb Wash Buffer 2	Not applicable.
Resuspension Buffer	Not applicable.
End Prep Buffer	Not applicable.
End Prep Enzyme	Not applicable.
Ligation Buffer	Not applicable.
Ligation Enzyme	Not applicable.
Adapter for ILM	Not applicable.
Hyb Blocker	Not applicable.
Hyb Buffer	Not applicable.
Hyb Enhancer	Not applicable.
2X Amplification	Not applicable.
Mastermix	
Library Binding Beads	Not applicable.
Capture Beads	Not applicable.
Index Primer Mix for ILM 1-8	Not applicable.
Index Primer Mix for ILM 9-16	Not applicable.

**SECTION 2: Hazards identification**

<b>Tactile warning of danger</b>	:	Nuclease-Free Water	Not applicable.
		Library Wash Buffer	Not applicable.
		Hyb Wash Buffer 1	Not applicable.
		Hyb Wash Buffer 2	Not applicable.
		Resuspension Buffer	Not applicable.
		End Prep Buffer	Not applicable.
		End Prep Enzyme	Not applicable.
		Ligation Buffer	Not applicable.
		Ligation Enzyme	Not applicable.
		Adapter for ILM	Not applicable.
		Hyb Blocker	Not applicable.
		Hyb Buffer	Not applicable.
		Hyb Enhancer	Not applicable.
		2X Amplification Mastermix	Not applicable.
		Library Binding Beads	Not applicable.
		Capture Beads	Not applicable.
		Index Primer Mix for ILM 1-8	Not applicable.
		Index Primer Mix for ILM 9-16	Not applicable.

**2.3 Other hazards**

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII**

:	PBT	P	B	T	vPvB	vP	vB
	<b>Nuclease-Free Water</b>						
	Not applicable (Inorganic)	N/A	N/A	N/A	Not applicable (Inorganic)	N/A	N/A

Library Wash Buffer	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Hyb Wash Buffer 1	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Hyb Wash Buffer 2	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Resuspension Buffer	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
End Prep Buffer	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
End Prep Enzyme	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Ligation Buffer	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Ligation Enzyme	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Adapter for ILM	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Hyb Blocker	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Hyb Buffer	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Hyb Enhancer	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
2X Amplification Mastermix	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Library Binding Beads	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Capture Beads	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Index Primer Mix for ILM 1-8	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Index Primer Mix for ILM 9-16	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.



**SECTION 2: Hazards identification**

<b>Other hazards which do not result in classification</b>	9-16 assessed to be a PBT or a vPvB. : Nuclease-Free Water None known. Library Wash Buffer None known. Hyb Wash Buffer 1 None known. Hyb Wash Buffer 2 None known. Resuspension Buffer None known. End Prep Buffer None known. End Prep Enzyme None known. Ligation Buffer None known. Ligation Enzyme None known. Adapter for ILM None known. Hyb Blocker None known. Hyb Buffer None known. Hyb Enhancer None known. 2X Amplification None known. Mastermix Library Binding Beads None known. Capture Beads None known. Index Primer Mix for ILM 1-8 None known. 9-16 Index Primer Mix for ILM None known.
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**SECTION 3: Composition/information on ingredients**

<b>3.1 Substances</b>	: Nuclease-Free Water Mono-constituent substance Library Wash Buffer Mixture Hyb Wash Buffer 1 Mixture Hyb Wash Buffer 2 Mixture Resuspension Buffer Mixture End Prep Buffer Mixture End Prep Enzyme Mixture Ligation Buffer Mixture Ligation Enzyme Mixture Adapter for ILM Mixture Hyb Blocker Mixture Hyb Buffer Mixture Hyb Enhancer Mixture 2X Amplification Mastermix Mixture Library Binding Beads Mixture Capture Beads Mixture Index Primer Mix for ILM 1-8 Mixture Index Primer Mix for ILM 9-16 Mixture
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Product/ingredient name	Identifiers	%	Classification	Type
<b>Nuclease-Free Water</b> water	UK (GB) REACH #: Annex IV REACH #: Annex IV EC: 231-791-2 CAS: 7732-18-5	100	Not classified.	[1]
<b>End Prep Buffer</b> Magnesium chloride	EC: 232-094-6 CAS: 7786-30-3	<2.5	Aquatic Chronic 1, H410 (M=1)	[1]
<b>End Prep Enzyme</b> Glycerol	UK (GB) REACH #: Annex V REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥50 - ≤75	Not classified.	[1]
<b>Ligation Enzyme</b> Glycerol	UK (GB) REACH #: Annex V	≥50 - ≤75	Not classified.	[1]

**SECTION 3: Composition/information on ingredients**

	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5			
<b>Hyb Buffer</b> tetramethylammonium chloride	EC: 200-880-8 CAS: 75-57-0	≥10 - <15	Acute Tox. 2, H300 Acute Tox. 3, H311 Skin Irrit. 2, H315 STOT SE 1, H370 (central nervous system (CNS)) (oral) Aquatic Chronic 2, H411	[1]
Dextran sulfate sodium	CAS: 9011-18-1	≤3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	[1]
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	CAS: 9036-19-5	<0.1	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=1)	[1] [2]
<b>Hyb Enhancer</b> Formamide	EC: 200-842-0 CAS: 75-12-7	≥90	Carc. 2, H351 Repr. 1B, H360 STOT RE 2, H373 (blood) (oral)	[1] [2]
<b>2X Amplification Mastermix</b> Glycerol	UK (GB) REACH #: Annex V REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≤10	Not classified.	[1]
			<b>See Section 16 for the full text of the H statements declared above.</b>	

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type

- Nuclease-Free Water [1] Constituent
- End Prep Buffer [1] Substance classified with a health or environmental hazard
- End Prep Enzyme [1] Substance with a workplace exposure limit
- Ligation Enzyme [1] Substance with a workplace exposure limit
- Hyb Buffer [1] Substance classified with a health or environmental hazard  
[2] Substance of equivalent concern
- Hyb Enhancer [1] Substance classified with a health or environmental hazard  
[2] Substance with a workplace exposure limit
- 2X Amplification Mastermix [1] Substance with a workplace exposure limit

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

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

## SECTION 4: First aid measures

<b>Eye contact</b>	: Nuclease-Free Water	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.
	Library Wash 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.
	Hyb Wash Buffer 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.
	Hyb Wash Buffer 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.
	Resuspension 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.
	End Prep 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.
	End Prep Enzyme	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.
	Ligation 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.
	Ligation Enzyme	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.
	Adapter for ILM	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.
	Hyb Blocker	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.
	Hyb Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.
	Hyb Enhancer	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.
	2X Amplification Mastermix	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.
	Library Binding Beads	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.
	Capture Beads	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.
	Index Primer Mix for ILM 1-8	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.
	Index Primer Mix for ILM 9-16	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

## SECTION 4: First aid measures

<b>Inhalation</b>	: Nuclease-Free Water	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Library Wash Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Hyb Wash Buffer 1	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Hyb Wash Buffer 2	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Resuspension Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	End Prep Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.
	End Prep Enzyme	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Ligation Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Ligation Enzyme	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Adapter for ILM	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Hyb Blocker	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Hyb Buffer	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 necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Hyb Enhancer	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.
	2X Amplification Mastermix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

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**Skin contact**

		occur.
	Library Binding Beads	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Capture Beads	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Index Primer Mix for ILM 1-8	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Index Primer Mix for ILM 9-16	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	: Nuclease-Free Water	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Library Wash Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Hyb Wash Buffer 1	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Hyb Wash Buffer 2	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Resuspension Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	End Prep Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	End Prep Enzyme	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Ligation Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Ligation Enzyme	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Adapter for ILM	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Hyb Blocker	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Hyb Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Hyb Enhancer	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.
	2X Amplification Mastermix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Library Binding Beads	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Capture Beads	Flush contaminated skin with plenty of water. Remove

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**Ingestion**

		contaminated clothing and shoes. Get medical attention if symptoms occur.
	Index Primer Mix for ILM 1-8	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Index Primer Mix for ILM 9-16	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	: Nuclease-Free Water	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.
	Library Wash 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.
	Hyb Wash Buffer 1	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.
	Hyb Wash Buffer 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.
	Resuspension 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.
	End Prep 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.
	End Prep Enzyme	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.
	Ligation 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.
	Ligation Enzyme	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.
	Adapter for ILM	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.
	Hyb Blocker	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.
	Hyb Buffer	Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is

**SECTION 4: First aid measures**

	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 necessary, call a poison center or physician. 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.
Hyb Enhancer	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.
2X Amplification Mastermix	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.
Library Binding Beads	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.
Capture Beads	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.
Index Primer Mix for ILM 1-8	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.
Index Primer Mix for ILM 9-16	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.

<b>Protection of first-aiders</b>	:	Nuclease-Free Water	No action shall be taken involving any personal risk or without suitable training.
		Library Wash Buffer	No action shall be taken involving any personal risk or without suitable training.
		Hyb Wash Buffer 1	No action shall be taken involving any personal risk or without suitable training.
		Hyb Wash Buffer 2	No action shall be taken involving any personal risk or without suitable training.
		Resuspension Buffer	No action shall be taken involving any personal risk or without suitable training.
		End Prep Buffer	No action shall be taken involving any personal risk or without suitable training.
		End Prep Enzyme	No action shall be taken involving any personal risk or without suitable training.
		Ligation Buffer	No action shall be taken involving any personal risk or without suitable training.
		Ligation Enzyme	No action shall be taken involving any personal risk or without suitable training.

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Adapter for ILM	No action shall be taken involving any personal risk or without suitable training.
Hyb Blocker	No action shall be taken involving any personal risk or without suitable training.
Hyb Buffer	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.
Hyb Enhancer	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.
2X Amplification Mastermix	No action shall be taken involving any personal risk or without suitable training.
Library Binding Beads	No action shall be taken involving any personal risk or without suitable training.
Capture Beads	No action shall be taken involving any personal risk or without suitable training.
Index Primer Mix for ILM 1-8	No action shall be taken involving any personal risk or without suitable training.
Index Primer Mix for ILM 9-16	No action shall be taken involving any personal risk or without suitable training.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Over-exposure signs/symptoms

##### Eye contact

: Nuclease-Free Water	No specific data.
Library Wash Buffer	No specific data.
Hyb Wash Buffer 1	No specific data.
Hyb Wash Buffer 2	No specific data.
Resuspension Buffer	No specific data.
End Prep Buffer	No specific data.
End Prep Enzyme	No specific data.
Ligation Buffer	No specific data.
Ligation Enzyme	No specific data.
Adapter for ILM	No specific data.
Hyb Blocker	No specific data.
Hyb Buffer	Adverse symptoms may include the following: pain or irritation watering redness
Hyb Enhancer	No specific data.
2X Amplification Mastermix	No specific data.
Library Binding Beads	No specific data.
Capture Beads	No specific data.
Index Primer Mix for ILM 1-8	No specific data.
Index Primer Mix for ILM 9-16	No specific data.

