

# SAFETY DATA SHEET

Lambda Dash II EcoR I-treated - Gigapack III XL Cloning Kit, Part Number 247714

## Section 1. Identification

<b>Product identifier</b>	: Lambda Dash II EcoR I-treated - Gigapack III XL Cloning Kit, Part Number 247714	
<b>Part no. (chemical kit)</b>	: 247714	
<b>Part no.</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	247212-51
	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 XL - 11 packaging extract	200207-41
	VCS257 E. coli Strain	200256-51
	Wild-Type Lambda DNA c1857ind 1 Sam7	246203-51
<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 XL - 11 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)
<b>Supplier/Manufacturer</b>	: Agilent Technologies, Inc. 5301 Stevens Creek Blvd Santa Clara, CA 95051, USA 800-227-9770	
<b>Emergency telephone number (with hours of operation)</b>	: CHEMTREC®: 1-800-424-9300	

## Section 2. Hazard identification

### Classification of the substance or mixture

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

H319 EYE IRRITATION - Category 2A

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

H319 EYE IRRITATION - Category 2A

#### VCS257 E. coli Strain

H319 EYE IRRITATION - Category 2A

### GHS label elements

## Section 2. Hazard identification

**Hazard pictograms** : XL1-Blue MRA E.coli Strain



XL1-Blue MRA (p2) E.coli Strain



VCS257 E. coli Strain



**Signal word** :

Lambda DASH II Vector	No signal word.
Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain	Warning
XL1-Blue MRA (p2) E.coli Strain	Warning
pDT-RI/EcoR I Test Insert	No signal word.
Gigapack III XL - 11 packaging extract	No signal word.
VCS257 E. coli Strain	Warning
Wild-Type Lambda DNA c1857ind 1 Sam7	No signal word.

**Hazard statements** :

Lambda DASH II Vector	No known significant effects or critical hazards.
Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain	H319 - Causes serious eye irritation.
XL1-Blue MRA (p2) E.coli Strain	H319 - Causes serious eye irritation.
pDT-RI/EcoR I Test Insert	No known significant effects or critical hazards.
Gigapack III XL - 11 packaging extract	No known significant effects or critical hazards.
VCS257 E. coli Strain	H319 - Causes serious eye irritation.
Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.

### Precautionary statements

**Prevention** :

Lambda DASH II Vector	Not applicable.
Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain	P280 - Wear eye or face protection.
XL1-Blue MRA (p2) E.coli Strain	P280 - Wear eye or face protection.
pDT-RI/EcoR I Test Insert	Not applicable.
Gigapack III XL - 11 packaging extract	Not applicable.
VCS257 E. coli Strain	P280 - Wear eye or face protection.
Wild-Type Lambda DNA c1857ind 1 Sam7	Not applicable.

## Section 2. Hazard identification

<b>Response</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain	Not applicable.
	XL1-Blue MRA (p2) E.coli Strain	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
	pDT-RI/EcoR I Test Insert Gigapack III XL - 11 packaging extract VCS257 E. coli Strain	Not applicable. Not applicable. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not applicable.
<b>Storage</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain	Not applicable.
	XL1-Blue MRA (p2) E.coli Strain	Not applicable.
	pDT-RI/EcoR I Test Insert Gigapack III XL - 11 packaging extract VCS257 E. coli Strain	Not applicable. Not applicable.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not applicable.
<b>Disposal</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain	Not applicable.
	XL1-Blue MRA (p2) E.coli Strain	Not applicable.
	pDT-RI/EcoR I Test Insert Gigapack III XL - 11 packaging extract VCS257 E. coli Strain	Not applicable. Not applicable.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not applicable.
<b>Supplemental label elements</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain	None known.
	XL1-Blue MRA (p2) E.coli Strain	None known.
	pDT-RI/EcoR I Test Insert Gigapack III XL - 11 packaging extract VCS257 E. coli Strain	None known. None known.
	Wild-Type Lambda DNA	None known.

## Section 2. Hazard identification

	c1857ind 1 Sam7	
<b>Other hazards which do not result in classification</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 XL - 11 packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	None known. None known. None known. None known. None known.

