

# SAFETY DATA SHEET



Lambda Dash II EcoR I-treated - Gigapack III Cloning Kit, Part Number 247614

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

### 1.1 Product identifier

<b>Product name</b>	: Lambda Dash II EcoR I-treated - Gigapack III Cloning Kit, Part Number 247614
<b>Part no. (chemical kit)</b>	: 247614
<b>Part no.</b>	: Lambda DASH II Vector 247212-51 Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain 200302-81 XL1-Blue MRA (p2) E. coli Strain 200303-81 pDT-RI/EcoR I Test Insert 210200-56 Gigapack III packaging extract 200201-41 VCS257 E. coli Strain 200256-51 Wild-Type Lambda DNA c1857ind 1 Sam7 246203-51

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

<b>Material uses</b>	: Analytical reagent.
	Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated 0.01 ml (10 µg 1 µg/µl)
	XL1-Blue MRA E.coli Strain 0.5 ml
	XL1-Blue MRA (p2) E.coli Strain 0.5 ml
	pDT-RI/EcoR I Test Insert 0.005 ml (2 µg 0.4 µg/µl)
	Gigapack III packaging extract 0.275 ml
	VCS257 E. coli Strain 1 ml
	Wild-Type Lambda DNA c1857ind 1 Sam7 0.005 ml (1.05 µg 0.21 µg/µl)

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

Agilent Technologies Manufacturing GmbH & Co. KG  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**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

Lambda Dash II EcoR I-treated - Gigapack III Cloning Kit, Part Number 247614

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

<b>Product definition</b>	:	Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	Mixture
		XL1-Blue MRA E.coli Strain	Mixture
		XL1-Blue MRA (p2) E. coli Strain	Mixture
		pDT-RI/EcoR I Test Insert	Mixture
		Gigapack III packaging extract	Mixture
		VCS257 E. coli Strain	Mixture
		Wild-Type Lambda DNA c1857ind 1 Sam7	Mixture

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

Not classified.

<b>Ingredients of unknown toxicity</b>	:	<input checked="" type="checkbox"/> XL1-Blue MRA E.coli Strain	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%
		XL1-Blue MRA (p2) E.coli Strain	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%
		Gigapack III packaging extract	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 1 - 10%
		VCS257 E. coli Strain	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%

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

<b>Signal word</b>	:	Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	No signal word.
		XL1-Blue MRA E.coli Strain	No signal word.
		XL1-Blue MRA (p2) E. coli Strain	No signal word.
		pDT-RI/EcoR I Test Insert	No signal word.
		Gigapack III packaging extract	No signal word.
		VCS257 E. coli Strain	No signal word.
		Wild-Type Lambda DNA c1857ind 1 Sam7	No signal word.
<b>Hazard statements</b>	:	Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	No known significant effects or critical hazards.
		XL1-Blue MRA E.coli Strain	No known significant effects or critical hazards.
		XL1-Blue MRA (p2) E. coli Strain	No known significant effects or critical hazards.
		pDT-RI/EcoR I Test Insert	No known significant effects or critical hazards.
		Gigapack III packaging extract	No known significant effects or critical hazards.

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## SECTION 2: Hazards identification

VCS257 E. coli Strain No known significant effects or critical hazards.  
 Wild-Type Lambda DNA No known significant effects or critical hazards.  
 c1857ind 1 Sam7

### Precautionary statements

#### **Prevention**

: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated Not applicable.  
 XL1-Blue MRA E.coli Strain Not applicable.  
 XL1-Blue MRA (p2) E. coli Strain Not applicable.  
 pDT-RI/EcoR I Test Insert Not applicable.  
 Gigapack III packaging extract Not applicable.  
 VCS257 E. coli Strain Not applicable.  
 Wild-Type Lambda DNA c1857ind 1 Sam7 Not applicable.

#### **Response**

: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated Not applicable.  
 XL1-Blue MRA E.coli Strain Not applicable.  
 XL1-Blue MRA (p2) E. coli Strain Not applicable.  
 pDT-RI/EcoR I Test Insert Not applicable.  
 Gigapack III packaging extract Not applicable.  
 VCS257 E. coli Strain Not applicable.  
 Wild-Type Lambda DNA c1857ind 1 Sam7 Not applicable.

#### **Storage**

: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated Not applicable.  
 XL1-Blue MRA E.coli Strain Not applicable.  
 XL1-Blue MRA (p2) E. coli Strain Not applicable.  
 pDT-RI/EcoR I Test Insert Not applicable.  
 Gigapack III packaging extract Not applicable.  
 VCS257 E. coli Strain Not applicable.  
 Wild-Type Lambda DNA c1857ind 1 Sam7 Not applicable.

#### **Disposal**

: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated Not applicable.  
 XL1-Blue MRA E.coli Strain Not applicable.  
 XL1-Blue MRA (p2) E. coli Strain Not applicable.  
 pDT-RI/EcoR I Test Insert Not applicable.  
 Gigapack III packaging extract Not applicable.  
 VCS257 E. coli Strain Not applicable.