##### Inhalation

: Nuclease-Free Water	No specific data.
Library Wash Buffer	No specific data.
Hyb Wash Buffer 1	No specific data.
Hyb Wash Buffer 2	No specific data.
Resuspension Buffer	No specific data.
End Prep Buffer	No specific data.
End Prep Enzyme	No specific data.
Ligation Buffer	No specific data.
Ligation Enzyme	No specific data.
Adapter for ILM	No specific data.
Hyb Blocker	No specific data.



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Hyb Buffer No specific data.  
 Hyb Enhancer Adverse symptoms may include the following:  
 reduced foetal weight  
 increase in foetal deaths  
 skeletal malformations

2X Amplification No specific data.  
 Mastermix  
 Library Binding Beads No specific data.  
 Capture Beads No specific data.  
 Index Primer Mix for ILM 1-8 No specific data.  
 Index Primer Mix for ILM 9-16 No specific data.

**Skin contact**

: Nuclease-Free Water No specific data.  
 Library Wash Buffer No specific data.  
 Hyb Wash Buffer 1 No specific data.  
 Hyb Wash Buffer 2 No specific data.  
 Resuspension Buffer No specific data.  
 End Prep Buffer No specific data.  
 End Prep Enzyme No specific data.  
 Ligation Buffer No specific data.  
 Ligation Enzyme No specific data.  
 Adapter for ILM No specific data.  
 Hyb Blocker No specific data.  
 Hyb Buffer Adverse symptoms may include the following:  
 irritation  
 redness

Hyb Enhancer Adverse symptoms may include the following:  
 reduced foetal weight  
 increase in foetal deaths  
 skeletal malformations

2X Amplification No specific data.  
 Mastermix  
 Library Binding Beads No specific data.  
 Capture Beads No specific data.  
 Index Primer Mix for ILM 1-8 No specific data.  
 Index Primer Mix for ILM 9-16 No specific data.

**Ingestion**

: Nuclease-Free Water No specific data.  
 Library Wash Buffer No specific data.  
 Hyb Wash Buffer 1 No specific data.  
 Hyb Wash Buffer 2 No specific data.  
 Resuspension Buffer No specific data.  
 End Prep Buffer No specific data.  
 End Prep Enzyme No specific data.  
 Ligation Buffer No specific data.  
 Ligation Enzyme No specific data.  
 Adapter for ILM No specific data.  
 Hyb Blocker No specific data.  
 Hyb Buffer No specific data.  
 Hyb Enhancer Adverse symptoms may include the following:  
 reduced foetal weight  
 increase in foetal deaths  
 skeletal malformations

2X Amplification No specific data.  
 Mastermix  
 Library Binding Beads No specific data.  
 Capture Beads No specific data.  
 Index Primer Mix for ILM 1-8 No specific data.  
 Index Primer Mix for ILM 9-16 No specific data.

## SECTION 4: First aid measures

### 4.3 Indication of any immediate medical attention and special treatment needed

<b>Notes to physician</b>	:	Nuclease-Free Water	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Library Wash Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Hyb Wash Buffer 1	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Hyb Wash Buffer 2	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Resuspension Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		End Prep Buffer	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
		End Prep Enzyme	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Ligation Buffer	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
		Ligation Enzyme	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Adapter for ILM	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Hyb Blocker	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Hyb Buffer	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
		Hyb Enhancer	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.
		2X Amplification Mastermix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Library Binding Beads	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Capture Beads	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Index Primer Mix for ILM 1-8	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Index Primer Mix for ILM 9-16	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	:	Nuclease-Free Water	No specific treatment.
		Library Wash Buffer	No specific treatment.
		Hyb Wash Buffer 1	No specific treatment.
		Hyb Wash Buffer 2	No specific treatment.
		Resuspension Buffer	No specific treatment.
		End Prep Buffer	No specific treatment.
		End Prep Enzyme	No specific treatment.
		Ligation Buffer	No specific treatment.
		Ligation Enzyme	No specific treatment.
		Adapter for ILM	No specific treatment.
		Hyb Blocker	No specific treatment.
		Hyb Buffer	No specific treatment.
		Hyb Enhancer	No specific treatment.
		2X Amplification Mastermix	No specific treatment.
		Library Binding Beads	No specific treatment.
		Capture Beads	No specific treatment.
		Index Primer Mix for ILM 1-8	No specific treatment.
		Index Primer Mix for ILM 9-16	No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	: Nuclease-Free Water	Use an extinguishing agent suitable for the surrounding fire.
	Library Wash Buffer	Use an extinguishing agent suitable for the surrounding fire.
	Hyb Wash Buffer 1	Use an extinguishing agent suitable for the surrounding fire.
	Hyb Wash Buffer 2	Use an extinguishing agent suitable for the surrounding fire.
	Resuspension Buffer	Use an extinguishing agent suitable for the surrounding fire.
	End Prep Buffer	Use an extinguishing agent suitable for the surrounding fire.
	End Prep Enzyme	Use an extinguishing agent suitable for the surrounding fire.
	Ligation Buffer	Use an extinguishing agent suitable for the surrounding fire.
	Ligation Enzyme	Use an extinguishing agent suitable for the surrounding fire.
	Adapter for ILM	Use an extinguishing agent suitable for the surrounding fire.
	Hyb Blocker	Use an extinguishing agent suitable for the surrounding fire.
	Hyb Buffer	Use an extinguishing agent suitable for the surrounding fire.
	Hyb Enhancer	Use an extinguishing agent suitable for the surrounding fire.
	2X Amplification	Use an extinguishing agent suitable for the surrounding fire.
	Mastermix	
	Library Binding Beads	Use an extinguishing agent suitable for the surrounding fire.
Capture Beads	Use an extinguishing agent suitable for the surrounding fire.	
Index Primer Mix for ILM 1-8	Use an extinguishing agent suitable for the surrounding fire.	
Index Primer Mix for ILM 9-16	Use an extinguishing agent suitable for the surrounding fire.	

<b>Unsuitable extinguishing media</b>	: Nuclease-Free Water	None known.
	Library Wash Buffer	None known.
	Hyb Wash Buffer 1	None known.
	Hyb Wash Buffer 2	None known.
	Resuspension Buffer	None known.
	End Prep Buffer	None known.
	End Prep Enzyme	None known.
	Ligation Buffer	None known.
	Ligation Enzyme	None known.
	Adapter for ILM	None known.
	Hyb Blocker	None known.
	Hyb Buffer	None known.
	Hyb Enhancer	None known.
	2X Amplification	None known.
	Mastermix	
	Library Binding Beads	None known.
Capture Beads	None known.	
Index Primer Mix for ILM 1-8	None known.	
Index Primer Mix for ILM 9-16	None known.	

### 5.2 Special hazards arising from the substance or mixture

<b>Hazards from the substance or mixture</b>	: Nuclease-Free Water	In a fire or if heated, a pressure increase will occur and the container may burst.
	Library Wash Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	Hyb Wash Buffer 1	In a fire or if heated, a pressure increase will occur and the container may burst.
	Hyb Wash Buffer 2	In a fire or if heated, a pressure increase will occur and the container may burst.
	Resuspension Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	End Prep Buffer	In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
	End Prep Enzyme	In a fire or if heated, a pressure increase will occur and the container may burst.

**SECTION 5: Firefighting measures**

**Hazardous combustion products**

Ligation Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
Ligation Enzyme	In a fire or if heated, a pressure increase will occur and the container may burst.
Adapter for ILM	In a fire or if heated, a pressure increase will occur and the container may burst.
Hyb Blocker	In a fire or if heated, a pressure increase will occur and the container may burst.
Hyb Buffer	In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hyb Enhancer	In a fire or if heated, a pressure increase will occur and the container may burst.
2X Amplification Mastermix	In a fire or if heated, a pressure increase will occur and the container may burst.
Library Binding Beads	In a fire or if heated, a pressure increase will occur and the container may burst.
Capture Beads	In a fire or if heated, a pressure increase will occur and the container may burst.
Index Primer Mix for ILM 1-8	In a fire or if heated, a pressure increase will occur and the container may burst.
Index Primer Mix for ILM 9-16	In a fire or if heated, a pressure increase will occur and the container may burst.
Nuclease-Free Water	No specific data.
Library Wash Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
Hyb Wash Buffer 1	Decomposition products may include the following materials: halogenated compounds metal oxide/oxides
Hyb Wash Buffer 2	No specific data.
Resuspension Buffer	No specific data.
End Prep Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
End Prep Enzyme	Decomposition products may include the following materials: carbon dioxide carbon monoxide
Ligation Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds
Ligation Enzyme	Decomposition products may include the following materials: carbon dioxide carbon monoxide
Adapter for ILM	No specific data.
Hyb Blocker	No specific data.
Hyb Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides phosphorus oxides halogenated compounds metal oxide/oxides

**SECTION 5: Firefighting measures**

Hyb Enhancer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
2X Amplification Mastermix	Decomposition products may include the following materials:  carbon dioxide carbon monoxide
Library Binding Beads	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
Capture Beads	No specific data.
Index Primer Mix for ILM 1-8	No specific data.
Index Primer Mix for ILM 9-16	No specific data.