## Section 3. Composition/information on ingredients

<b>Substance/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 XL - 11 packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	Mixture Mixture Mixture Mixture Mixture Mixture Mixture Mixture
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Ingredient name	% (w/w)	CAS number
<b>XL1-Blue MRA E.coli Strain</b>		
Glycerol	10 - 30	56-81-5
Sodium chloride	0.1 - 1	7647-14-5
<b>XL1-Blue MRA (p2) E.coli Strain</b>		
Glycerol	10 - 30	56-81-5
Sodium chloride	0.1 - 1	7647-14-5
<b>VCS257 E. coli Strain</b>		
Glycerol	10 - 30	56-81-5
Sodium chloride	0.1 - 1	7647-14-5

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

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

## Section 4. First-aid measures

### Description of necessary first aid measures

<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	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.  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.  Immediately flush eyes with plenty of water,
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## Section 4. First-aid measures

	Strain	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.
	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 XL - 11 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. Continue to rinse for at least 10 minutes. Get medical attention.
	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.
<b>Inhalation</b>	: 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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	XL1-Blue MRA (p2) E.coli Strain	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	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.
	Gigapack III XL - 11 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. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately.

## Section 4. First-aid measures

	Wild-Type Lambda DNA c1857ind 1 Sam7	Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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 XL1-Blue MRA E.coli Strain	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	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. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	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 XL - 11 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. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	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 dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	XL1-Blue MRA (p2) E.coli Strain	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting

## Section 4. First-aid measures

	may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
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 XL - 11 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 dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Wild-Type Lambda DNA c1857ind 1 Sam7	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.

### Most important symptoms/effects, 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	No known significant effects or critical hazards. Causes serious eye irritation. Causes serious eye irritation.
	pDT-RI/EcoR I Test Insert	No known significant effects or critical hazards.
	Gigapack III XL - 11	No known significant effects or critical hazards.

## Section 4. First-aid measures

	packaging extract	
	VCS257 E. coli Strain	Causes serious eye irritation.
	Wild-Type Lambda DNA	No known significant effects or critical hazards.
	c1857ind 1 Sam7	
<b>Inhalation</b>	: Lambda DASH II Vector	No known significant effects or critical hazards.
	Double Digested With EcoR	
	I And Xho I CIAP Treated	
	XL1-Blue MRA E.coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRA (p2) E.coli	No known significant effects or critical hazards.
	Strain	
	pDT-RI/EcoR I Test Insert	No known significant effects or critical hazards.
	Gigapack III XL - 11	No known significant effects or critical hazards.
	packaging extract	
	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	
<b>Skin contact</b>	: Lambda DASH II Vector	No known significant effects or critical hazards.
	Double Digested With EcoR	
	I And Xho I CIAP Treated	
	XL1-Blue MRA E.coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRA (p2) E.coli	No known significant effects or critical hazards.
	Strain	
	pDT-RI/EcoR I Test Insert	No known significant effects or critical hazards.
	Gigapack III XL - 11	No known significant effects or critical hazards.
	packaging extract	
	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	
<b>Ingestion</b>	: Lambda DASH II Vector	No known significant effects or critical hazards.
	Double Digested With EcoR	
	I And Xho I CIAP Treated	
	XL1-Blue MRA E.coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRA (p2) E.coli	No known significant effects or critical hazards.
	Strain	
	pDT-RI/EcoR I Test Insert	No known significant effects or critical hazards.
	Gigapack III XL - 11	No known significant effects or critical hazards.
	packaging extract	
	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	
<b><u>Over-exposure signs/symptoms</u></b>		
<b>Eye contact</b>	: Lambda DASH II Vector	No specific data.
	Double Digested With EcoR	
	I And Xho I CIAP Treated	
	XL1-Blue MRA E.coli Strain	Adverse symptoms may include the following: pain or irritation watering redness
	XL1-Blue MRA (p2) E.coli	Adverse symptoms may include the following: pain or irritation watering redness
	Strain	
	pDT-RI/EcoR I Test Insert	No specific data.
	Gigapack III XL - 11	No specific data.
	packaging extract	
	VCS257 E. coli Strain	Adverse symptoms may include the following: pain or irritation

## Section 4. First-aid measures

		watering redness
	Wild-Type Lambda DNA c1857ind 1 Sam7	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	No specific data.
	XL1-Blue MRA (p2) E.coli Strain	No specific data.
	pDT-RI/EcoR I Test Insert Gigapack III XL - 11 packaging extract	No specific data. No specific data.
	VCS257 E. coli Strain	No specific data.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.
<b>Skin contact</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain	No specific data.
	XL1-Blue MRA (p2) E.coli Strain	No specific data. No specific data.
	pDT-RI/EcoR I Test Insert Gigapack III XL - 11 packaging extract	No specific data. No specific data.
	VCS257 E. coli Strain	No specific data.
	Wild-Type Lambda DNA c1857ind 1 Sam7	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	No specific data.
	XL1-Blue MRA (p2) E.coli Strain	No specific data. No specific data.
	pDT-RI/EcoR I Test Insert Gigapack III XL - 11 packaging extract	No specific data. No specific data.
	VCS257 E. coli Strain	No specific data.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.

