

# SAFETY DATA SHEET



Lambda FIX II Xho I Partial Fill-In - Gigapack III Cloning Kit, Part Number 248612

## Section 1. Identification

### 1.1 Product identifier

**Product name** : Lambda FIX II Xho I Partial Fill-In - Gigapack III Cloning Kit, Part Number 248612  
**Part no. (chemical kit)** : 248612  
**Part no.** : Gigapack III packaging extract 200201-41  
 VCS257 E. coli Strain 200256-51  
 Wild-Type Lambda DNA c1857ind 1 Sam7 246203-51  
 Lambda FixII Vector Predigested With Xho I 248211-51  
 XL1-Blue MRA E.coli Strain 200302-81  
 XL1-Blue MRA (p2) E.coli Strain 200303-81  
 pMF/BamH I Test Insert 210200-55

**Validation date** : 7/20/2020

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

**Material uses** : Analytical reagent.  
 Gigapack III packaging extract 0.275 ml (11 x 0.025 ml)  
 VCS257 E. coli Strain 1 ml  
 Wild-Type Lambda DNA c1857ind 1 Sam7 0.005 ml (1.05 µg 0.21 µg/µl)  
 Lambda FixII Vector Predigested With Xho I 0.01 ml (10 µg 1 µg/µl)  
 XL1-Blue MRA E.coli Strain 0.05 ml  
 XL1-Blue MRA (p2) E.coli Strain 0.5 ml  
 pMF/BamH I Test Insert 0.01 ml (5 µg 0.5 µg/µl)

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

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

### 1.4 Emergency telephone number

**In case of emergency** : CHEMTREC®: 1-800-424-9300

## Section 2. Hazards identification

### 2.1 Classification of the substance or mixture

**OSHA/HCS status** : Gigapack III packaging extract While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.  
 VCS257 E. coli Strain This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).  
 Wild-Type Lambda DNA c1857ind 1 Sam7 While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.  
 Lambda FixII Vector Predigested With Xho I While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information

## Section 2. Hazards identification

	critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
XL1-Blue MRA E.coli Strain	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
XL1-Blue MRA (p2) E.coli Strain	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
pMF/BamH I Test Insert	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

### Classification of the substance or mixture

#### **VCS257 E. coli Strain**

H319 EYE IRRITATION - Category 2A

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

H319 EYE IRRITATION - Category 2A

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

H319 EYE IRRITATION - Category 2A

### 2.2 GHS label elements

#### **Hazard pictograms**

: VCS257 E. coli Strain



XL1-Blue MRA E.coli Strain



XL1-Blue MRA (p2) E.coli Strain



#### **Signal word**

: Gigapack III packaging extract	No signal word.
VCS257 E. coli Strain	Warning
Wild-Type Lambda DNA c1857ind	No signal word.
1 Sam7	
Lambda FixII Vector Predigested	No signal word.
With Xho I	
XL1-Blue MRA E.coli Strain	Warning
XL1-Blue MRA (p2) E.coli Strain	Warning
pMF/BamH I Test Insert	No signal word.

#### **Hazard statements**

: Gigapack III packaging extract	No known significant effects or critical hazards.
VCS257 E. coli Strain	H319 - Causes serious eye irritation.
Wild-Type Lambda DNA c1857ind	No known significant effects or critical hazards.
1 Sam7	
Lambda FixII Vector Predigested	No known significant effects or critical hazards.
With Xho I	
XL1-Blue MRA E.coli Strain	H319 - Causes serious eye irritation.
XL1-Blue MRA (p2) E.coli Strain	H319 - Causes serious eye irritation.
pMF/BamH I Test Insert	No known significant effects or critical hazards.

## Section 2. Hazards identification

### Precautionary statements

#### Prevention

- : Gigapack III packaging extract Not applicable.
- VCS257 E. coli Strain P280 - Wear eye or face protection.
- Wild-Type Lambda DNA c1857ind Not applicable.
- 1 Sam7
- Lambda FixII Vector Predigested Not applicable.
- With Xho I
- 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.
- pMF/BamH I Test Insert Not applicable.

#### Response

- : Gigapack III packaging extract Not applicable.
- VCS257 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.
- Wild-Type Lambda DNA c1857ind P337 + P313 - If eye irritation persists: Get medical advice or attention.
- 1 Sam7 Not applicable.
- Lambda FixII Vector Predigested Not applicable.
- With Xho I
- XL1-Blue MRA 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.
- XL1-Blue MRA (p2) E.coli Strain P337 + P313 - If eye irritation persists: Get medical advice or attention.
- 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.
- pMF/BamH I Test Insert Not applicable.