**5.3 Advice for firefighters**

**Special protective actions for fire-fighters**

: Nuclease-Free Water	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.
Library Wash 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.
Hyb Wash Buffer 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.
Hyb Wash Buffer 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.
Resuspension 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.
End Prep 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.
End Prep Enzyme	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 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.
Ligation Enzyme	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.
Adapter for ILM	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.
Hyb Blocker	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.
Hyb 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.
Hyb Enhancer	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.
2X Amplification Mastermix	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.
Library Binding Beads	Promptly isolate the scene by removing all persons from the

**SECTION 5: Firefighting measures**

**Special protective equipment for fire-fighters**

Capture Beads	vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. 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.
Index Primer Mix for ILM 1-8	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.
Index Primer Mix for ILM 9-16	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.
: Nuclease-Free Water	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Library Wash Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Hyb Wash Buffer 1	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Hyb Wash Buffer 2	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Resuspension Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
End Prep Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
End Prep Enzyme	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Ligation Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Ligation Enzyme	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Adapter for ILM	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Hyb Blocker	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Hyb Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Hyb Enhancer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
2X Amplification Mastermix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Library Binding Beads	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Capture Beads	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Index Primer Mix for ILM 1-8	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Index Primer Mix for ILM 9-16	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full

## SECTION 5: Firefighting measures

face-piece operated in positive pressure mode.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	: Nuclease-Free Water	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.
	Library Wash 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.
	Hyb Wash Buffer 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. Put on appropriate personal protective equipment.
	Hyb Wash Buffer 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.
	Resuspension 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.
	End Prep 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.
	End Prep Enzyme	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.
	Ligation 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.
	Ligation Enzyme	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.
	Adapter for ILM	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.
	Hyb Blocker	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.
	Hyb 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. Avoid breathing

**SECTION 6: Accidental release measures**

	vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Hyb Enhancer	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.
2X Amplification Mastermix	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.
Library Binding Beads	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.
Capture Beads	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.
Index Primer Mix for ILM 1-8	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.
Index Primer Mix for ILM 9-16	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.
<b>For emergency responders</b> : Nuclease-Free Water	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".
Library Wash 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".
Hyb Wash Buffer 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".
Hyb Wash Buffer 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".
Resuspension 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".
End Prep 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".
End Prep Enzyme	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".
Ligation Buffer	If specialised clothing is required to deal with the spillage,



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	take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Ligation Enzyme	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".
Adapter for ILM	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".
Hyb Blocker	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".
Hyb 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".
Hyb Enhancer	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".
2X Amplification Mastermix	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".
Library Binding Beads	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 Beads	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".
Index Primer Mix for ILM 1-8	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".
Index Primer Mix for ILM 9-16	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".

### 6.2 Environmental precautions

: Nuclease-Free Water	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).
Library Wash 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).
Hyb Wash Buffer 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).
Hyb Wash Buffer 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).
Resuspension 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).

## SECTION 6: Accidental release measures

End Prep 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). Water polluting material. May be harmful to the environment if released in large quantities.
End Prep Enzyme	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).
Ligation 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).
Ligation Enzyme	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).
Adapter for ILM	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).
Hyb Blocker	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).
Hyb 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). Water polluting material. May be harmful to the environment if released in large quantities.
Hyb Enhancer	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).
2X Amplification Mastermix	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).
Library Binding Beads	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 Beads	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).
Index Primer Mix for ILM 1-8	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).
Index Primer Mix for ILM 9-16	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).

### 6.3 Methods and material for containment and cleaning up

## SECTION 6: Accidental release measures

<b>Methods for cleaning up</b>	: Nuclease-Free Water	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.
	Library Wash 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.
	Hyb Wash Buffer 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.
	Hyb Wash Buffer 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.
	Resuspension 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.
	End Prep 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.
	End Prep Enzyme	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 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.
	Ligation Enzyme	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.
	Adapter for ILM	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.
	Hyb Blocker	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.
	Hyb 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.
	Hyb Enhancer	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

## SECTION 6: Accidental release measures

2X Amplification Mastermix	of via a licensed waste disposal contractor. Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Library Binding Beads	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 Beads	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.
Index Primer Mix for ILM 1-8	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.
Index Primer Mix for ILM 9-16	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.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

<b>Protective measures</b>	: Nuclease-Free Water	Put on appropriate personal protective equipment (see Section 8).
	Library Wash Buffer	Put on appropriate personal protective equipment (see Section 8).
	Hyb Wash Buffer 1	Put on appropriate personal protective equipment (see Section 8).
	Hyb Wash Buffer 2	Put on appropriate personal protective equipment (see Section 8).
	Resuspension Buffer	Put on appropriate personal protective equipment (see Section 8).
	End Prep Buffer	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
	End Prep Enzyme	Put on appropriate personal protective equipment (see Section 8).
	Ligation Buffer	Put on appropriate personal protective equipment (see Section 8).
	Ligation Enzyme	Put on appropriate personal protective equipment (see Section 8).
	Adapter for ILM	Put on appropriate personal protective equipment (see Section 8).
	Hyb Blocker	Put on appropriate personal protective equipment (see Section 8).
	Hyb Buffer	Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not

## SECTION 7: Handling and storage

### Advice on general occupational hygiene

		<p>breathe vapour or mist. Do not ingest. Avoid release to the environment. 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.</p>
	Hyb Enhancer	<p>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.</p>
	2X Amplification Mastermix	<p>Put on appropriate personal protective equipment (see Section 8).</p>
	Library Binding Beads	<p>Put on appropriate personal protective equipment (see Section 8).</p>
	Capture Beads	<p>Put on appropriate personal protective equipment (see Section 8).</p>
	Index Primer Mix for ILM 1-8	<p>Put on appropriate personal protective equipment (see Section 8).</p>
	Index Primer Mix for ILM 9-16	<p>Put on appropriate personal protective equipment (see Section 8).</p>
	: Nuclease-Free Water	<p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p>
	Library Wash Buffer	<p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p>
	Hyb Wash Buffer 1	<p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p>
	Hyb Wash Buffer 2	<p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p>
	Resuspension Buffer	<p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p>
	End Prep Buffer	<p>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</p>

## SECTION 7: Handling and storage

End Prep Enzyme	<p>equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p> <p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.</p> <p>Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p>
Ligation Buffer	<p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.</p> <p>Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p>
Ligation Enzyme	<p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.</p> <p>Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p>
Adapter for ILM	<p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.</p> <p>Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p>
Hyb Blocker	<p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.</p> <p>Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p>
Hyb Buffer	<p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.</p> <p>Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p>
Hyb Enhancer	<p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.</p> <p>Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p>
2X Amplification Mastermix	<p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.</p> <p>Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p>
Library Binding Beads	<p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.</p> <p>Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p>
Capture Beads	<p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.</p> <p>Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p>
Index Primer Mix for ILM 1-8	<p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.</p>

**SECTION 7: Handling and storage**

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.

Index Primer Mix for ILM 9-16

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

**7.2 Conditions for safe storage, including any incompatibilities**

**Storage**

: Nuclease-Free Water

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.

Library Wash 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.

Hyb Wash Buffer 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.

Hyb Wash Buffer 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.

Resuspension 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.

End Prep Buffer

Store in accordance with local regulations. Store in original

## SECTION 7: Handling and storage

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



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Hyb Enhancer	<p>Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p> <p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use.</p> <p>Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
2X Amplification Mastermix	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
Library Binding Beads	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
Capture Beads	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
Index Primer Mix for ILM 1-8	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
Index Primer Mix for ILM 9-16	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>

## SECTION 7: Handling and storage

before handling or use.

### Seveso Directive - Reporting thresholds

#### Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
Hyb Buffer H3	50 tonne	200 tonne

### 7.3 Specific end use(s)

#### Recommendations

Nuclease-Free Water	Industrial applications, Professional applications.
Library Wash Buffer	Industrial applications, Professional applications.
Hyb Wash Buffer 1	Industrial applications, Professional applications.
Hyb Wash Buffer 2	Industrial applications, Professional applications.
Resuspension Buffer	Industrial applications, Professional applications.
End Prep Buffer	Industrial applications, Professional applications.
End Prep Enzyme	Industrial applications, Professional applications.
Ligation Buffer	Industrial applications, Professional applications.
Ligation Enzyme	Industrial applications, Professional applications.
Adapter for ILM	Industrial applications, Professional applications.
Hyb Blocker	Industrial applications, Professional applications.
Hyb Buffer	Industrial applications, Professional applications.
Hyb Enhancer	Industrial applications, Professional applications.
2X Amplification	Industrial applications, Professional applications.
Mastermix	
Library Binding Beads	Industrial applications, Professional applications.
Capture Beads	Industrial applications, Professional applications.
Index Primer Mix for ILM 1-8	Industrial applications, Professional applications.
Index Primer Mix for ILM 9-16	Industrial applications, Professional applications.

#### Industrial sector specific solutions

Nuclease-Free Water	Not available.
Library Wash Buffer	Not available.
Hyb Wash Buffer 1	Not available.
Hyb Wash Buffer 2	Not available.
Resuspension Buffer	Not available.
End Prep Buffer	Not available.
End Prep Enzyme	Not available.
Ligation Buffer	Not available.
Ligation Enzyme	Not available.
Adapter for ILM	Not available.
Hyb Blocker	Not available.
Hyb Buffer	Not available.
Hyb Enhancer	Not available.
2X Amplification	Not available.
Mastermix	
Library Binding Beads	Not available.
Capture Beads	Not available.
Index Primer Mix for ILM 1-8	Not available.
Index Primer Mix for ILM 9-16	Not available.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

Occupational exposure limits

Product/ingredient name	Exposure limit values
<b>End Prep Enzyme</b> Glycerol	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist
<b>Ligation Enzyme</b> Glycerol	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist
<b>Hyb Enhancer</b> Formamide	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> STEL: 56 mg/m <sup>3</sup> 15 minutes. STEL: 30 ppm 15 minutes. TWA: 37 mg/m <sup>3</sup> 8 hours. TWA: 20 ppm 8 hours.
<b>2X Amplification Mastermix</b> Glycerol	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist

Biological exposure indices

No exposure indices known.

**Recommended monitoring procedures** : Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
<b>End Prep Buffer</b> Magnesium chloride	DNEL	Long term Oral	7 mg/kg bw/day	General population	Systemic
<b>Hyb Buffer</b> tetramethylammonium chloride	DNEL	Long term Oral	0.25 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.25 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.4 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	1.76 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	2.9 mg/m <sup>3</sup>	Workers	Systemic
<b>Hyb Enhancer</b> Formamide	DNEL	Long term Dermal	0.952 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	6.6 mg/m <sup>3</sup>	Workers	Systemic

PNECs

No PNECs available

**8.2 Exposure controls**

**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.

## SECTION 8: Exposure controls/personal protection

### Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- 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.
- 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.