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

<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	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	XL1-Blue MRA (p2) E.coli Strain	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	pDT-RI/EcoR I Test Insert	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Gigapack III XL - 11 packaging extract	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

## Section 4. First-aid measures

	VCS257 E. coli Strain	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Wild-Type Lambda DNA c1857ind 1 Sam7	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	No specific treatment.
	XL1-Blue MRA (p2) E.coli Strain	No specific treatment.
	pDT-RI/EcoR I Test Insert Gigapack III XL - 11 packaging extract	No specific treatment. No specific treatment.
	VCS257 E. coli Strain	No specific treatment.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No specific treatment.
<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	No action shall be taken involving any personal risk or without suitable training.
	XL1-Blue MRA (p2) E.coli Strain	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.
	pDT-RI/EcoR I Test Insert	No action shall be taken involving any personal risk or without suitable training.
	Gigapack III XL - 11 packaging extract	No action shall be taken involving any personal risk or without suitable training.
	VCS257 E. coli Strain	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.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

<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	Use an extinguishing agent suitable for the surrounding fire.
	XL1-Blue MRA (p2) E.coli Strain	Use an extinguishing agent suitable for the surrounding fire.
	pDT-RI/EcoR I Test Insert	Use an extinguishing agent suitable for the surrounding fire.
	Gigapack III XL - 11 packaging extract	Use an extinguishing agent suitable for the surrounding fire.
	VCS257 E. coli Strain	Use an extinguishing agent suitable for the surrounding fire.

## Section 5. Fire-fighting measures

<b>Unsuitable extinguishing media</b>	Wild-Type Lambda DNA c1857ind 1 Sam7 : 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 XL - 11 packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	Use an extinguishing agent suitable for the surrounding fire. None known. None known. None known. None known. None known. None known.
<b>Specific hazards arising from the chemical</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 XL - 11 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.
<b>Hazardous thermal decomposition products</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 XL - 11 packaging extract  VCS257 E. coli Strain  Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.  Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides No specific data. Decomposition products may include the following materials: carbon dioxide carbon monoxide Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides No specific data.

## Section 5. Fire-fighting measures

<b>Special protective actions for fire-fighters</b>	<p>: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated</p> <p>XL1-Blue MRA E.coli Strain</p> <p>XL1-Blue MRA (p2) E.coli Strain</p> <p>pDT-RI/EcoR I Test Insert</p> <p>Gigapack III XL - 11 packaging extract</p> <p>VCS257 E. coli Strain</p> <p>Wild-Type Lambda DNA c1857ind 1 Sam7</p>	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>
<b>Special protective equipment for fire-fighters</b>	<p>: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated</p> <p>XL1-Blue MRA E.coli Strain</p> <p>XL1-Blue MRA (p2) E.coli Strain</p> <p>pDT-RI/EcoR I Test Insert</p> <p>Gigapack III XL - 11 packaging extract</p> <p>VCS257 E. coli Strain</p> <p>Wild-Type Lambda DNA c1857ind 1 Sam7</p>	<p>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</p> <p>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</p> <p>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</p> <p>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</p> <p>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</p> <p>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</p> <p>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</p>

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	<p>: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated</p> <p>XL1-Blue MRA E.coli Strain</p> <p>XL1-Blue MRA (p2) E.coli Strain</p> <p>pDT-RI/EcoR I Test Insert</p> <p>Gigapack III XL - 11 packaging extract</p> <p>VCS257 E. coli Strain</p> <p>Wild-Type Lambda DNA c1857ind 1 Sam7</p>	<p>No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.</p> <p>No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.</p> <p>No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.</p> <p>No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.</p> <p>No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.</p> <p>No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.</p> <p>No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.</p>
<b>For emergency responders</b>	<p>: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated</p> <p>XL1-Blue MRA E.coli Strain</p> <p>XL1-Blue MRA (p2) E.coli</p>	<p>If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p> <p>If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p> <p>If specialized clothing is required to deal with the</p>

## Section 6. Accidental release measures

Strain	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 specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Gigapack III XL - 11 packaging extract	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
VCS257 E. coli Strain	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Wild-Type Lambda DNA c1857ind 1 Sam7	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

<b>Environmental precautions</b>	:	Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
		XL1-Blue MRA E.coli Strain	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
		XL1-Blue MRA (p2) E.coli Strain	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
		pDT-RI/EcoR I Test Insert	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
		Gigapack III XL - 11 packaging extract	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
		VCS257 E. coli Strain	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
		Wild-Type Lambda DNA c1857ind 1 Sam7	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### [Methods and materials for containment and cleaning up](#)

## Section 6. Accidental release measures

<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 XL - 11 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.