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	Wild-Type Lambda DNA c1857ind 1 Sam7	Not applicable.
<b>Hazardous ingredients</b>	: XL1-Blue MRA E.coli Strain	Not applicable.
	XL1-Blue MRA (p2) E. coli Strain	Not applicable.
	VCS257 E. coli Strain	Not applicable.
<b>Supplemental label elements</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	Not applicable.
	XL1-Blue MRA E.coli Strain	Safety data sheet available on request.
	XL1-Blue MRA (p2) E. coli Strain	Safety data sheet available on request.
	pDT-RI/EcoR I Test Insert	Not applicable.
	Gigapack III packaging extract	Not applicable.
	VCS257 E. coli Strain	Safety data sheet available on request.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not applicable.
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	Not applicable.
	XL1-Blue MRA E.coli Strain	Not applicable.
	XL1-Blue MRA (p2) E. coli Strain	Not applicable.
	pDT-RI/EcoR I Test Insert	Not applicable.
	Gigapack III packaging extract	Not applicable.
	VCS257 E. coli Strain	Not applicable.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not applicable.
<b>Special packaging requirements</b>		
<b>Tactile warning of danger</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	Not applicable.
	XL1-Blue MRA E.coli Strain	Not applicable.
	XL1-Blue MRA (p2) E. coli Strain	Not applicable.
	pDT-RI/EcoR I Test Insert	Not applicable.
	Gigapack III packaging extract	Not applicable.
	VCS257 E. coli Strain	Not applicable.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not applicable.

### 2.3 Other hazards

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

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<p> <input checked="" type="checkbox"/> Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated                      XL1-Blue MRA E.coli Strain                      XL1-Blue MRA (p2) E. coli Strain                      pDT-RI/EcoR I Test Insert                      Gigapack III packaging extract                      VCS257 E. coli Strain                      Wild-Type Lambda DNA c1857ind 1 Sam7                 </p>	<p>                     This mixture does not contain any substances that are assessed to be a PBT or a vPvB.                      This mixture does not contain any substances that are assessed to be a PBT or a vPvB.                      This mixture does not contain any substances that are assessed to be a PBT or a vPvB.                      This mixture does not contain any substances that are assessed to be a PBT or a vPvB.                      This mixture does not contain any substances that are assessed to be a PBT or a vPvB.                      This mixture does not contain any substances that are assessed to be a PBT or a vPvB.                      This mixture does not contain any substances that are assessed to be a PBT or a vPvB.                 </p>
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**Other hazards which do not result in classification**

<p>                     : Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated                      XL1-Blue MRA E.coli Strain                      XL1-Blue MRA (p2) E. coli Strain                      pDT-RI/EcoR I Test Insert                      Gigapack III packaging extract                      VCS257 E. coli Strain                      Wild-Type Lambda DNA c1857ind 1 Sam7                 </p>	<p>                     None known.                      None known.                      None known.                      None known.                      None known.                      None known.                      None known.                 </p>
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**SECTION 3: Composition/information on ingredients**

**3.1 Substances**

<p>                     : Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated                      XL1-Blue MRA E.coli Strain                      XL1-Blue MRA (p2) E.coli Strain                      pDT-RI/EcoR I Test Insert                      Gigapack III packaging extract                      VCS257 E. coli Strain                      Wild-Type Lambda DNA c1857ind 1 Sam7                 </p>	<p>                     Mixture                      Mixture                      Mixture                      Mixture                      Mixture                      Mixture                 </p>
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Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
<input checked="" type="checkbox"/> XL1-Blue MRA E.coli Strain	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥10 - ≤25	Not classified.	[2]
Glycerol				
Sodium chloride	REACH #: Annex V EC: 231-598-3 CAS: 7647-14-5	≤3	Eye Irrit. 2, H319	[1]
<b>XL1-Blue MRA (p2) E.coli Strain</b>	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥10 - ≤25	Not classified.	[2]
Glycerol				
Sodium chloride	REACH #: Annex V EC: 231-598-3 CAS: 7647-14-5	≤3	Eye Irrit. 2, H319	[1]
<b>Gigapack III packaging extract</b>				

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Sucrose	REACH #: Annex IV EC: 200-334-9 CAS: 57-50-1	≤10	Not classified.	[2]
<b>VCS257 E. coli Strain</b>				
Glycerol	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥10 - ≤25	Not classified.	[2]
Sodium chloride	EC: 231-598-3 CAS: 7647-14-5	≤3	Eye Irrit. 2, H319	[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 and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern
- [6] Additional disclosure due to company policy