## SECTION 9: Physical and chemical properties

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

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	:	Nuclease-Free Water	Liquid.
		Library Wash Buffer	Liquid.
		Hyb Wash Buffer 1	Liquid.
		Hyb Wash Buffer 2	Liquid.
		Resuspension Buffer	Liquid.
		End Prep Buffer	Liquid.
		End Prep Enzyme	Liquid.
		Ligation Buffer	Liquid.
		Ligation Enzyme	Liquid.
		Adapter for ILM	Liquid.
		Hyb Blocker	Liquid.
		Hyb Buffer	Liquid.
		Hyb Enhancer	Liquid.
		2X Amplification	Liquid.
		Mastermix	
		Library Binding Beads	Liquid.
		Capture Beads	Liquid.
		Index Primer Mix for ILM	Liquid.
		1-8	
		Index Primer Mix for ILM	Liquid.
		9-16	

**SECTION 9: Physical and chemical properties**

<b>Colour</b>	:	Nuclease-Free Water	Colourless.
		Library Wash Buffer	Not available.
		Hyb Wash Buffer 1	Not available.
		Hyb Wash Buffer 2	Not available.
		Resuspension Buffer	Not available.
		End Prep Buffer	Not available.
		End Prep Enzyme	Not available.
		Ligation Buffer	Not available.
		Ligation Enzyme	Not available.
		Adapter for ILM	Not available.
		Hyb Blocker	Not available.
		Hyb Buffer	Not available.
		Hyb Enhancer	Not available.
		2X Amplification	Not available.
		Mastermix	
		Library Binding Beads	Not available.
	Capture Beads	Not available.	
	Index Primer Mix for ILM 1-8	Not available.	
	Index Primer Mix for ILM 9-16	Not available.	
<b>Odour</b>	:	Nuclease-Free Water	Odourless.
		Library Wash Buffer	Not available.
		Hyb Wash Buffer 1	Not available.
		Hyb Wash Buffer 2	Not available.
		Resuspension Buffer	Not available.
		End Prep Buffer	Not available.
		End Prep Enzyme	Not available.
		Ligation Buffer	Not available.
		Ligation Enzyme	Not available.
		Adapter for ILM	Not available.
		Hyb Blocker	Not available.
		Hyb Buffer	Not available.
		Hyb Enhancer	Not available.
		2X Amplification	Not available.
		Mastermix	
		Library Binding Beads	Not available.
	Capture Beads	Not available.	
	Index Primer Mix for ILM 1-8	Not available.	
	Index Primer Mix for ILM 9-16	Not available.	
<b>Odour threshold</b>	:	Nuclease-Free Water	Not available.
		Library Wash Buffer	Not available.
		Hyb Wash Buffer 1	Not available.
		Hyb Wash Buffer 2	Not available.
		Resuspension Buffer	Not available.
		End Prep Buffer	Not available.
		End Prep Enzyme	Not available.
		Ligation Buffer	Not available.
		Ligation Enzyme	Not available.
		Adapter for ILM	Not available.
		Hyb Blocker	Not available.
		Hyb Buffer	Not available.
		Hyb Enhancer	Not available.
		2X Amplification	Not available.
		Mastermix	
		Library Binding Beads	Not available.
	Capture Beads	Not available.	
	Index Primer Mix for ILM 1-8	Not available.	
	Index Primer Mix for ILM 9-16	Not available.	

**SECTION 9: Physical and chemical properties**

<b>Melting point/freezing point</b>	:	Nuclease-Free Water	0°C
		Library Wash Buffer	Not available.
		Hyb Wash Buffer 1	0°C
		Hyb Wash Buffer 2	0°C
		Resuspension Buffer	0°C
		End Prep Buffer	Not available.
		End Prep Enzyme	Not available.
		Ligation Buffer	Not available.
		Ligation Enzyme	Not available.
		Adapter for ILM	0°C
		Hyb Blocker	0°C
		Hyb Buffer	Not available.
		Hyb Enhancer	Not available.
		2X Amplification	Not available.
		Mastermix	
		Library Binding Beads	Not available.
	Capture Beads	Not available.	
	Index Primer Mix for ILM 1-8	0°C	
	Index Primer Mix for ILM 9-16	0°C	
<b>Initial boiling point and boiling range</b>	:	Nuclease-Free Water	100°C
		Library Wash Buffer	Not available.
		Hyb Wash Buffer 1	100°C
		Hyb Wash Buffer 2	100°C
		Resuspension Buffer	100°C
		End Prep Buffer	Not available.
		End Prep Enzyme	Not available.
		Ligation Buffer	Not available.
		Ligation Enzyme	Not available.
		Adapter for ILM	100°C
		Hyb Blocker	100°C
		Hyb Buffer	Not available.
		Hyb Enhancer	Not available.
		2X Amplification	Not available.
		Mastermix	
		Library Binding Beads	Not available.
	Capture Beads	Not available.	
	Index Primer Mix for ILM 1-8	100°C	
	Index Primer Mix for ILM 9-16	100°C	
<b>Flammability</b>	:	Nuclease-Free Water	Not applicable.
		Library Wash Buffer	Not applicable.
		Hyb Wash Buffer 1	Not applicable.
		Hyb Wash Buffer 2	Not applicable.
		Resuspension Buffer	Not applicable.
		End Prep Buffer	Not applicable.
		End Prep Enzyme	Not applicable.
		Ligation Buffer	Not applicable.
		Ligation Enzyme	Not applicable.
		Adapter for ILM	Not applicable.
		Hyb Blocker	Not applicable.
		Hyb Buffer	Not applicable.
		Hyb Enhancer	Not applicable.
		2X Amplification	Not applicable.
		Mastermix	
		Library Binding Beads	Not applicable.
	Capture Beads	Not applicable.	
	Index Primer Mix for ILM 1-8	Not applicable.	
	Index Primer Mix for ILM 9-16	Not applicable.	

**SECTION 9: Physical and chemical properties**

**Upper/lower flammability or explosive limits** : Nuclease-Free Water Not available.  
 Library Wash Buffer Not available.  
 Hyb Wash Buffer 1 Not available.  
 Hyb Wash Buffer 2 Not available.  
 Resuspension Buffer Not available.  
 End Prep Buffer Not available.  
 End Prep Enzyme Not available.  
 Ligation Buffer Not available.  
 Ligation Enzyme Not available.  
 Adapter for ILM Not available.  
 Hyb Blocker Not available.  
 Hyb Buffer Not available.  
 Hyb Enhancer Not available.  
 2X Amplification Not available.  
 Mastermix  
 Library Binding Beads Not available.  
 Capture Beads Not available.  
 Index Primer Mix for ILM 1-8 Not available.  
 Index Primer Mix for ILM 9-16 Not available.

**Flash point** :

Ingredient name	Closed cup		Open cup	
	°C	Method	°C	Method
<b>Library Wash Buffer</b>				
Poly(oxy-1,2-ethanediyl),α-hydro-ω-hydroxy- Ethane-1,2-diol, ethoxylated	171 to 235	-	199 to 238	-
<b>End Prep Enzyme</b>				
glycerol	-	-	177	-
<b>Ligation Buffer</b>				
Poly(oxy-1,2-ethanediyl),α-hydro-ω-hydroxy- Ethane-1,2-diol, ethoxylated	171 to 235	-	199 to 238	-
<b>Ligation Enzyme</b>				
glycerol	-	-	177	-
<b>Hyb Enhancer</b>				
formamide	150	-	152	DIN EN ISO 2592
Poly(oxy-1,2-ethanediyl),α-hydro-ω-hydroxy- Ethane-1,2-diol, ethoxylated	171 to 235	-	199 to 238	-
<b>2X Amplification Mastermix</b>				
glycerol	-	-	177	-
<b>Library Binding Beads</b>				
Poly(oxy-1,2-ethanediyl),α-hydro-ω-hydroxy- Ethane-1,2-diol, ethoxylated	171 to 235	-	199 to 238	-

**SECTION 9: Physical and chemical properties**

**Auto-ignition temperature**

Ingredient name	°C	Method
<b>Library Wash Buffer</b>		
Poly(oxy-1,2-ethanediyl),α-hydro-ω-hydroxy-Ethane-1,2-diol, ethoxylated	360	-
<b>End Prep Enzyme</b>		
glycerol	370	-
<b>Ligation Buffer</b>		
Poly(oxy-1,2-ethanediyl),α-hydro-ω-hydroxy-Ethane-1,2-diol, ethoxylated	360	-
<b>Ligation Enzyme</b>		
glycerol	370	-
<b>Hyb Enhancer</b>		
Poly(oxy-1,2-ethanediyl),α-hydro-ω-hydroxy-Ethane-1,2-diol, ethoxylated	360	-
formamide	>500	ASTM D 2155-66
<b>2X Amplification Mastermix</b>		
glycerol	370	-
<b>Library Binding Beads</b>		
Poly(oxy-1,2-ethanediyl),α-hydro-ω-hydroxy-Ethane-1,2-diol, ethoxylated	360	-

**Decomposition temperature**

Nuclease-Free Water	Not available.
Library Wash Buffer	Not available.
Hyb Wash Buffer 1	Not available.
Hyb Wash Buffer 2	Not available.
Resuspension Buffer	Not available.
End Prep Buffer	Not available.
End Prep Enzyme	Not available.
Ligation Buffer	Not available.
Ligation Enzyme	Not available.
Adapter for ILM	Not available.
Hyb Blocker	Not available.
Hyb Buffer	Not available.
Hyb Enhancer	Not available.
2X Amplification Mastermix	Not available.
Library Binding Beads	Not available.
Capture Beads	Not available.
Index Primer Mix for ILM 1-8	Not available.
Index Primer Mix for ILM 9-16	Not available.



**SECTION 9: Physical and chemical properties**

<b>pH</b>	:	Nuclease-Free Water	7
		Library Wash Buffer	Not available.
		Hyb Wash Buffer 1	7.2 to 7.6
		Hyb Wash Buffer 2	7.2 to 7.6
		Resuspension Buffer	8
		End Prep Buffer	8
		End Prep Enzyme	7.5
		Ligation Buffer	8
		Ligation Enzyme	7.5
		Adapter for ILM	8
		Hyb Blocker	8
		Hyb Buffer	7.5
		Hyb Enhancer	Not available.
		2X Amplification	Not available.
		Mastermix	
		Library Binding Beads	8
	Capture Beads	Not available.	
	Index Primer Mix for ILM 1-8	8	
	Index Primer Mix for ILM 9-16	8	

<b>Viscosity</b>	:	Nuclease-Free Water	Not available.
		Library Wash Buffer	Not available.
		Hyb Wash Buffer 1	Not available.
		Hyb Wash Buffer 2	Not available.
		Resuspension Buffer	Not available.
		End Prep Buffer	Not available.
		End Prep Enzyme	Not available.
		Ligation Buffer	Not available.
		Ligation Enzyme	Not available.
		Adapter for ILM	Not available.
		Hyb Blocker	Not available.
		Hyb Buffer	Not available.
		Hyb Enhancer	Not available.
		2X Amplification	Not available.
		Mastermix	
		Library Binding Beads	Not available.
	Capture Beads	Not available.	
	Index Primer Mix for ILM 1-8	Not available.	
	Index Primer Mix for ILM 9-16	Not available.	