## Section 7. Handling and storage

### Precautions for safe handling

<b>Protective measures</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain	Put on appropriate personal protective equipment (see Section 8).  Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
	XL1-Blue MRA (p2) E.coli Strain	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with

## Section 7. Handling and storage

### Advice on general occupational hygiene

pDT-RI/EcoR I Test Insert	eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Put on appropriate personal protective equipment (see Section 8).
Gigapack III XL - 11 packaging extract	Put on appropriate personal protective equipment (see Section 8).
VCS257 E. coli Strain	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Wild-Type Lambda DNA c1857ind 1 Sam7	Put on appropriate personal protective equipment (see Section 8).
: 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 XL - 11 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

## Section 7. Handling and storage

	<p>Wild-Type Lambda DNA c1857ind 1 Sam7</p>	<p>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> <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>
<p><b>Conditions for safe storage, including any incompatibilities</b></p>	<p>: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated</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. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
	<p>XL1-Blue MRA E.coli Strain</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. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
	<p>XL1-Blue MRA (p2) E.coli Strain</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. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
	<p>pDT-RI/EcoR I Test Insert</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. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>

## Section 7. Handling and storage

Gigapack III XL - 11  
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 unlabeled 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 unlabeled 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### [Control parameters](#)

### [Occupational exposure limits](#)

Ingredient name	Exposure limits
<p><input checked="" type="checkbox"/> L1-Blue MRA E.coli Strain Glycerol</p>	<p><b>CA Alberta Provincial (Canada, 6/2018).</b> 8 hrs OEL: 10 mg/m<sup>3</sup> 8 hours. Form: Mist <b>CA Quebec Provincial (Canada, 1/2014).</b> TWAEV: 10 mg/m<sup>3</sup> 8 hours. Form: mist <b>CA Saskatchewan Provincial (Canada, 7/2013).</b> STEL: 20 mg/m<sup>3</sup> 15 minutes. Form: mist TWA: 10 mg/m<sup>3</sup> 8 hours. Form: mist <b>CA Ontario Provincial (Canada, 1/2018).</b> TWA: 10 mg/m<sup>3</sup> 8 hours. Form: mist <b>CA British Columbia Provincial (Canada, 5/2019).</b> TWA: 3 mg/m<sup>3</sup> 8 hours. Form: respirable mist TWA: 10 mg/m<sup>3</sup> 8 hours. Form: total mist</p>

## Section 8. Exposure controls/personal protection

<p><b>XL1-Blue MRA (p2) E.coli Strain</b> Glycerol</p>	<p><b>CA Alberta Provincial (Canada, 6/2018).</b> 8 hrs OEL: 10 mg/m<sup>3</sup> 8 hours. Form: Mist  <b>CA Quebec Provincial (Canada, 1/2014).</b> TWAEV: 10 mg/m<sup>3</sup> 8 hours. Form: mist  <b>CA Saskatchewan Provincial (Canada, 7/2013).</b> STEL: 20 mg/m<sup>3</sup> 15 minutes. Form: mist TWA: 10 mg/m<sup>3</sup> 8 hours. Form: mist  <b>CA Ontario Provincial (Canada, 1/2018).</b> TWA: 10 mg/m<sup>3</sup> 8 hours. Form: mist  <b>CA British Columbia Provincial (Canada, 5/2019).</b> TWA: 3 mg/m<sup>3</sup> 8 hours. Form: respirable mist TWA: 10 mg/m<sup>3</sup> 8 hours. Form: total mist</p>
<p><b>VCS257 E. coli Strain</b> Glycerol</p>	<p><b>CA Alberta Provincial (Canada, 6/2018).</b> 8 hrs OEL: 10 mg/m<sup>3</sup> 8 hours. Form: Mist  <b>CA Quebec Provincial (Canada, 1/2014).</b> TWAEV: 10 mg/m<sup>3</sup> 8 hours. Form: mist  <b>CA Saskatchewan Provincial (Canada, 7/2013).</b> STEL: 20 mg/m<sup>3</sup> 15 minutes. Form: mist TWA: 10 mg/m<sup>3</sup> 8 hours. Form: mist  <b>CA Ontario Provincial (Canada, 1/2018).</b> TWA: 10 mg/m<sup>3</sup> 8 hours. Form: mist  <b>CA British Columbia Provincial (Canada, 5/2019).</b> TWA: 3 mg/m<sup>3</sup> 8 hours. Form: respirable mist TWA: 10 mg/m<sup>3</sup> 8 hours. Form: total mist</p>

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

### Individual protection measures

- Hygiene measures** : 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: chemical splash goggles.