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

**Eye contact**

- : Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated  
XL1-Blue MRA E.coli Strain  
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.
- : XL1-Blue MRA (p2) E. coli Strain  
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.
- : pDT-RI/EcoR I Test Insert  
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.
- : Gigapack III packaging extract  
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.
- : VCS257 E. coli Strain  
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.
- : Wild-Type Lambda DNA c1857ind 1 Sam7  
Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

**Inhalation**

- : Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated  
XL1-Blue MRA E.coli Strain  
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- : XL1-Blue MRA (p2) E. coli Strain  
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- : pDT-RI/EcoR I Test Insert  
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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	Gigapack III packaging extract	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	VCS257 E. coli Strain	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
<b>Skin contact</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	XL1-Blue MRA E.coli Strain	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	XL1-Blue MRA (p2) E. coli Strain	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pDT-RI/EcoR I Test Insert	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Gigapack III packaging extract	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	VCS257 E. coli Strain	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	XL1-Blue MRA E.coli Strain	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	XL1-Blue MRA (p2) E. coli Strain	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	pDT-RI/EcoR I Test Insert	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Gigapack III packaging extract	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	VCS257 E. coli Strain	Wash out mouth with water. Remove victim to fresh air and

## SECTION 4: First aid measures

	Wild-Type Lambda DNA c1857ind 1 Sam7	keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
<b>Protection of first-aiders</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain  Wild-Type Lambda DNA c1857ind 1 Sam7	No action shall be taken involving any personal risk or without suitable training.  No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training.

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

#### Potential acute health effects

<b>Eye contact</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.  No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Inhalation</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.  No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

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<b>Skin contact</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.
<b>Ingestion</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.
<b><u>Over-exposure signs/symptoms</u></b>		
<b>Eye contact</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.  No specific data.  No specific data.  No specific data.  No specific data.
<b>Inhalation</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.  No specific data.  No specific data.  No specific data.  No specific data.

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<b>Skin contact</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
<b>Ingestion</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.

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

<b>Notes to physician</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain  Wild-Type Lambda DNA c1857ind 1 Sam7	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.  Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA	No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment.

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## SECTION 4: First aid measures

c1857ind 1 Sam7

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	Use an extinguishing agent suitable for the surrounding fire.  Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	None known.  None known. None known. None known. None known. None known. None known.

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

<b>Hazards from the substance or mixture</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain  Wild-Type Lambda DNA c1857ind 1 Sam7	In a fire or if heated, a pressure increase will occur and the container may burst.  In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst.  In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous combustion products</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain	No specific data.  Decomposition products may include the following materials:  carbon dioxide carbon monoxide halogenated compounds

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XL1-Blue MRA (p2) E. coli Strain	metal oxide/oxides Decomposition products may include the following materials:  carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
pDT-RI/EcoR I Test Insert Gigapack III packaging extract	No specific data.  Decomposition products may include the following materials:  carbon dioxide carbon monoxide
VCS257 E. coli Strain	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.

**5.3 Advice for firefighters**

**Special precautions for fire-fighters**

: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain	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.  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.
XL1-Blue MRA (p2) E. coli Strain	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.
pDT-RI/EcoR I Test Insert	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.
Gigapack III packaging extract	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.
VCS257 E. coli Strain	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.
Wild-Type Lambda DNA c1857ind 1 Sam7	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters**

: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
XL1-Blue MRA E.coli Strain	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
XL1-Blue MRA (p2) E. coli Strain	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

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**SECTION 5: Firefighting measures**

pDT-RI/EcoR I Test Insert	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Gigapack III packaging extract	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
VCS257 E. coli Strain	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Wild-Type Lambda DNA c1857ind 1 Sam7	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**SECTION 6: Accidental release measures**

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

<b>For non-emergency personnel</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	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.
	XL1-Blue MRA E.coli Strain	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.
	XL1-Blue MRA (p2) E. coli Strain	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.
	pDT-RI/EcoR I Test Insert	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.
	Gigapack III packaging extract	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.
	VCS257 E. coli Strain	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.
	Wild-Type Lambda DNA c1857ind 1 Sam7	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.

## SECTION 6: Accidental release measures

<b>For emergency responders</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain	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".
	XL1-Blue MRA (p2) E. coli Strain	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".
	pDT-RI/EcoR I Test Insert	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".
	Gigapack III packaging extract	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".
	VCS257 E. coli Strain	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".
	Wild-Type Lambda DNA c1857ind 1 Sam7	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".
<b>6.2 Environmental precautions</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain	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).
	XL1-Blue MRA (p2) E. coli Strain	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).
	pDT-RI/EcoR I Test Insert	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).
	Gigapack III packaging extract	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).
	VCS257 E. coli Strain	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).
	Wild-Type Lambda DNA c1857ind 1 Sam7	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

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## SECTION 6: Accidental release measures