<b>Solubility(ies)</b>	:	<b>Media</b>	<b>Result</b>
		<b>Nuclease-Free Water</b> water	Soluble
		<b>Library Wash Buffer</b> water	Soluble
		<b>Hyb Wash Buffer 1</b> water	Soluble
		<b>Hyb Wash Buffer 2</b> water	Soluble
		<b>Resuspension Buffer</b> water	Soluble
		<b>End Prep Buffer</b> water	Soluble
		<b>End Prep Enzyme</b> water	Soluble
		<b>Ligation Buffer</b> water	Soluble
		<b>Ligation Enzyme</b> water	Soluble
		<b>Adapter for ILM</b> water	Soluble

**SECTION 9: Physical and chemical properties**

<b>Hyb Blocker</b> water	Soluble
<b>Hyb Buffer</b> water	Soluble
<b>Hyb Enhancer</b> water	Soluble
<b>Library Binding Beads</b> water	Soluble
<b>Capture Beads</b> water	Soluble
<b>Index Primer Mix for ILM 1-8</b> water	Soluble
<b>Index Primer Mix for ILM 9-16</b> water	Soluble

**Partition coefficient: n-octanol/water** :

Nuclease-Free Water	-1.38
Library Wash Buffer	Not applicable.
Hyb Wash Buffer 1	Not applicable.
Hyb Wash Buffer 2	Not applicable.
Resuspension Buffer	Not applicable.
End Prep Buffer	Not applicable.
End Prep Enzyme	Not applicable.
Ligation Buffer	Not applicable.
Ligation Enzyme	Not applicable.
Adapter for ILM	Not applicable.
Hyb Blocker	Not applicable.
Hyb Buffer	Not applicable.
Hyb Enhancer	Not applicable.
2X Amplification	Not applicable.
Mastermix	
Library Binding Beads	Not applicable.
Capture Beads	Not applicable.
Index Primer Mix for ILM 1-8	Not applicable.
Index Primer Mix for ILM 9-16	Not applicable.

**Vapour pressure** :

Nuclease-Free Water	2.3 kPa (17.5 mm Hg) [room temperature] 12.3 kPa (92.258 mm Hg) [50°C]
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Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
<b>Library Wash Buffer</b>						
water	17.5	2.3	-	92.258	12.3	-
Poly(oxy-1,2-ethanediyl), $\alpha$ -hydro- $\omega$ -hydroxy-Ethane-1,2-diol, ethoxylated	0.0000003	0.00000004	-	-	-	-
<b>Hyb Wash Buffer 1</b>						
water	17.5	2.3	-	92.258	12.3	-
<b>Hyb Wash Buffer 2</b>						
water	17.5	2.3	-	92.258	12.3	-

**SECTION 9: Physical and chemical properties**

<b>Resuspension Buffer</b>							
water	17.5	2.3	-		92.258	12.3	-
<b>End Prep Buffer</b>							
water	17.5	2.3	-		92.258	12.3	-
<b>End Prep Enzyme</b>							
water	17.5	2.3	-		92.258	12.3	-
glycerol	0.000075	0.00001	-		0.0025	0.00033	-
<b>Ligation Buffer</b>							
water	17.5	2.3	-		92.258	12.3	-
<b>Ligation Enzyme</b>							
water	17.5	2.3	-		92.258	12.3	-
glycerol	0.000075	0.00001	-		0.0025	0.00033	-
<b>Adapter for ILM</b>							
water	17.5	2.3	-		92.258	12.3	-
<b>Hyb Blocker</b>							
water	17.5	2.3	-		92.258	12.3	-
<b>Hyb Buffer</b>							
water	17.5	2.3	-		92.258	12.3	-
tetramethylammonium chloride	0.000000001	0.0000000013	EU A.4		-	-	-
<b>Hyb Enhancer</b>							
formamide	0.045	0.006	-		-	-	-
Poly(oxy-1,2-ethanediyl), $\alpha$ -hydro- $\omega$ -hydroxy-Ethane-1,2-diol, ethoxylated	0.0000003	0.00000004	-		-	-	-
<b>2X Amplification Mastermix</b>							
glycerol	0.000075	0.00001	-		0.0025	0.00033	-
<b>Library Binding Beads</b>							

**SECTION 9: Physical and chemical properties**

water	17.5	2.3	-	92.258	12.3	-
Poly(oxy-1,2-ethanediyl), $\alpha$ -hydro- $\omega$ -hydroxy-Ethane-1,2-diol, ethoxylated	0.0000003	0.00000004	-	-	-	-
<b>Capture Beads</b>						
water	17.5	2.3	-	92.258	12.3	-
<b>Index Primer Mix for ILM 1-8</b>						
water	17.5	2.3	-	92.258	12.3	-
<b>Index Primer Mix for ILM 9-16</b>						
water	17.5	2.3	-	92.258	12.3	-

**Evaporation rate** :

- Nuclease-Free Water Not available.
- Library Wash Buffer Not available.
- Hyb Wash Buffer 1 Not available.
- Hyb Wash Buffer 2 Not available.
- Resuspension Buffer Not available.
- End Prep Buffer Not available.
- End Prep Enzyme Not available.
- Ligation Buffer Not available.
- Ligation Enzyme Not available.
- Adapter for ILM Not available.
- Hyb Blocker Not available.
- Hyb Buffer Not available.
- Hyb Enhancer Not available.
- 2X Amplification Not available.
- Mastermix
- Library Binding Beads Not available.
- Capture Beads Not available.
- Index Primer Mix for ILM 1-8 Not available.
- Index Primer Mix for ILM 9-16 Not available.

**Relative density** :

- Nuclease-Free Water 1
- Library Wash Buffer Not available.
- Hyb Wash Buffer 1 Not available.
- Hyb Wash Buffer 2 Not available.
- Resuspension Buffer Not available.
- End Prep Buffer Not available.
- End Prep Enzyme Not available.
- Ligation Buffer Not available.
- Ligation Enzyme Not available.
- Adapter for ILM Not available.
- Hyb Blocker Not available.
- Hyb Buffer Not available.
- Hyb Enhancer Not available.
- 2X Amplification Not available.
- Mastermix
- Library Binding Beads Not available.
- Capture Beads Not available.
- Index Primer Mix for ILM Not available.

**SECTION 9: Physical and chemical properties**

	1-8	
	Index Primer Mix for ILM	Not available.
	9-16	
<b>Vapour density</b>	: Nuclease-Free Water	0.62 [Air = 1]
	Library Wash Buffer	Not available.
	Hyb Wash Buffer 1	Not available.
	Hyb Wash Buffer 2	Not available.
	Resuspension Buffer	Not available.
	End Prep Buffer	Not available.
	End Prep Enzyme	Not available.
	Ligation Buffer	Not available.
	Ligation Enzyme	Not available.
	Adapter for ILM	Not available.
	Hyb Blocker	Not available.
	Hyb Buffer	Not available.
	Hyb Enhancer	Not available.
	2X Amplification	Not available.
	Mastermix	
	Library Binding Beads	Not available.
	Capture Beads	Not available.
	Index Primer Mix for ILM	Not available.
	1-8	
	Index Primer Mix for ILM	Not available.
	9-16	
<b>Explosive properties</b>	: Nuclease-Free Water	Not available.
	Library Wash Buffer	Not available.
	Hyb Wash Buffer 1	Not available.
	Hyb Wash Buffer 2	Not available.
	Resuspension Buffer	Not available.
	End Prep Buffer	Not available.
	End Prep Enzyme	Not available.
	Ligation Buffer	Not available.
	Ligation Enzyme	Not available.
	Adapter for ILM	Not available.
	Hyb Blocker	Not available.
	Hyb Buffer	Not available.
	Hyb Enhancer	Not available.
	2X Amplification	Not available.
	Mastermix	
	Library Binding Beads	Not available.
	Capture Beads	Not available.
	Index Primer Mix for ILM	Not available.
	1-8	
	Index Primer Mix for ILM	Not available.
	9-16	
<b>Oxidising properties</b>	: Nuclease-Free Water	Not available.
	Library Wash Buffer	Not available.
	Hyb Wash Buffer 1	Not available.
	Hyb Wash Buffer 2	Not available.
	Resuspension Buffer	Not available.
	End Prep Buffer	Not available.
	End Prep Enzyme	Not available.
	Ligation Buffer	Not available.
	Ligation Enzyme	Not available.
	Adapter for ILM	Not available.
	Hyb Blocker	Not available.
	Hyb Buffer	Not available.
	Hyb Enhancer	Not available.
	2X Amplification	Not available.
	Mastermix	
	Library Binding Beads	Not available.
	Capture Beads	Not available.
	Index Primer Mix for ILM	Not available.

**SECTION 9: Physical and chemical properties**

1-8  
Index Primer Mix for ILM Not available.  
9-16

**Particle characteristics**

<b>Median particle size</b>	:	Nuclease-Free Water	Not applicable.
		Library Wash Buffer	Not applicable.
		Hyb Wash Buffer 1	Not applicable.
		Hyb Wash Buffer 2	Not applicable.
		Resuspension Buffer	Not applicable.
		End Prep Buffer	Not applicable.
		End Prep Enzyme	Not applicable.
		Ligation Buffer	Not applicable.
		Ligation Enzyme	Not applicable.
		Adapter for ILM	Not applicable.
		Hyb Blocker	Not applicable.
		Hyb Buffer	Not applicable.
		Hyb Enhancer	Not applicable.
		2X Amplification	Not applicable.
		Mastermix	
		Library Binding Beads	Not applicable.
		Capture Beads	Not applicable.
		Index Primer Mix for ILM	Not applicable.
		1-8	
		Index Primer Mix for ILM	Not applicable.
		9-16	

**9.2 Other information**

No additional information.