### Skin protection

## Section 8. Exposure controls/personal protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### Appearance

- |   |   |                |
|---|---|----------------|
| <b>Physical state</b>                     | : Lambda DASH II Vector                               | Liquid.        |
|   | Double Digested With EcoR<br>I And Xho I CIAP Treated |                |
|   | XL1-Blue MRA E.coli Strain                            | Liquid.        |
|   | XL1-Blue MRA (p2) E.coli<br>Strain                    | Liquid.        |
|   | pDT-RI/EcoR I Test Insert                             | Liquid.        |
|   | Gigapack III XL - 11<br>packaging extract             | Liquid.        |
|   | VCS257 E. coli Strain                                 | Liquid.        |
| <b>Color</b>                              | Wild-Type Lambda DNA<br>c1857ind 1 Sam7               | Liquid.        |
|   | : Lambda DASH II Vector                               | Not available. |
|   | Double Digested With EcoR<br>I And Xho I CIAP Treated |                |
|   | XL1-Blue MRA E.coli Strain                            | Not available. |
|   | XL1-Blue MRA (p2) E.coli<br>Strain                    | Not available. |
|   | pDT-RI/EcoR I Test Insert                             | Not available. |
|   | Gigapack III XL - 11<br>packaging extract             | Not available. |
| <b>Odor</b>                               | VCS257 E. coli Strain                                 | Not available. |
|   | Wild-Type Lambda DNA<br>c1857ind 1 Sam7               | Not available. |
|   | : Lambda DASH II Vector                               | Not available. |
|   | Double Digested With EcoR<br>I And Xho I CIAP Treated |                |
|   | XL1-Blue MRA E.coli Strain                            | Not available. |
|   | XL1-Blue MRA (p2) E.coli<br>Strain                    | Not available. |
|   | pDT-RI/EcoR I Test Insert                             | Not available. |
| Gigapack III XL - 11<br>packaging extract | Not available.  |                |
| VCS257 E. coli Strain                     | Not available.  |                |
| Wild-Type Lambda DNA                      | Not available.  |                |

## Section 9. Physical and chemical properties

	c1857ind 1 Sam7	
<b>Odor threshold</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	Not available. Not available. Not available.
	pDT-RI/EcoR I Test Insert Gigapack III XL - 11 packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	Not available. Not available. Not available. Not available. Not available.
<b>pH</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	7.5 7 7
	pDT-RI/EcoR I Test Insert Gigapack III XL - 11 packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	7.5 8 7 7
<b>Melting point</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	0°C (32°F) Not available. Not available.
	pDT-RI/EcoR I Test Insert Gigapack III XL - 11 packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	0°C (32°F) Not available. Not available. 0°C (32°F)
<b>Boiling point</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	100°C (212°F) Not available. Not available.
	pDT-RI/EcoR I Test Insert Gigapack III XL - 11 packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	100°C (212°F) Not available. Not available. 100°C (212°F)
<b>Flash point</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	Not available. Not available. Not available.
	pDT-RI/EcoR I Test Insert Gigapack III XL - 11	Not available. Not available.

## Section 9. Physical and chemical properties

	packaging extract	
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda DNA	Not available.
	c1857ind 1 Sam7	
<b>Evaporation rate</b>	: Lambda DASH II Vector	Not available.
	Double Digested With EcoR	
	I And Xho I CIAP Treated	
	XL1-Blue MRA E.coli Strain	Not available.
	XL1-Blue MRA (p2) E.coli	Not available.
	Strain	
	pDT-RI/EcoR I Test Insert	Not available.
	Gigapack III XL - 11	Not available.
	packaging extract	
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda DNA	Not available.
	c1857ind 1 Sam7	
<b>Flammability (solid, gas)</b>	: Lambda DASH II Vector	Not applicable.
	Double Digested With EcoR	
	I And Xho I CIAP Treated	
	XL1-Blue MRA E.coli Strain	Not applicable.
	XL1-Blue MRA (p2) E.coli	Not applicable.
	Strain	
	pDT-RI/EcoR I Test Insert	Not applicable.
	Gigapack III XL - 11	Not applicable.
	packaging extract	
	VCS257 E. coli Strain	Not applicable.
	Wild-Type Lambda DNA	Not applicable.
	c1857ind 1 Sam7	
<b>Lower and upper explosive (flammable) limits</b>	: Lambda DASH II Vector	Not available.
	Double Digested With EcoR	
	I And Xho I CIAP Treated	
	XL1-Blue MRA E.coli Strain	Not available.
	XL1-Blue MRA (p2) E.coli	Not available.
	Strain	
	pDT-RI/EcoR I Test Insert	Not available.
	Gigapack III XL - 11	Not available.
	packaging extract	
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda DNA	Not available.
	c1857ind 1 Sam7	
<b>Vapor pressure</b>	: Lambda DASH II Vector	Not available.
	Double Digested With EcoR	
	I And Xho I CIAP Treated	
	XL1-Blue MRA E.coli Strain	Not available.
	XL1-Blue MRA (p2) E.coli	Not available.
	Strain	
	pDT-RI/EcoR I Test Insert	Not available.
	Gigapack III XL - 11	Not available.
	packaging extract	
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda DNA	Not available.
	c1857ind 1 Sam7	
<b>Vapor density</b>	:	