<b>Methods for cleaning up</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	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.
	XL1-Blue MRA E.coli Strain	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.
	XL1-Blue MRA (p2) E. coli Strain	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.
	pDT-RI/EcoR I Test Insert	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.
	Gigapack III packaging extract	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.
	VCS257 E. coli Strain	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.
	Wild-Type Lambda DNA c1857ind 1 Sam7	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>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	Put on appropriate personal protective equipment (see Section 8).
	XL1-Blue MRA E.coli Strain	Put on appropriate personal protective equipment (see Section 8).
	XL1-Blue MRA (p2) E. coli Strain	Put on appropriate personal protective equipment (see Section 8).
	pDT-RI/EcoR I Test Insert	Put on appropriate personal protective equipment (see Section 8).
	Gigapack III packaging extract	Put on appropriate personal protective equipment (see Section 8).
	VCS257 E. coli Strain	Put on appropriate personal protective equipment (see Section 8).
	Wild-Type Lambda DNA c1857ind 1 Sam7	Put on appropriate personal protective equipment (see Section 8).

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**SECTION 7: Handling and storage**

**Advice on general occupational hygiene**

: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	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.
XL1-Blue MRA E.coli Strain	Potentially biohazardous material. 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.
XL1-Blue MRA (p2) E. coli Strain	Potentially biohazardous material. 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.
pDT-RI/EcoR I Test Insert	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.
Gigapack III packaging extract	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.
VCS257 E. coli Strain	Potentially biohazardous material. 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.
Wild-Type Lambda DNA c1857ind 1 Sam7	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**

: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	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.
XL1-Blue MRA E.coli Strain	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

## **SECTION 7: Handling and storage**

	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.
XL1-Blue MRA (p2) E. coli Strain	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.
pDT-RI/EcoR I Test Insert	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.
Gigapack III packaging extract	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.
VCS257 E. coli Strain	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.
Wild-Type Lambda DNA c1857ind 1 Sam7	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.

### **7.3 Specific end use(s)**

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## SECTION 7: Handling and storage

<b>Recommendations</b>	:	Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications.
<b>Industrial sector specific solutions</b>	:	Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
<b>XL1-Blue MRA E.coli Strain</b> Glycerol	<b>EH40/2005 WELs (United Kingdom (UK), 8/2018).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist
<b>XL1-Blue MRA (p2) E.coli Strain</b> Glycerol	<b>EH40/2005 WELs (United Kingdom (UK), 8/2018).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist
<b>Gigapack III packaging extract</b> Sucrose	<b>EH40/2005 WELs (United Kingdom (UK), 8/2018).</b> STEL: 20 mg/m <sup>3</sup> 15 minutes. TWA: 10 mg/m <sup>3</sup> 8 hours.
<b>VCS257 E. coli Strain</b> Glycerol	<b>EH40/2005 WELs (United Kingdom (UK), 8/2018).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of

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## SECTION 8: Exposure controls/personal protection

exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) 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>XL1-Blue MRA E.coli Strain</b> Sodium chloride	DNEL	Short term Oral	126.65 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Oral	126.65 mg/ kg bw/day	General population	Systemic
	DNEL	Short term Dermal	126.65 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Dermal	126.65 mg/ kg bw/day	General population	Systemic
	DNEL	Short term Dermal	295.52 mg/ kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	295.52 mg/ kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	443.28 mg/ m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	443.28 mg/ m <sup>3</sup>	General population	Systemic
	DNEL	Short term Inhalation	2068.62 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	2068.62 mg/m <sup>3</sup>	Workers	Systemic
<b>XL1-Blue MRA (p2) E.coli Strain</b> Sodium chloride	DNEL	Short term Oral	126.65 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Oral	126.65 mg/ kg bw/day	General population	Systemic
	DNEL	Short term Dermal	126.65 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Dermal	126.65 mg/ kg bw/day	General population	Systemic
	DNEL	Short term Dermal	295.52 mg/ kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	295.52 mg/ kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	443.28 mg/ m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	443.28 mg/ m <sup>3</sup>	General population	Systemic
	DNEL	Short term Inhalation	2068.62 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	2068.62 mg/m <sup>3</sup>	Workers	Systemic
<b>VCS257 E. coli Strain</b> Sodium chloride	DNEL	Short term Oral	126.65 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Oral	126.65 mg/ kg bw/day	General population	Systemic
	DNEL	Short term Dermal	126.65 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Dermal	126.65 mg/ kg bw/day	General population	Systemic
	DNEL	Short term Dermal	295.52 mg/ kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	295.52 mg/ kg bw/day	Workers	Systemic

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## SECTION 8: Exposure controls/personal protection

	DNEL	Short term Inhalation	kg bw/day 443.28 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	443.28 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Short term Inhalation	2068.62 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	2068.62 mg/m <sup>3</sup>	Workers	Systemic

### PNECs

No PNECs available

### 8.2 Exposure controls

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

### Individual protection measures

**Hygiene measures** : Handle as biohazard material (Biosafety level 1). 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.