**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	:	Nuclease-Free Water	No specific test data related to reactivity available for this product or its ingredients.
		Library Wash Buffer	No specific test data related to reactivity available for this product or its ingredients.
		Hyb Wash Buffer 1	No specific test data related to reactivity available for this product or its ingredients.
		Hyb Wash Buffer 2	No specific test data related to reactivity available for this product or its ingredients.
		Resuspension Buffer	No specific test data related to reactivity available for this product or its ingredients.
		End Prep Buffer	No specific test data related to reactivity available for this product or its ingredients.
		End Prep Enzyme	No specific test data related to reactivity available for this product or its ingredients.
		Ligation Buffer	No specific test data related to reactivity available for this product or its ingredients.
		Ligation Enzyme	No specific test data related to reactivity available for this product or its ingredients.
		Adapter for ILM	No specific test data related to reactivity available for this product or its ingredients.
		Hyb Blocker	No specific test data related to reactivity available for this product or its ingredients.
		Hyb Buffer	No specific test data related to reactivity available for this product or its ingredients.
		Hyb Enhancer	No specific test data related to reactivity available for this product or its ingredients.
		2X Amplification	No specific test data related to reactivity available for this product or its ingredients.
		Mastermix	No specific test data related to reactivity available for this product or its ingredients.
		Library Binding Beads	No specific test data related to reactivity available for this product or its ingredients.
		Capture Beads	No specific test data related to reactivity available for this product or its ingredients.

## SECTION 10: Stability and reactivity

Index Primer Mix for ILM 1-8	No specific test data related to reactivity available for this product or its ingredients.
Index Primer Mix for ILM 9-16	No specific test data related to reactivity available for this product or its ingredients.

### 10.2 Chemical stability

: Nuclease-Free Water	The product is stable.
Library Wash Buffer	The product is stable.
Hyb Wash Buffer 1	The product is stable.
Hyb Wash Buffer 2	The product is stable.
Resuspension Buffer	The product is stable.
End Prep Buffer	The product is stable.
End Prep Enzyme	The product is stable.
Ligation Buffer	The product is stable.
Ligation Enzyme	The product is stable.
Adapter for ILM	The product is stable.
Hyb Blocker	The product is stable.
Hyb Buffer	The product is stable.
Hyb Enhancer	The product is stable.
2X Amplification Mastermix	The product is stable.
Library Binding Beads	The product is stable.
Capture Beads	The product is stable.
Index Primer Mix for ILM 1-8	The product is stable.
Index Primer Mix for ILM 9-16	The product is stable.

### 10.3 Possibility of hazardous reactions

: Nuclease-Free Water	Under normal conditions of storage and use, hazardous reactions will not occur.
Library Wash Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
Hyb Wash Buffer 1	Under normal conditions of storage and use, hazardous reactions will not occur.
Hyb Wash Buffer 2	Under normal conditions of storage and use, hazardous reactions will not occur.
Resuspension Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
End Prep Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
End Prep Enzyme	Under normal conditions of storage and use, hazardous reactions will not occur.
Ligation Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
Ligation Enzyme	Under normal conditions of storage and use, hazardous reactions will not occur.
Adapter for ILM	Under normal conditions of storage and use, hazardous reactions will not occur.
Hyb Blocker	Under normal conditions of storage and use, hazardous reactions will not occur.
Hyb Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
Hyb Enhancer	Under normal conditions of storage and use, hazardous reactions will not occur.
2X Amplification Mastermix	Under normal conditions of storage and use, hazardous reactions will not occur.
Library Binding Beads	Under normal conditions of storage and use, hazardous reactions will not occur.
Capture Beads	Under normal conditions of storage and use, hazardous reactions will not occur.
Index Primer Mix for ILM 1-8	Under normal conditions of storage and use, hazardous reactions will not occur.
Index Primer Mix for ILM 9-16	Under normal conditions of storage and use, hazardous reactions will not occur.

## SECTION 10: Stability and reactivity

<b>10.4 Conditions to avoid</b>	<ul style="list-style-type: none"> <li>: Nuclease-Free Water</li> <li>Library Wash Buffer</li> <li>Hyb Wash Buffer 1</li> <li>Hyb Wash Buffer 2</li> <li>Resuspension Buffer</li> <li>End Prep Buffer</li> <li>End Prep Enzyme</li> <li>Ligation Buffer</li> <li>Ligation Enzyme</li> <li>Adapter for ILM</li> <li>Hyb Blocker</li> <li>Hyb Buffer</li> <li>Hyb Enhancer</li> <li>2X Amplification</li> <li>Mastermix</li> <li>Library Binding Beads</li> <li>Capture Beads</li> <li>Index Primer Mix for ILM 1-8</li> <li>Index Primer Mix for ILM 9-16</li> </ul>	<ul style="list-style-type: none"> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> </ul>
<b>10.5 Incompatible materials</b>	<ul style="list-style-type: none"> <li>: Nuclease-Free Water</li> <li>Library Wash Buffer</li> <li>Hyb Wash Buffer 1</li> <li>Hyb Wash Buffer 2</li> <li>Resuspension Buffer</li> <li>End Prep Buffer</li> <li>End Prep Enzyme</li> <li>Ligation Buffer</li> <li>Ligation Enzyme</li> <li>Adapter for ILM</li> <li>Hyb Blocker</li> <li>Hyb Buffer</li> <li>Hyb Enhancer</li> <li>2X Amplification</li> <li>Mastermix</li> <li>Library Binding Beads</li> <li>Capture Beads</li> <li>Index Primer Mix for ILM 1-8</li> <li>Index Primer Mix for ILM 9-16</li> </ul>	<ul style="list-style-type: none"> <li>May react or be incompatible with oxidising materials.</li> <li>May react or be incompatible with oxidising materials.</li> <li>May react or be incompatible with oxidising materials.</li> <li>May react or be incompatible with oxidising materials.</li> <li>May react or be incompatible with oxidising materials.</li> <li>May react or be incompatible with oxidising materials.</li> <li>May react or be incompatible with oxidising materials.</li> <li>May react or be incompatible with oxidising materials.</li> <li>May react or be incompatible with oxidising materials.</li> <li>May react or be incompatible with oxidising materials.</li> <li>May react or be incompatible with oxidising materials.</li> <li>May react or be incompatible with oxidising materials.</li> <li>May react or be incompatible with oxidising materials.</li> <li>May react or be incompatible with oxidising materials.</li> <li>May react or be incompatible with oxidising materials.</li> <li>May react or be incompatible with oxidising materials.</li> <li>May react or be incompatible with oxidising materials.</li> <li>May react or be incompatible with oxidising materials.</li> <li>May react or be incompatible with oxidising materials.</li> </ul>
<b>10.6 Hazardous decomposition products</b>	<ul style="list-style-type: none"> <li>: Nuclease-Free Water</li> <li>Library Wash Buffer</li> <li>Hyb Wash Buffer 1</li> <li>Hyb Wash Buffer 2</li> <li>Resuspension Buffer</li> <li>End Prep Buffer</li> <li>End Prep Enzyme</li> <li>Ligation Buffer</li> <li>Ligation Enzyme</li> </ul>	<ul style="list-style-type: none"> <li>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</li> <li>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</li> <li>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</li> <li>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</li> <li>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</li> <li>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</li> <li>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</li> <li>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</li> <li>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</li> </ul>



## SECTION 10: Stability and reactivity

Adapter for ILM	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hyb Blocker	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hyb Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hyb Enhancer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
2X Amplification Mastermix	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Library Binding Beads	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Capture Beads	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Index Primer Mix for ILM 1-8	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Index Primer Mix for ILM 9-16	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<b>End Prep Buffer</b> Magnesium chloride	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat	2800 mg/kg	-
<b>End Prep Enzyme</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-
<b>Ligation Enzyme</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-
<b>Hyb Buffer</b> tetramethylammonium chloride	LD50 Dermal	Rabbit - Male, Female	200 to 500 mg/kg	-
	LD50 Oral	Rat	50 mg/kg	-
Dextran sulfate sodium	LD50 Oral	Rat	20600 mg/kg	-
Poly(oxy-1,2-ethanediyl), . alpha.-[ (1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy-	LD50 Oral	Rat	2800 mg/kg	-
<b>Hyb Enhancer</b> Formamide	LC50 Inhalation Dusts and mists	Rat - Male	>21 mg/l	4 hours
	LD50 Dermal	Rabbit	17 g/kg	-
	LD50 Oral	Rat	5570 mg/kg	-
<b>2X Amplification Mastermix</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-

#### Acute toxicity estimates

## SECTION 11: Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
<b>End Prep Buffer</b> Magnesium chloride	2800	N/A	N/A	N/A	N/A
<b>End Prep Enzyme</b> Glycerol	12600	N/A	N/A	N/A	N/A
<b>Ligation Enzyme</b> Glycerol	12600	N/A	N/A	N/A	N/A
<b>Hyb Buffer</b> Hyb Buffer	456.2	2737.2	N/A	N/A	N/A
tetramethylammonium chloride	50	300	N/A	N/A	N/A
Dextran sulfate sodium	20600	N/A	N/A	N/A	N/A
Poly(oxy-1,2-ethanediyl), .alpha.-[ (1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	500	N/A	N/A	N/A	N/A
<b>Hyb Enhancer</b> Formamide	5570	17000	N/A	N/A	N/A
<b>2X Amplification Mastermix</b> Glycerol	12600	N/A	N/A	N/A	N/A

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>End Prep Enzyme</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
<b>Ligation Enzyme</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
<b>Hyb Buffer</b> Poly(oxy-1,2-ethanediyl), .alpha.-[ (1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Eyes - Severe irritant	Rabbit	-	1 %	-
<b>2X Amplification Mastermix</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

### Sensitiser

**Conclusion/Summary** : Not available.

### Mutagenicity

**Conclusion/Summary** : Not available.

### Carcinogenicity

**Conclusion/Summary** : Not available.

### Reproductive toxicity

**Conclusion/Summary** : Not available.

## SECTION 11: Toxicological information

### Teratogenicity

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
<b>Hyb Buffer</b> tetramethylammonium chloride	Category 1	oral	central nervous system (CNS)
Dextran sulfate sodium	Category 3	-	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
<b>Hyb Enhancer</b> Formamide	Category 2	oral	blood

### Aspiration hazard

Not available.

<b>Information on likely routes of exposure</b>	: Nuclease-Free Water	Not available.
	Library Wash Buffer	Not available.
	Hyb Wash Buffer 1	Not available.
	Hyb Wash Buffer 2	Not available.
	Resuspension Buffer	Not available.
	End Prep Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
	End Prep Enzyme	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
	Ligation Buffer	Not available.
	Ligation Enzyme	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
	Adapter for ILM	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
	Hyb Blocker	Not available.
	Hyb Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
	Hyb Enhancer	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
	2X Amplification	Not available.
	Mastermix	
	Library Binding Beads	Not available.
	Capture Beads	Not available.
	Index Primer Mix for ILM 1-8	Not available.
	Index Primer Mix for ILM 9-16	Not available.