## Section 9. Physical and chemical properties

	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 XL - 11 packaging extract	Not available.
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
<b>Relative density</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 XL - 11 packaging extract	Not available.
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
<b>Solubility</b>	: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated	Easily soluble in the following materials: cold water and hot water.
	XL1-Blue MRA E.coli Strain	Soluble in the following materials: cold water and hot water.
	XL1-Blue MRA (p2) E.coli Strain	Soluble in the following materials: cold water and hot water.
	pDT-RI/EcoR I Test Insert	Easily soluble in the following materials: cold water and hot water.
	Gigapack III XL - 11 packaging extract	Easily soluble in the following materials: cold water and hot water.
	VCS257 E. coli Strain	Easily soluble in the following materials: cold water and hot water.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n- octanol/water</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 XL - 11 packaging extract	Not available.
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.

## Section 9. Physical and chemical properties

<b>Auto-ignition temperature</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 XL - 11 packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available.
<b>Decomposition temperature</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 XL - 11 packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available.
<b>Viscosity</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 XL - 11 packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available.

## Section 10. Stability and reactivity

<b>Reactivity</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 XL - 11 packaging extract VCS257 E. coli Strain  Wild-Type Lambda DNA c1857ind 1 Sam7	No specific test data related to reactivity available for this product or its ingredients.  No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.  No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.  No specific test data related to reactivity available for this product or its ingredients.
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## Section 10. Stability and reactivity

<b>Chemical stability</b>	<ul style="list-style-type: none"> <li>: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain</li> <li>XL1-Blue MRA (p2) E.coli Strain</li> <li>pDT-RI/EcoR I Test Insert</li> <li>Gigapack III XL - 11 packaging extract</li> <li>VCS257 E. coli Strain</li> <li>Wild-Type Lambda DNA c1857ind 1 Sam7</li> </ul>	<ul style="list-style-type: none"> <li>The product is stable.</li> <li>The product is stable.</li> <li>The product is stable.</li> <li>The product is stable.</li> <li>The product is stable.</li> <li>The product is stable.</li> </ul>
<b>Possibility of hazardous reactions</b>	<ul style="list-style-type: none"> <li>: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain</li> <li>XL1-Blue MRA (p2) E.coli Strain</li> <li>pDT-RI/EcoR I Test Insert</li> <li>Gigapack III XL - 11 packaging extract</li> <li>VCS257 E. coli Strain</li> <li>Wild-Type Lambda DNA c1857ind 1 Sam7</li> </ul>	<ul style="list-style-type: none"> <li>Under normal conditions of storage and use, hazardous reactions will not occur.</li> <li>Under normal conditions of storage and use, hazardous reactions will not occur.</li> <li>Under normal conditions of storage and use, hazardous reactions will not occur.</li> <li>Under normal conditions of storage and use, hazardous reactions will not occur.</li> <li>Under normal conditions of storage and use, hazardous reactions will not occur.</li> <li>Under normal conditions of storage and use, hazardous reactions will not occur.</li> </ul>
<b>Conditions to avoid</b>	<ul style="list-style-type: none"> <li>: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain</li> <li>XL1-Blue MRA (p2) E.coli Strain</li> <li>pDT-RI/EcoR I Test Insert</li> <li>Gigapack III XL - 11 packaging extract</li> <li>VCS257 E. coli Strain</li> <li>Wild-Type Lambda DNA c1857ind 1 Sam7</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> </ul>
<b>Incompatible materials</b>	<ul style="list-style-type: none"> <li>: Lambda DASH II Vector Double Digested With EcoR I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain</li> <li>XL1-Blue MRA (p2) E.coli Strain</li> <li>pDT-RI/EcoR I Test Insert</li> <li>Gigapack III XL - 11 packaging extract</li> <li>VCS257 E. coli Strain</li> <li>Wild-Type Lambda DNA c1857ind 1 Sam7</li> </ul>	<ul style="list-style-type: none"> <li>May react or be incompatible with oxidizing materials.</li> <li>May react or be incompatible with oxidizing materials.</li> <li>May react or be incompatible with oxidizing materials.</li> <li>May react or be incompatible with oxidizing materials.</li> <li>May react or be incompatible with oxidizing materials.</li> </ul>