**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

### 9.1 Information on basic physical and chemical properties

#### Appearance

**Physical state** : Lambda DASH II Liquid.  
Vector Double Digested  
With EcoR I And Xho I  
CIAP Treated  
XL1-Blue MRA E.coli Liquid.  
Strain  
XL1-Blue MRA (p2) E. Liquid.  
coli Strain  
pDT-RI/EcoR I Test Liquid.

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**SECTION 9: Physical and chemical properties**

	Insert	
	Gigapack III packaging extract	Liquid.
	VCS257 E. coli Strain	Liquid.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Liquid.
<b>Colour</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	Not available.
	XL1-Blue MRA E.coli Strain	Not available.
	XL1-Blue MRA (p2) E. coli Strain	Not available.
	pDT-RI/EcoR I Test Insert	Not available.
	Gigapack III packaging extract	Not available.
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
<b>Odour</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	Not available.
	XL1-Blue MRA E.coli Strain	Not available.
	XL1-Blue MRA (p2) E. coli Strain	Not available.
	pDT-RI/EcoR I Test Insert	Not available.
	Gigapack III packaging extract	Not available.
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
<b>Odour threshold</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	Not available.
	XL1-Blue MRA E.coli Strain	Not available.
	XL1-Blue MRA (p2) E. coli Strain	Not available.
	pDT-RI/EcoR I Test Insert	Not available.
	Gigapack III packaging extract	Not available.
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
<b>pH</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	7.5
	XL1-Blue MRA E.coli Strain	7
	XL1-Blue MRA (p2) E. coli Strain	7
	pDT-RI/EcoR I Test Insert	7.5

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## SECTION 9: Physical and chemical properties

	Gigapack III packaging extract	8
	VCS257 E. coli Strain	7
	Wild-Type Lambda DNA c1857ind 1 Sam7	7
<b>Melting point/freezing point</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	0°C
	XL1-Blue MRA E.coli Strain	Not available.
	XL1-Blue MRA (p2) E. coli Strain	Not available.
	pDT-RI/EcoR I Test Insert	0°C
	Gigapack III packaging extract	Not available.
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda DNA c1857ind 1 Sam7	0°C
<b>Initial boiling point and boiling range</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	100°C
	XL1-Blue MRA E.coli Strain	Not available.
	XL1-Blue MRA (p2) E. coli Strain	Not available.
	pDT-RI/EcoR I Test Insert	100°C
	Gigapack III packaging extract	Not available.
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda DNA c1857ind 1 Sam7	100°C
<b>Flash point</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	Not available.
	XL1-Blue MRA E.coli Strain	Not available.
	XL1-Blue MRA (p2) E. coli Strain	Not available.
	pDT-RI/EcoR I Test Insert	Not available.
	Gigapack III packaging extract	Not available.
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
<b>Evaporation rate</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	Not available.
	XL1-Blue MRA E.coli Strain	Not available.
	XL1-Blue MRA (p2) E. coli Strain	Not available.
	pDT-RI/EcoR I Test Insert	Not available.
	Gigapack III packaging	Not available.

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## SECTION 9: Physical and chemical properties

	extract	
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda	Not available.
	DNA c1857ind 1 Sam7	
<b>Flammability (solid, gas)</b>	: Lambda DASH II	Not applicable.
	Vector Double	
	Digested With EcoR I	
	And Xho I CIAP	
	Treated	
	XL1-Blue MRA E.coli	Not applicable.
	Strain	
	XL1-Blue MRA (p2) E.	Not applicable.
	coli Strain	
	pDT-RI/EcoR I Test	Not applicable.
	Insert	
	Gigapack III packaging	Not applicable.
	extract	
	VCS257 E. coli Strain	Not applicable.
	Wild-Type Lambda	Not applicable.
	DNA c1857ind 1 Sam7	
<b>Upper/lower flammability or explosive limits</b>	: Lambda DASH II	Not available.
	Vector Double Digested	
	With EcoR I And Xho I	
	CIAP Treated	
	XL1-Blue MRA E.coli	Not available.
	Strain	
	XL1-Blue MRA (p2) E.	Not available.
	coli Strain	
	pDT-RI/EcoR I Test	Not available.
	Insert	
	Gigapack III packaging	Not available.
	extract	
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda	Not available.
	DNA c1857ind 1 Sam7	
<b>Vapour pressure</b>	: Lambda DASH II	Not available.
	Vector Double Digested	
	With EcoR I And Xho I	
	CIAP Treated	
	XL1-Blue MRA E.coli	Not available.
	Strain	
	XL1-Blue MRA (p2) E.	Not available.
	coli Strain	
	pDT-RI/EcoR I Test	Not available.
	Insert	
	Gigapack III packaging	Not available.
	extract	
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda	Not available.
	DNA c1857ind 1 Sam7	
<b>Vapour density</b>	: Lambda DASH II	Not available.
	Vector Double Digested	
	With EcoR I And Xho I	
	CIAP Treated	
	XL1-Blue MRA E.coli	Not available.
	Strain	
	XL1-Blue MRA (p2) E.	Not available.
	coli Strain	
	pDT-RI/EcoR I Test	Not available.
	Insert	
	Gigapack III packaging	Not available.