### Potential acute health effects

<b>Inhalation</b>	: Nuclease-Free Water	No known significant effects or critical hazards.
	Library Wash Buffer	No known significant effects or critical hazards.
	Hyb Wash Buffer 1	No known significant effects or critical hazards.
	Hyb Wash Buffer 2	No known significant effects or critical hazards.
	Resuspension Buffer	No known significant effects or critical hazards.
	End Prep Buffer	No known significant effects or critical hazards.
	End Prep Enzyme	No known significant effects or critical hazards.
	Ligation Buffer	No known significant effects or critical hazards.
	Ligation Enzyme	No known significant effects or critical hazards.
	Adapter for ILM	No known significant effects or critical hazards.
	Hyb Blocker	No known significant effects or critical hazards.
	Hyb Buffer	Causes damage to organs following a single exposure if inhaled.
	Hyb Enhancer	No known significant effects or critical hazards.
	2X Amplification	No known significant effects or critical hazards.
	Mastermix	
	Library Binding Beads	No known significant effects or critical hazards.
	Capture Beads	No known significant effects or critical hazards.
	Index Primer Mix for ILM	No known significant effects or critical hazards.

**SECTION 11: Toxicological information**

	1-8	Index Primer Mix for ILM	No known significant effects or critical hazards.
	9-16	Index Primer Mix for ILM	No known significant effects or critical hazards.
<b>Ingestion</b>	:	Nuclease-Free Water	No known significant effects or critical hazards.
		Library Wash Buffer	No known significant effects or critical hazards.
		Hyb Wash Buffer 1	No known significant effects or critical hazards.
		Hyb Wash Buffer 2	No known significant effects or critical hazards.
		Resuspension Buffer	No known significant effects or critical hazards.
		End Prep Buffer	No known significant effects or critical hazards.
		End Prep Enzyme	No known significant effects or critical hazards.
		Ligation Buffer	No known significant effects or critical hazards.
		Ligation Enzyme	No known significant effects or critical hazards.
		Adapter for ILM	No known significant effects or critical hazards.
		Hyb Blocker	No known significant effects or critical hazards.
		Hyb Buffer	Harmful if swallowed. Causes damage to organs following a single exposure if swallowed.
		Hyb Enhancer	No known significant effects or critical hazards.
		2X Amplification	No known significant effects or critical hazards.
		Mastermix	
		Library Binding Beads	No known significant effects or critical hazards.
		Capture Beads	No known significant effects or critical hazards.
		Index Primer Mix for ILM	No known significant effects or critical hazards.
	1-8	Index Primer Mix for ILM	No known significant effects or critical hazards.
	9-16	Index Primer Mix for ILM	No known significant effects or critical hazards.
<b>Skin contact</b>	:	Nuclease-Free Water	No known significant effects or critical hazards.
		Library Wash Buffer	No known significant effects or critical hazards.
		Hyb Wash Buffer 1	No known significant effects or critical hazards.
		Hyb Wash Buffer 2	No known significant effects or critical hazards.
		Resuspension Buffer	No known significant effects or critical hazards.
		End Prep Buffer	No known significant effects or critical hazards.
		End Prep Enzyme	No known significant effects or critical hazards.
		Ligation Buffer	No known significant effects or critical hazards.
		Ligation Enzyme	No known significant effects or critical hazards.
		Adapter for ILM	No known significant effects or critical hazards.
		Hyb Blocker	No known significant effects or critical hazards.
		Hyb Buffer	Causes damage to organs following a single exposure in contact with skin. Causes skin irritation.
		Hyb Enhancer	No known significant effects or critical hazards.
		2X Amplification	No known significant effects or critical hazards.
		Mastermix	
		Library Binding Beads	No known significant effects or critical hazards.
		Capture Beads	No known significant effects or critical hazards.
		Index Primer Mix for ILM	No known significant effects or critical hazards.
	1-8	Index Primer Mix for ILM	No known significant effects or critical hazards.
	9-16	Index Primer Mix for ILM	No known significant effects or critical hazards.
<b>Eye contact</b>	:	Nuclease-Free Water	No known significant effects or critical hazards.
		Library Wash Buffer	No known significant effects or critical hazards.
		Hyb Wash Buffer 1	No known significant effects or critical hazards.
		Hyb Wash Buffer 2	No known significant effects or critical hazards.
		Resuspension Buffer	No known significant effects or critical hazards.
		End Prep Buffer	No known significant effects or critical hazards.
		End Prep Enzyme	No known significant effects or critical hazards.
		Ligation Buffer	No known significant effects or critical hazards.
		Ligation Enzyme	No known significant effects or critical hazards.
		Adapter for ILM	No known significant effects or critical hazards.
		Hyb Blocker	No known significant effects or critical hazards.
		Hyb Buffer	No known significant effects or critical hazards.
		Hyb Enhancer	No known significant effects or critical hazards.
		2X Amplification	No known significant effects or critical hazards.
		Mastermix	
		Library Binding Beads	No known significant effects or critical hazards.

## SECTION 11: Toxicological information

Capture Beads	No known significant effects or critical hazards.
Index Primer Mix for ILM 1-8	No known significant effects or critical hazards.
Index Primer Mix for ILM 9-16	No known significant effects or critical hazards.

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

<b>Inhalation</b>	:	Nuclease-Free Water	No specific data.	
		Library Wash Buffer	No specific data.	
		Hyb Wash Buffer 1	No specific data.	
		Hyb Wash Buffer 2	No specific data.	
		Resuspension Buffer	No specific data.	
		End Prep Buffer	No specific data.	
		End Prep Enzyme	No specific data.	
		Ligation Buffer	No specific data.	
		Ligation Enzyme	No specific data.	
		Adapter for ILM	No specific data.	
		Hyb Blocker	No specific data.	
		Hyb Buffer	No specific data.	
		Hyb Enhancer	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations	
		2X Amplification Mastermix	No specific data.	
		Library Binding Beads	No specific data.	
		Capture Beads	No specific data.	
		Index Primer Mix for ILM 1-8	No specific data.	
		Index Primer Mix for ILM 9-16	No specific data.	
	<b>Ingestion</b>	:	Nuclease-Free Water	No specific data.
			Library Wash Buffer	No specific data.
		Hyb Wash Buffer 1	No specific data.	
		Hyb Wash Buffer 2	No specific data.	
		Resuspension Buffer	No specific data.	
		End Prep Buffer	No specific data.	
		End Prep Enzyme	No specific data.	
		Ligation Buffer	No specific data.	
		Ligation Enzyme	No specific data.	
		Adapter for ILM	No specific data.	
		Hyb Blocker	No specific data.	
		Hyb Buffer	No specific data.	
		Hyb Enhancer	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations	
		2X Amplification Mastermix	No specific data.	
		Library Binding Beads	No specific data.	
		Capture Beads	No specific data.	
		Index Primer Mix for ILM 1-8	No specific data.	
		Index Primer Mix for ILM 9-16	No specific data.	
<b>Skin contact</b>		:	Nuclease-Free Water	No specific data.
			Library Wash Buffer	No specific data.
		Hyb Wash Buffer 1	No specific data.	
		Hyb Wash Buffer 2	No specific data.	
		Resuspension Buffer	No specific data.	
		End Prep Buffer	No specific data.	
		End Prep Enzyme	No specific data.	
		Ligation Buffer	No specific data.	
		Ligation Enzyme	No specific data.	

**SECTION 11: Toxicological information**

Adapter for ILM	No specific data.
Hyb Blocker	No specific data.
Hyb Buffer	Adverse symptoms may include the following: irritation redness
Hyb Enhancer	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
2X Amplification	No specific data.
Mastermix	No specific data.
Library Binding Beads	No specific data.
Capture Beads	No specific data.
Index Primer Mix for ILM 1-8	No specific data.
Index Primer Mix for ILM 9-16	No specific data.
Nuclease-Free Water	No specific data.
Library Wash Buffer	No specific data.
Hyb Wash Buffer 1	No specific data.
Hyb Wash Buffer 2	No specific data.
Resuspension Buffer	No specific data.
End Prep Buffer	No specific data.
End Prep Enzyme	No specific data.
Ligation Buffer	No specific data.
Ligation Enzyme	No specific data.
Adapter for ILM	No specific data.
Hyb Blocker	No specific data.
Hyb Buffer	Adverse symptoms may include the following: pain or irritation watering redness
Hyb Enhancer	No specific data.
2X Amplification	No specific data.
Mastermix	No specific data.
Library Binding Beads	No specific data.
Capture Beads	No specific data.
Index Primer Mix for ILM 1-8	No specific data.
Index Primer Mix for ILM 9-16	No specific data.

**Eye contact**

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

**Conclusion/Summary** : Not available.

**SECTION 11: Toxicological information**

<b>General</b>	:	Nuclease-Free Water	No known significant effects or critical hazards.
		Library Wash Buffer	No known significant effects or critical hazards.
		Hyb Wash Buffer 1	No known significant effects or critical hazards.
		Hyb Wash Buffer 2	No known significant effects or critical hazards.
		Resuspension Buffer	No known significant effects or critical hazards.
		End Prep Buffer	No known significant effects or critical hazards.
		End Prep Enzyme	No known significant effects or critical hazards.
		Ligation Buffer	No known significant effects or critical hazards.
		Ligation Enzyme	No known significant effects or critical hazards.
		Adapter for ILM	No known significant effects or critical hazards.
		Hyb Blocker	No known significant effects or critical hazards.
		Hyb Buffer	No known significant effects or critical hazards.
		Hyb Enhancer	May cause damage to organs through prolonged or repeated exposure.
		2X Amplification Mastermix	No known significant effects or critical hazards.
		Library Binding Beads	No known significant effects or critical hazards.
		Capture Beads	No known significant effects or critical hazards.
	Index Primer Mix for ILM 1-8	No known significant effects or critical hazards.	
	Index Primer Mix for ILM 9-16	No known significant effects or critical hazards.	
<b>Carcinogenicity</b>	:	Nuclease-Free Water	No known significant effects or critical hazards.
		Library Wash Buffer	No known significant effects or critical hazards.
		Hyb Wash Buffer 1	No known significant effects or critical hazards.
		Hyb Wash Buffer 2	No known significant effects or critical hazards.
		Resuspension Buffer	No known significant effects or critical hazards.
		End Prep Buffer	No known significant effects or critical hazards.
		End Prep Enzyme	No known significant effects or critical hazards.
		Ligation Buffer	No known significant effects or critical hazards.
		Ligation Enzyme	No known significant effects or critical hazards.
		Adapter for ILM	No known significant effects or critical hazards.
		Hyb Blocker	No known significant effects or critical hazards.
		Hyb Buffer	No known significant effects or critical hazards.
		Hyb Enhancer	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
		2X Amplification Mastermix	No known significant effects or critical hazards.
		Library Binding Beads	No known significant effects or critical hazards.
		Capture Beads	No known significant effects or critical hazards.
	Index Primer Mix for ILM 1-8	No known significant effects or critical hazards.	
	Index Primer Mix for ILM 9-16	No known significant effects or critical hazards.	
<b>Mutagenicity</b>	:	Nuclease-Free Water	No known significant effects or critical hazards.
		Library Wash Buffer	No known significant effects or critical hazards.
		Hyb Wash Buffer 1	No known significant effects or critical hazards.
		Hyb Wash Buffer 2	No known significant effects or critical hazards.
		Resuspension Buffer	No known significant effects or critical hazards.
		End Prep Buffer	No known significant effects or critical hazards.
		End Prep Enzyme	No known significant effects or critical hazards.
		Ligation Buffer	No known significant effects or critical hazards.
		Ligation Enzyme	No known significant effects or critical hazards.
		Adapter for ILM	No known significant effects or critical hazards.
		Hyb Blocker	No known significant effects or critical hazards.
		Hyb Buffer	No known significant effects or critical hazards.
		Hyb Enhancer	No known significant effects or critical hazards.
		2X Amplification Mastermix	No known significant effects or critical hazards.
		Library Binding Beads	No known significant effects or critical hazards.
		Capture Beads	No known significant effects or critical hazards.
	Index Primer Mix for ILM 1-8	No known significant effects or critical hazards.	