## Section 10. Stability and reactivity

<b>Hazardous decomposition products</b>	<b>:</b> Lambda DASH II Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Double Digested With EcoR I And Xho I CIAP Treated	
	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 XL - 11 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

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<b>XL1-Blue MRA E.coli Strain</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-
	Sodium chloride LD50 Oral	Rat	3000 mg/kg	-
<b>XL1-Blue MRA (p2) E.coli Strain</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-
	Sodium chloride LD50 Oral	Rat	3000 mg/kg	-
<b>VCS257 E. coli Strain</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-
	Sodium chloride LD50 Oral	Rat	3000 mg/kg	-

#### Irritation/Corrosion

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

## Section 11. Toxicological information

Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
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>					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

### Sensitization

Not available.

### Mutagenicity

**Conclusion/Summary** : Not available.

### Carcinogenicity

**Conclusion/Summary** : Not available.

### Reproductive toxicity

**Conclusion/Summary** : Not available.

### Teratogenicity

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

<b>Information on the likely routes of exposure</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 XL - 11 packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	Not available. Routes of entry anticipated: Oral, Dermal, Inhalation. Routes of entry anticipated: Oral, Dermal, Inhalation. Not available. Not available. Routes of entry anticipated: Oral, Dermal, Inhalation. Not available.
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### Potential acute health effects

## Section 11. Toxicological information

<b>Eye contact</b>	: Lambda DASH II Vector	No known significant effects or critical hazards.
	Double Digested With EcoR	
	I And Xho I CIAP Treated	
	XL1-Blue MRA E.coli Strain	Causes serious eye irritation.
	XL1-Blue MRA (p2) E.coli Strain	Causes serious eye irritation.
	pDT-RI/EcoR I Test Insert	No known significant effects or critical hazards.
	Gigapack III XL - 11	No known significant effects or critical hazards.
	packaging extract	
	VCS257 E. coli Strain	Causes serious eye irritation.
	Wild-Type Lambda DNA	No known significant effects or critical hazards.
<b>Inhalation</b>	c1857ind 1 Sam7	
	: Lambda DASH II Vector	No known significant effects or critical hazards.
	Double Digested With EcoR	
	I And Xho I CIAP Treated	
	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 XL - 11	No known significant effects or critical hazards.
	packaging extract	
	VCS257 E. coli Strain	No known significant effects or critical hazards.
<b>Skin contact</b>	Wild-Type Lambda DNA	No known significant effects or critical hazards.
	c1857ind 1 Sam7	
	: Lambda DASH II Vector	No known significant effects or critical hazards.
	Double Digested With EcoR	
	I And Xho I CIAP Treated	
	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 XL - 11	No known significant effects or critical hazards.
	packaging extract	
<b>Ingestion</b>	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	
	: Lambda DASH II Vector	No known significant effects or critical hazards.
	Double Digested With EcoR	
	I And Xho I CIAP Treated	
	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 XL - 11	No known significant effects or critical hazards.
	packaging extract	
	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	

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

<b>Eye contact</b>	: Lambda DASH II Vector	No specific data.
	Double Digested With EcoR	
	I And Xho I CIAP Treated	
	XL1-Blue MRA E.coli Strain	Adverse symptoms may include the following: pain or irritation watering redness

## Section 11. Toxicological information

	XL1-Blue MRA (p2) E.coli Strain	Adverse symptoms may include the following: pain or irritation watering redness
	pDT-RI/EcoR I Test Insert Gigapack III XL - 11 packaging extract VCS257 E. coli Strain	No specific data. No specific data. Adverse symptoms may include the following: pain or irritation watering redness
	Wild-Type Lambda DNA c1857ind 1 Sam7	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	No specific data. No specific data. No specific data.
	pDT-RI/EcoR I Test Insert Gigapack III XL - 11 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.
<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	No specific data. No specific data. No specific data.
	pDT-RI/EcoR I Test Insert Gigapack III XL - 11 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.
<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	No specific data. No specific data. No specific data.
	pDT-RI/EcoR I Test Insert Gigapack III XL - 11 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.

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

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

## Section 11. Toxicological information

### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

**General** :

Lambda DASH II Vector	No known significant effects or critical hazards.
Double Digested With EcoR	
I And Xho I CIAP Treated	
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 XL - 11	No known significant effects or critical hazards.
packaging extract	
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	

**Carcinogenicity** :

Lambda DASH II Vector	No known significant effects or critical hazards.
Double Digested With EcoR	
I And Xho I CIAP Treated	
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 XL - 11	No known significant effects or critical hazards.
packaging extract	
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	

**Mutagenicity** :

Lambda DASH II Vector	No known significant effects or critical hazards.
Double Digested With EcoR	
I And Xho I CIAP Treated	
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 XL - 11	No known significant effects or critical hazards.
packaging extract	
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	

**Teratogenicity** :

Lambda DASH II Vector	No known significant effects or critical hazards.
Double Digested With EcoR	
I And Xho I CIAP Treated	
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 XL - 11	No known significant effects or critical hazards.
packaging extract	
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	

## Section 11. Toxicological information

<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 XL - 11 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>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 XL - 11 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.