#### Storage

- : Gigapack III packaging extract Not applicable.
- VCS257 E. coli Strain Not applicable.
- Wild-Type Lambda DNA c1857ind Not applicable.
- 1 Sam7
- Lambda FixII Vector Predigested Not applicable.
- With Xho I
- XL1-Blue MRA E.coli Strain Not applicable.
- XL1-Blue MRA (p2) E.coli Strain Not applicable.
- pMF/BamH I Test Insert Not applicable.

#### Disposal

- : Gigapack III packaging extract Not applicable.
- VCS257 E. coli Strain Not applicable.
- Wild-Type Lambda DNA c1857ind Not applicable.
- 1 Sam7
- Lambda FixII Vector Predigested Not applicable.
- With Xho I
- XL1-Blue MRA E.coli Strain Not applicable.
- XL1-Blue MRA (p2) E.coli Strain Not applicable.
- pMF/BamH I Test Insert Not applicable.

## Section 2. Hazards identification

<b>Supplemental label elements</b>	:	Gigapack III packaging extract	None known.
		VCS257 E. coli Strain	None known.
		Wild-Type Lambda DNA c1857ind 1 Sam7	None known.
		Lambda FixII Vector Predigested With Xho I	None known.
		XL1-Blue MRA E.coli Strain	None known.
		XL1-Blue MRA (p2) E.coli Strain	None known.
		pMF/BamH I Test Insert	None known.

### 2.3 Other hazards

<b>Hazards not otherwise classified</b>	:	Gigapack III packaging extract	None known.
		VCS257 E. coli Strain	None known.
		Wild-Type Lambda DNA c1857ind 1 Sam7	None known.
		Lambda FixII Vector Predigested With Xho I	None known.
		XL1-Blue MRA E.coli Strain	None known.
		XL1-Blue MRA (p2) E.coli Strain	None known.
		pMF/BamH I Test Insert	None known.

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	:	Gigapack III packaging extract	Mixture
		VCS257 E. coli Strain	Mixture
		Wild-Type Lambda DNA c1857ind 1 Sam7	Mixture
		Lambda FixII Vector Predigested With Xho I	Mixture
		XL1-Blue MRA E.coli Strain	Mixture
		XL1-Blue MRA (p2) E.coli Strain	Mixture
		pMF/BamH I Test Insert	Mixture

Ingredient name	%	CAS number
<b>VCS257 E. coli Strain</b>		
Glycerol	≥10 - ≤25	56-81-5
Sodium chloride	≤3	7647-14-5
<b>XL1-Blue MRA E.coli Strain</b>		
Glycerol	≥10 - ≤25	56-81-5
Sodium chloride	≤3	7647-14-5
<b>XL1-Blue MRA (p2) E.coli Strain</b>		
Glycerol	≥10 - ≤25	56-81-5
Sodium chloride	≤3	7647-14-5

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

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

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

## Section 4. First aid measures

### 4.1 Description of necessary first aid measures

<b>Eye contact</b>	: 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. 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.
	Lambda FixII Vector Predigested With Xho I	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 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.
	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. Continue to rinse for at least 10 minutes. Get medical attention.
	pMF/BamH 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.
<b>Inhalation</b>	: 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. 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.
	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.
	Lambda FixII Vector Predigested With Xho I	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	XL1-Blue MRA 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

## Section 4. First aid measures

		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.
	pMF/BamH I Test Insert	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>	: 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. 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.
	Lambda FixII Vector Predigested With Xho I	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. 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.
	pMF/BamH I Test Insert	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	: 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 dentures if any. Remove victim to fresh air and keep at rest in

## Section 4. First aid measures

	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.
Lambda FixII Vector Predigested With Xho I	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 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,

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

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

#### Potential acute health effects

<b>Eye contact</b>	: Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain pMF/BamH I Test Insert	No known significant effects or critical hazards. Causes serious eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. Causes serious eye irritation. Causes serious eye irritation. No known significant effects or critical hazards.
<b>Inhalation</b>	: Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain pMF/BamH I Test Insert	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Skin contact</b>	: Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain pMF/BamH I Test Insert	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Ingestion</b>	: Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain pMF/BamH I Test Insert	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

<b>Eye contact</b>	: Gigapack III packaging extract VCS257 E. coli Strain	No specific data. Adverse symptoms may include the following: pain or irritation watering redness
	Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.
	Lambda FixII Vector Predigested With Xho I	No specific data.