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## SECTION 9: Physical and chemical properties

	extract	
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda	Not available.
	DNA c1857ind 1 Sam7	
<b>Relative density</b>	: Lambda DASH II	Not available.
	Vector Double Digested	
	With EcoR I And Xho I	
	CIAP Treated	
	XL1-Blue MRA E.coli	Not available.
	Strain	
	XL1-Blue MRA (p2) E.	Not available.
	coli Strain	
	pDT-RI/EcoR I Test	Not available.
	Insert	
	Gigapack III packaging	Not available.
	extract	
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda	Not available.
	DNA c1857ind 1 Sam7	
<b>Solubility(ies)</b>	: Lambda DASH II	Easily soluble in the following materials: cold water and hot water.
	Vector Double Digested	
	With EcoR I And Xho I	
	CIAP Treated	
	XL1-Blue MRA E.coli	Soluble in the following materials: cold water and hot water.
	Strain	
	XL1-Blue MRA (p2) E.	Soluble in the following materials: cold water and hot water.
	coli Strain	
	pDT-RI/EcoR I Test	Easily soluble in the following materials: cold water and hot water.
	Insert	
	Gigapack III packaging	Easily soluble in the following materials: cold water and hot water.
	extract	
	VCS257 E. coli Strain	Easily soluble in the following materials: cold water and hot water.
	Wild-Type Lambda	Easily soluble in the following materials: cold water and hot water.
	DNA c1857ind 1 Sam7	
<b>Partition coefficient: n-octanol/water</b>	: Lambda DASH II	Not available.
	Vector Double Digested	
	With EcoR I And Xho I	
	CIAP Treated	
	XL1-Blue MRA E.coli	Not available.
	Strain	
	XL1-Blue MRA (p2) E.	Not available.
	coli Strain	
	pDT-RI/EcoR I Test	Not available.
	Insert	
	Gigapack III packaging	Not available.
	extract	
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda	Not available.
	DNA c1857ind 1 Sam7	
<b>Auto-ignition temperature</b>	: Lambda DASH II	Not available.
	Vector Double Digested	
	With EcoR I And Xho I	
	CIAP Treated	
	XL1-Blue MRA E.coli	Not available.
	Strain	
	XL1-Blue MRA (p2) E.	Not available.
	coli Strain	
	pDT-RI/EcoR I Test	Not available.
	Insert	
	Gigapack III packaging	Not available.

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## SECTION 9: Physical and chemical properties

	extract	
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda	Not available.
	DNA c1857ind 1 Sam7	
<b>Decomposition temperature</b>	: Lambda DASH II	Not available.
	Vector Double Digested	
	With EcoR I And Xho I	
	CIAP Treated	
	XL1-Blue MRA E.coli	Not available.
	Strain	
	XL1-Blue MRA (p2) E.	Not available.
	coli Strain	
	pDT-RI/EcoR I Test	Not available.
	Insert	
	Gigapack III packaging	Not available.
	extract	
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda	Not available.
	DNA c1857ind 1 Sam7	
<b>Viscosity</b>	: Lambda DASH II	Not available.
	Vector Double Digested	
	With EcoR I And Xho I	
	CIAP Treated	
	XL1-Blue MRA E.coli	Not available.
	Strain	
	XL1-Blue MRA (p2) E.	Not available.
	coli Strain	
	pDT-RI/EcoR I Test	Not available.
	Insert	
	Gigapack III packaging	Not available.
	extract	
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda	Not available.
	DNA c1857ind 1 Sam7	
<b>Explosive properties</b>	: Lambda DASH II	Not available.
	Vector Double Digested	
	With EcoR I And Xho I	
	CIAP Treated	
	XL1-Blue MRA E.coli	Not available.
	Strain	
	XL1-Blue MRA (p2) E.	Not available.
	coli Strain	
	pDT-RI/EcoR I Test	Not available.
	Insert	
	Gigapack III packaging	Not available.
	extract	
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda	Not available.
	DNA c1857ind 1 Sam7	
<b>Oxidising properties</b>	: Lambda DASH II	Not available.
	Vector Double Digested	
	With EcoR I And Xho I	
	CIAP Treated	
	XL1-Blue MRA E.coli	Not available.
	Strain	
	XL1-Blue MRA (p2) E.	Not available.
	coli Strain	
	pDT-RI/EcoR I Test	Not available.
	Insert	
	Gigapack III packaging	Not available.
	extract	

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## SECTION 9: Physical and chemical properties

VCS257 E. coli Strain	Not available.
Wild-Type Lambda	Not available.
DNA c1857ind 1 Sam7	

### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	:	Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	No specific test data related to reactivity available for this product or its ingredients.
		XL1-Blue MRA E.coli Strain	No specific test data related to reactivity available for this product or its ingredients.
		XL1-Blue MRA (p2) E. coli Strain	No specific test data related to reactivity available for this product or its ingredients.
		pDT-RI/EcoR I Test Insert	No specific test data related to reactivity available for this product or its ingredients.
		Gigapack III packaging extract	No specific test data related to reactivity available for this product or its ingredients.
		VCS257 E. coli Strain	No specific test data related to reactivity available for this product or its ingredients.
		Wild-Type Lambda DNA c1857ind 1 Sam7	No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	:	Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	The product is stable.
		XL1-Blue MRA E.coli Strain	The product is stable.
		XL1-Blue MRA (p2) E. coli Strain	The product is stable.
		pDT-RI/EcoR I Test Insert	The product is stable.
		Gigapack III packaging extract	The product is stable.
		VCS257 E. coli Strain	The product is stable.
		Wild-Type Lambda DNA c1857ind 1 Sam7	The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	:	Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	Under normal conditions of storage and use, hazardous reactions will not occur.
		XL1-Blue MRA E.coli Strain	Under normal conditions of storage and use, hazardous reactions will not occur.
		XL1-Blue MRA (p2) E. coli Strain	Under normal conditions of storage and use, hazardous reactions will not occur.
		pDT-RI/EcoR I Test Insert	Under normal conditions of storage and use, hazardous reactions will not occur.
		Gigapack III packaging extract	Under normal conditions of storage and use, hazardous reactions will not occur.
		VCS257 E. coli Strain	Under normal conditions of storage and use, hazardous reactions will not occur.
		Wild-Type Lambda DNA c1857ind 1 Sam7	Under normal conditions of storage and use, hazardous reactions will not occur.

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**SECTION 10: Stability and reactivity**

<b>10.4 Conditions to avoid</b>	:	Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	No specific data.
		XL1-Blue MRA E.coli Strain	No specific data.
		XL1-Blue MRA (p2) E. coli Strain	No specific data.
		pDT-RI/EcoR I Test Insert	No specific data.
		Gigapack III packaging extract	No specific data.
		VCS257 E. coli Strain	No specific data.
		Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.
<b>10.5 Incompatible materials</b>	:	Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	May react or be incompatible with oxidising materials.
		XL1-Blue MRA E.coli Strain	May react or be incompatible with oxidising materials.
		XL1-Blue MRA (p2) E. coli Strain	May react or be incompatible with oxidising materials.
		pDT-RI/EcoR I Test Insert	May react or be incompatible with oxidising materials.
		Gigapack III packaging extract	May react or be incompatible with oxidising materials.
		VCS257 E. coli Strain	May react or be incompatible with oxidising materials.
		Wild-Type Lambda DNA c1857ind 1 Sam7	May react or be incompatible with oxidising materials.
<b>10.6 Hazardous decomposition products</b>	:	Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		XL1-Blue MRA E.coli Strain	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		XL1-Blue MRA (p2) E. coli Strain	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		pDT-RI/EcoR I Test Insert	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Gigapack III packaging extract	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		VCS257 E. coli Strain	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Wild-Type Lambda DNA c1857ind 1 Sam7	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

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## SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
<b>XL1-Blue MRA E.coli Strain</b> Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-
<b>XL1-Blue MRA (p2) E.coli Strain</b> Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-
<b>VCS257 E. coli Strain</b> Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-

### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
<input checked="" type="checkbox"/> <b>XL1-Blue MRA E.coli Strain</b> Sodium chloride	3000	N/A	N/A	N/A	N/A
<b>XL1-Blue MRA (p2) E.coli Strain</b> Sodium chloride	3000	N/A	N/A	N/A	N/A
<b>VCS257 E. coli Strain</b> Sodium chloride	3000	N/A	N/A	N/A	N/A

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<input checked="" type="checkbox"/> <b>XL1-Blue MRA E.coli Strain</b> Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
<b>XL1-Blue MRA (p2) E.coli Strain</b> Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
<b>VCS257 E. coli Strain</b> Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	10 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.

### Teratogenicity

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## SECTION 11: Toxicological information

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

### Information on likely routes of exposure

: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	Not available.
XL1-Blue MRA E.coli Strain	Routes of entry anticipated: Oral, Dermal, Inhalation.
XL1-Blue MRA (p2) E. coli Strain	Routes of entry anticipated: Oral, Dermal, Inhalation.
pDT-RI/EcoR I Test Insert	Not available.
Gigapack III packaging extract	Not available.
VCS257 E. coli Strain	Routes of entry anticipated: Oral, Dermal, Inhalation.
Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.