### Numerical measures of toxicity

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
<b>XL1-Blue MRA E.coli Strain</b>					
XL1-Blue MRA E.coli Strain	300000	N/A	N/A	N/A	N/A
Glycerol	12600	N/A	N/A	N/A	N/A
Sodium chloride	3000	N/A	N/A	N/A	N/A
<b>XL1-Blue MRA (p2) E.coli Strain</b>					
XL1-Blue MRA (p2) E.coli Strain	300000	N/A	N/A	N/A	N/A
Glycerol	12600	N/A	N/A	N/A	N/A
Sodium chloride	3000	N/A	N/A	N/A	N/A
<b>VCS257 E. coli Strain</b>					
VCS257 E. coli Strain	300000	N/A	N/A	N/A	N/A
Glycerol	12600	N/A	N/A	N/A	N/A
Sodium chloride	3000	N/A	N/A	N/A	N/A

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
<b>XL1-Blue MRA E.coli Strain</b> Glycerol Sodium chloride	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	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 Chronic LC10 781 mg/l Fresh water	Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	96 hours 3 weeks
<b>XL1-Blue MRA (p2) E.coli Strain</b> Glycerol Sodium chloride	Chronic NOEC 6 g/L Fresh water Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water	Aquatic plants - Lemna minor Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult	96 hours 21 days 8 weeks
	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	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 Acute LC50 1000000 µg/l Fresh water Chronic LC10 781 mg/l Fresh water	Aquatic plants - Lemna minor Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	96 hours 96 hours 3 weeks
<b>VCS257 E. coli Strain</b> Glycerol Sodium chloride	Chronic NOEC 6 g/L Fresh water Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water	Aquatic plants - Lemna minor Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult	96 hours 21 days 8 weeks
	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	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 Acute LC50 1000000 µg/l Fresh water Chronic LC10 781 mg/l Fresh water	Aquatic plants - Lemna minor Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	96 hours 96 hours 3 weeks

### Persistence and degradability

## Section 12. Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
<b>XL1-Blue MRA E.coli Strain</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
<b>XL1-Blue MRA (p2) E.coli Strain</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
<b>VCS257 E. coli Strain</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>XL1-Blue MRA E.coli Strain</b> Glycerol	-1.76	-	low
<b>XL1-Blue MRA (p2) E.coli Strain</b> Glycerol	-1.76	-	low
<b>VCS257 E. coli Strain</b> Glycerol	-1.76	-	low

### Mobility in soil

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

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

## Section 13. Disposal considerations

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

## Section 14. Transport information

**TDG / IMDG / IATA** : Not regulated.

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

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

## Section 15. Regulatory information

### Canadian lists

**Canadian NPRI** : None of the components are listed.

**CEPA Toxic substances** : None of the components are listed.

### International regulations

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

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

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

Not listed.

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

Not listed.

### Inventory list

**Australia** : Not determined.

**Canada** : At least one component is not listed in DSL but all such components are listed in NDSL.

**China** : All components are listed or exempted.

**Europe** : All components are listed or exempted.

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

**New Zealand** : All components are listed or exempted.

**Philippines** : Not determined.

**Republic of Korea** : Not determined.

**Taiwan** : All components are listed or exempted.

**Thailand** : Not determined.

**Turkey** : Not determined.

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

**Viet Nam** : Not determined.

## Section 16. Other information

### History

**Date of issue/Date of revision** : 04/20/2020  
**Date of previous issue** : 02/21/2018  
**Version** : 6

### Key to abbreviations

: ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 HPR = Hazardous Products Regulations  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container  
 IMDG = International Maritime Dangerous Goods  
 LogPow = logarithm of the octanol/water partition coefficient  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 N/A = Not available  
 UN = United Nations

### Procedure used to derive the classification

Classification	Justification
<b>XL1-Blue MRA E.coli Strain</b> EYE IRRITATION - Category 2A	Calculation method
<b>XL1-Blue MRA (p2) E.coli Strain</b> EYE IRRITATION - Category 2A	Calculation method
<b>VCS257 E. coli Strain</b> EYE IRRITATION - Category 2A	Calculation method

**References** : Not available.

☑ Indicates information that has changed from previously issued version.

### Notice to reader

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