## SECTION 11: Toxicological information

	Index Primer Mix for ILM 9-16	No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	: Nuclease-Free Water	No known significant effects or critical hazards.
	Library Wash Buffer	No known significant effects or critical hazards.
	Hyb Wash Buffer 1	No known significant effects or critical hazards.
	Hyb Wash Buffer 2	No known significant effects or critical hazards.
	Resuspension Buffer	No known significant effects or critical hazards.
	End Prep Buffer	No known significant effects or critical hazards.
	End Prep Enzyme	No known significant effects or critical hazards.
	Ligation Buffer	No known significant effects or critical hazards.
	Ligation Enzyme	No known significant effects or critical hazards.
	Adapter for ILM	No known significant effects or critical hazards.
	Hyb Blocker	No known significant effects or critical hazards.
	Hyb Buffer	No known significant effects or critical hazards.
	Hyb Enhancer	May damage fertility or the unborn child.
	2X Amplification	No known significant effects or critical hazards.
	Mastermix	
	Library Binding Beads	No known significant effects or critical hazards.
	Capture Beads	No known significant effects or critical hazards.
	Index Primer Mix for ILM 1-8	No known significant effects or critical hazards.
	Index Primer Mix for ILM 9-16	No known significant effects or critical hazards.
<b>Other information</b>	: End Prep Buffer	Adverse symptoms may include the following: May cause skin sensitisation.
	Adapter for ILM	Adverse symptoms may include the following: May cause skin sensitisation.
	Hyb Enhancer	Adverse symptoms may include the following: May cause eye irritation. May cause skin irritation.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
<b>End Prep Buffer</b> Magnesium chloride	Acute EC50 >100 mg/l Fresh water	Algae - <i>Desmodesmus subspicatus</i>	72 hours
	Acute EC50 180000 µg/l Fresh water	Crustaceans - Calanoid copepod - <i>Eudiaptomus padanus ssp. padanus</i> - Adult	48 hours
	Acute IC50 6.8 mg/l Fresh water	Aquatic plants - Lesser Duckweed - <i>Lemna aequinoctialis</i>	96 hours
	Acute LC50 32000 µg/l Fresh water	Daphnia - Water flea - <i>Daphnia hyalina</i> - Adult	48 hours
	Acute LC50 2120 mg/l Fresh water	Fish - Fathead minnow - <i>Pimephales promelas</i>	96 hours
	Acute NOEC 100 mg/l Fresh water	Algae - <i>Desmodesmus subspicatus</i>	72 hours
	Chronic NOEC 0.1 mg/l Fresh water	Fish - common carp - <i>Cyprinus carpio</i>	35 days
<b>End Prep Enzyme</b> Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Trout - <i>Oncorhynchus mykiss</i>	96 hours
<b>Ligation Enzyme</b> Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Trout - <i>Oncorhynchus mykiss</i>	96 hours
<b>Hyb Buffer</b> tetramethylammonium	Acute LC50 462 mg/l Fresh water	Fish - Fathead minnow -	96 hours



## SECTION 12: Ecological information

chloride Poly(oxy-1,2-ethanediyl), . alpha.-[ (1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy-	Acute EC50 210 µg/l Fresh water	<i>Pimephales promelas</i> Algae - Green algae - <i>Selenastrum sp.</i>	96 hours
	Acute LC50 10800 µg/l Marine water	Crustaceans - Aesop shrimp - <i>Pandalus montagui</i> - Adult	48 hours
	Acute LC50 2.518 mg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i>	48 hours
	Acute LC50 7200 µg/l Fresh water	Fish - Rainbow trout,donaldson trout - <i>Oncorhynchus mykiss</i>	96 hours
<b>Hyb Enhancer</b> Formamide	Acute EC50 >500 mg/l Fresh water	Algae	72 hours
	Acute EC50 >500 mg/l Fresh water	Daphnia	48 hours
	Acute LC50 6569 mg/l Fresh water	Fish	96 hours
	Acute NOEC 4640 mg/l Fresh water	Algae	72 hours
	Acute NOEC 4640 mg/l Fresh water	Fish	96 hours
<b>2X Amplification Mastermix</b> Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Trout - <i>Oncorhynchus mykiss</i>	96 hours

**Conclusion/Summary** : Not available.

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<b>End Prep Enzyme</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
<b>Ligation Enzyme</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
<b>Hyb Enhancer</b> Formamide	OECD 301A Ready Biodegradability - DOC Die-Away Test	99 % - Readily - 28 days	-	-
<b>2X Amplification Mastermix</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

**Conclusion/Summary** : Not available.

**SECTION 12: Ecological information**

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<b>Nuclease-Free Water</b> water	-	-	Readily
<b>Hyb Buffer</b> tetramethylammonium chloride	-	-	Readily
<b>Hyb Enhancer</b> Formamide	-	-	Readily

**12.3 Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>Nuclease-Free Water</b> water	-1.38	-	Low
<b>End Prep Enzyme</b> Glycerol	-1.76	-	Low
<b>Ligation Enzyme</b> Glycerol	-1.76	-	Low
<b>Hyb Buffer</b> tetramethylammonium chloride	<-1.6	-	Low
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	2.7	78.67	Low
<b>Hyb Enhancer</b> Formamide	-0.82	-	Low
<b>2X Amplification Mastermix</b> Glycerol	-1.76	-	Low

**12.4 Mobility in soil**

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

**Mobility** : Not available.

**12.5 Results of PBT and vPvB assessment**

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
<b>Nuclease-Free Water</b> water	Not applicable (Inorganic)	N/A	N/A	N/A	Not applicable (Inorganic)	N/A	N/A

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

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : 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.

**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : 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

	ADR/RID	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No.	No.	No.

#### Additional information

**14.6 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.

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

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture UK (GB)/REACH

#### Annex XIV - List of substances subject to authorisation

##### Annex XIV

None of the components are listed.

##### Substances of very high concern

**SECTION 15: Regulatory information**

Intrinsic property	Ingredient name	Status	Reference number	Date of revision
<b>Hyb Buffer</b> Substance of equivalent concern for environment	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated covering well-defined substances and UVCB substances, polymers and homologues	Candidate	-	12/19/2012
<b>Hyb Enhancer</b> Toxic to reproduction	formamide	Candidate	-	6/18/2012

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

Product / Ingredient name	Identifiers	Status
<b>End Prep Buffer</b> End Prep Buffer		3
<b>Hyb Buffer</b> Hyb Buffer		3
<b>Hyb Enhancer</b> Hyb Enhancer		3 30
Formamide		30

<b>Label</b>	: Nuclease-Free Water	Not applicable.
	Library Wash Buffer	Not applicable.
	Hyb Wash Buffer 1	Not applicable.
	Hyb Wash Buffer 2	Not applicable.
	Resuspension Buffer	Not applicable.
	End Prep Buffer	Not applicable.
	End Prep Enzyme	Not applicable.
	Ligation Buffer	Not applicable.
	Ligation Enzyme	Not applicable.
	Adapter for ILM	Not applicable.
	Hyb Blocker	Not applicable.
	Hyb Buffer	Not applicable.
	Hyb Enhancer	Restricted to professional users.
	2X Amplification Mastermix	Not applicable.
	Library Binding Beads	Not applicable.
	Capture Beads	Not applicable.
	Index Primer Mix for ILM 1-8	Not applicable.
	Index Primer Mix for ILM 9-16	Not applicable.

Seveso Directive

This product is not controlled under the Seveso Directive.

Danger criteria

<b>Category</b>
<b>Hyb Buffer</b> H3

EU regulations

**SECTION 15: Regulatory information**

**Industrial emissions (integrated pollution prevention and control) - Air** : Not listed

**Industrial emissions (integrated pollution prevention and control) - Water** : Not listed

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

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

**United States** : Not determined.

**SECTION 16: Other information**

✔ Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DMEL = Derived Minimal Effect Level  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 N/A = Not available  
 PBT = Persistent, Bioaccumulative and Toxic  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number  
 vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

Classification	Justification
<b>End Prep Buffer</b> Aquatic Chronic 3, H412	Calculation method
<b>Hyb Buffer</b> Acute Tox. 4, H302 Skin Irrit. 2, H315 STOT SE 1, H370 Aquatic Chronic 3, H412	Calculation method Calculation method Calculation method Calculation method
<b>Hyb Enhancer</b> Carc. 2, H351 Repr. 1B, H360 STOT RE 2, H373	Calculation method Calculation method Calculation method

Full text of abbreviated H statements

**SECTION 16: Other information**

<b>End Prep Buffer</b>	
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
<b>Hyb Buffer</b>	
H300	Fatal if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H370	Causes damage to organs.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
<b>Hyb Enhancer</b>	
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

[Full text of classifications](#)

<b>End Prep Buffer</b>	
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
<b>Hyb Buffer</b>	
Acute Tox. 2	ACUTE TOXICITY - Category 2
Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
STOT SE 1	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 1
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3
<b>Hyb Enhancer</b>	
Carc. 2	CARCINOGENICITY - Category 2
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2

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