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	XL1-Blue MRA E.coli Strain	Adverse symptoms may include the following: pain or irritation watering redness
	XL1-Blue MRA (p2) E.coli Strain	Adverse symptoms may include the following: pain or irritation watering redness
<b>Inhalation</b>	pMF/BamH 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.
	Lambda FixII Vector Predigested With Xho I	No specific data.
	XL1-Blue MRA E.coli Strain	No specific data.
	XL1-Blue MRA (p2) E.coli Strain	No specific data.
	pMF/BamH I Test Insert	No specific data.
<b>Skin contact</b>	: Gigapack III packaging extract	No specific data.
	VCS257 E. coli Strain	No specific data.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.
	Lambda FixII Vector Predigested With Xho I	No specific data.
	XL1-Blue MRA E.coli Strain	No specific data.
	XL1-Blue MRA (p2) E.coli Strain	No specific data.
	pMF/BamH I Test Insert	No specific data.
<b>Ingestion</b>	: Gigapack III packaging extract	No specific data.
	VCS257 E. coli Strain	No specific data.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.
	Lambda FixII Vector Predigested With Xho I	No specific data.
	XL1-Blue MRA E.coli Strain	No specific data.
	XL1-Blue MRA (p2) E.coli Strain	No specific data.
	pMF/BamH I Test Insert	No specific data.

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

<b>Notes to physician</b>	: Gigapack III packaging extract	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	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.
	Lambda FixII Vector Predigested With Xho I	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	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.
	pMF/BamH I Test Insert	Treat symptomatically. Contact poison treatment

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<b>Specific treatments</b>	: Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain pMF/BamH I Test Insert	specialist immediately if large quantities have been ingested or inhaled. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment.
<b>Protection of first-aiders</b>	: Gigapack III packaging extract  VCS257 E. coli Strain  Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain  XL1-Blue MRA (p2) E.coli Strain  pMF/BamH I Test Insert	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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. 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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	: Gigapack III packaging extract  VCS257 E. coli Strain  Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain  XL1-Blue MRA (p2) E.coli Strain  pMF/BamH I Test Insert	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>	: Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain	None known. None known. None known. None known. None known. None known.

## Section 5. Fire-fighting measures

pMF/BamH I Test Insert

None known.

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

#### Specific hazards arising from the chemical

: Gigapack III packaging extract

In a fire or if heated, a pressure increase will occur and the container may burst.

VCS257 E. coli Strain

In a fire or if heated, a pressure increase will occur and the container may burst.

Wild-Type Lambda DNA c1857ind 1 Sam7

In a fire or if heated, a pressure increase will occur and the container may burst.

Lambda FixII Vector Predigested With Xho I

In a fire or if heated, a pressure increase will occur and the container may burst.

XL1-Blue MRA E.coli Strain

In a fire or if heated, a pressure increase will occur and the container may burst.

XL1-Blue MRA (p2) E.coli Strain

In a fire or if heated, a pressure increase will occur and the container may burst.

pMF/BamH I Test Insert

In a fire or if heated, a pressure increase will occur and the container may burst.

#### Hazardous thermal decomposition products

: Gigapack III packaging extract

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.

Lambda FixII Vector Predigested With Xho I

No specific data.

XL1-Blue MRA E.coli Strain

Decomposition products may include the following materials:

carbon dioxide

carbon monoxide

halogenated compounds

metal oxide/oxides

XL1-Blue MRA (p2) E.coli Strain

Decomposition products may include the following materials:

carbon dioxide

carbon monoxide

halogenated compounds

metal oxide/oxides

pMF/BamH I Test Insert

No specific data.

### 5.3 Advice for firefighters

#### Special protective actions for fire-fighters

: 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

## Section 5. Fire-fighting measures

	Lambda FixII Vector Predigested With Xho I	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 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.
	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.
	pMF/BamH 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.
<b>Special protective equipment for fire-fighters</b>	: 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.
	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.
	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.
	Lambda FixII Vector Predigested With Xho I	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	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.
	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.
	pMF/BamH 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.