### Potential acute health effects

#### Inhalation

: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	No known significant effects or critical hazards.
XL1-Blue MRA E.coli Strain	No known significant effects or critical hazards.
XL1-Blue MRA (p2) E. coli Strain	No known significant effects or critical hazards.
pDT-RI/EcoR I Test Insert	No known significant effects or critical hazards.
Gigapack III packaging extract	No known significant effects or critical hazards.
VCS257 E. coli Strain	No known significant effects or critical hazards.
Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.

#### Ingestion

: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	No known significant effects or critical hazards.
XL1-Blue MRA E.coli Strain	No known significant effects or critical hazards.
XL1-Blue MRA (p2) E. coli Strain	No known significant effects or critical hazards.
pDT-RI/EcoR I Test Insert	No known significant effects or critical hazards.
Gigapack III packaging extract	No known significant effects or critical hazards.
VCS257 E. coli Strain	No known significant effects or critical hazards.
Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.

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## SECTION 11: Toxicological information

<b>Skin contact</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.
<b>Eye contact</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.

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

<b>Inhalation</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.  No specific data.  No specific data.  No specific data.  No specific data.
<b>Ingestion</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.  No specific data.  No specific data.  No specific data.  No specific data.

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<b>Skin contact</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.  No specific data.  No specific data.  No specific data.  No specific data.  No specific data.
<b>Eye contact</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.  No specific data.  No specific data.  No specific data.  No specific data.  No specific data.

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

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

<b>General</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.
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## SECTION 11: Toxicological information

<b>Carcinogenicity</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.
<b>Mutagenicity</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.
<b>Teratogenicity</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.
<b>Developmental effects</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.

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## SECTION 11: Toxicological information

<b>Fertility effects</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.  No known significant effects or critical hazards.
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## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
XL1-Blue MRA E.coli Strain Sodium chloride	Acute EC50 4.74 g/L Fresh water	Algae - Chlamydomonas reinhardtii	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
	Chronic LC10 781 mg/l Fresh water	Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	3 weeks
XL1-Blue MRA (p2) E.coli Strain Sodium chloride	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days
	Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks
	Acute EC50 4.74 g/L Fresh water	Algae - Chlamydomonas reinhardtii	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
VCS257 E. coli Strain Sodium chloride	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
	Chronic LC10 781 mg/l Fresh water	Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	3 weeks
	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days
VCS257 E. coli Strain Sodium chloride	Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks
	Acute EC50 4.74 g/L Fresh water	Algae - Chlamydomonas reinhardtii	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
VCS257 E. coli Strain Sodium chloride	Chronic LC10 781 mg/l Fresh water	Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	3 weeks
	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours

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## SECTION 12: Ecological information

	Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water	Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult	21 days 8 weeks
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### 12.2 Persistence and degradability

Not available.

### 12.3 Bioaccumulative potential

Not available.

### 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

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**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** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

#### 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. 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
<b>14.1 UN number</b>	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-

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## SECTION 14: Transport information

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

#### EU Regulation (EC) No. 1907/2006 (REACH)

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

###### Annex XIV

None of the components are listed.

###### Substances of very high concern

None of the components are listed.

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

<b>Label</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain pDT-RI/EcoR I Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
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### Other EU regulations

#### Ozone depleting substances (1005/2009/EU)

Not listed.

#### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

#### Seveso Directive

This product is not controlled under the Seveso Directive.

### 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.

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## SECTION 15: Regulatory information

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

Not listed.

### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Australia</b>	: Not determined.
<b>Canada</b>	: At least one component is not listed in DSL but all such components are listed in NDSL.
<b>China</b>	: Not determined.
<b>Europe</b>	: All components are listed or exempted.
<b>Japan</b>	: <b>Japan inventory (ENCS)</b> : Not determined. <b>Japan inventory (ISHL)</b> : Not determined.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: <input checked="" type="checkbox"/> All components are active or exempted.
<b>Viet Nam</b>	: Not determined.

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

## SECTION 16: Other information

Indicates information that has changed from previously issued version.

<b>Abbreviations and acronyms</b>	: 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
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### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Not classified.	

### Full text of abbreviated H statements

<b>XL1-Blue MRA E.coli Strain</b> H319	Causes serious eye irritation.
<b>XL1-Blue MRA (p2) E.coli Strain</b> H319	Causes serious eye irritation.
<b>VCS257 E. coli Strain</b> H319	Causes serious eye irritation.

### Full text of classifications [CLP/GHS]

Lambda Dash II EcoR I-treated - Gigapack III Cloning Kit, Part Number 247614

## SECTION 16: Other information

**XL1-Blue MRA E.coli Strain**

Eye Irrit. 2

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2

**XL1-Blue MRA (p2) E.coli Strain**

Eye Irrit. 2

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2

**VCS257 E. coli Strain**

Eye Irrit. 2

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2

**Date of issue/ Date of revision** : 20/04/2020

**Date of previous issue** : 21/02/2018

**Version** : 3

**Notice to reader**

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