## Section 6. Accidental release measures

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

<b>For non-emergency personnel</b>	: 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 spilled 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

## Section 6. Accidental release measures

Wild-Type Lambda DNA c1857ind  
1 Sam7

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.

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.

Lambda FixII Vector Predigested  
With Xho I

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.

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 spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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 spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

pMF/BamH 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 spilled material. Put on appropriate personal protective equipment.

**For emergency responders :** Gigapack III 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".

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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

Wild-Type Lambda DNA c1857ind  
1 Sam7

Lambda FixII Vector Predigested  
With Xho I

XL1-Blue MRA E.coli Strain

## Section 6. Accidental release measures

<p>XL1-Blue MRA (p2) E.coli Strain</p> <p>pMF/BamH I Test Insert</p>	<p>on suitable and unsuitable materials. See also the information in "For non-emergency personnel". If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". 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><b>6.2 Environmental precautions</b></p> <p>: Gigapack III packaging extract</p> <p>VCS257 E. coli Strain</p> <p>Wild-Type Lambda DNA c1857ind 1 Sam7</p> <p>Lambda FixII Vector Predigested With Xho I</p> <p>XL1-Blue MRA E.coli Strain</p> <p>XL1-Blue MRA (p2) E.coli Strain</p> <p>pMF/BamH I Test Insert</p>	<p>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).</p> <p>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).</p> <p>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).</p> <p>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).</p> <p>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).</p> <p>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).</p> <p>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).</p> <p>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).</p>

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

<p><b>Methods for cleaning up</b></p> <p>: Gigapack III packaging extract</p> <p>VCS257 E. coli Strain</p>	<p>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.</p> <p>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</p>
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## Section 6. Accidental release measures

Wild-Type Lambda DNA c1857ind 1 Sam7	inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Lambda FixII Vector Predigested With Xho I	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.
pMF/BamH 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.

## Section 7. Handling and storage

### 7.1 Precautions for safe handling

<b>Protective measures</b>	: 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). 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 FixII Vector Predigested With Xho I	Put on appropriate personal protective equipment (see Section 8).
	XL1-Blue MRA 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.

## Section 7. Handling and storage

### Advice on general occupational hygiene

XL1-Blue MRA (p2) 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.
pMF/BamH I Test Insert	Put on appropriate personal protective equipment (see Section 8).
: 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.
Lambda FixII Vector Predigested With Xho I	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.
pMF/BamH 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

## Section 7. Handling and storage

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

: Gigapack III packaging extract

contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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 c1857ind1 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.

Lambda FixII Vector Predigested With Xho I

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.

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 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

## Section 7. Handling and storage

XL1-Blue MRA (p2) E.coli Strain	incompatible materials before handling or use. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
pMF/BamH 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

#### Recommendations

: Gigapack III packaging extract	Industrial applications, Professional applications.
VCS257 E. coli Strain	Industrial applications, Professional applications.
Wild-Type Lambda DNA c1857ind 1 Sam7	Industrial applications, Professional applications.
Lambda FixII Vector Predigested With Xho I	Industrial applications, Professional applications.
XL1-Blue MRA E.coli Strain	Industrial applications, Professional applications.
XL1-Blue MRA (p2) E.coli Strain	Industrial applications, Professional applications.
pMF/BamH I Test Insert	Industrial applications, Professional applications.

#### Industrial sector specific solutions

: Gigapack III packaging extract	Not applicable.
VCS257 E. coli Strain	Not applicable.
Wild-Type Lambda DNA c1857ind 1 Sam7	Not applicable.
Lambda FixII Vector Predigested With Xho I	Not applicable.
XL1-Blue MRA E.coli Strain	Not applicable.
XL1-Blue MRA (p2) E.coli Strain	Not applicable.
pMF/BamH I Test Insert	Not applicable.

## Section 8. Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
✓ VCS257 E. coli Strain Glycerol	<b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>OSHA PEL (United States, 5/2018).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction

## Section 8. Exposure controls/personal protection

<p>Sodium chloride</p> <p><b>XL1-Blue MRA E.coli Strain</b> Glycerol</p>	<p>TWA: 15 mg/m<sup>3</sup> 8 hours. Form: Total dust None.</p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction TWA: 10 mg/m<sup>3</sup> 8 hours. Form: Total dust <b>OSHA PEL (United States, 5/2018).</b> TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction TWA: 15 mg/m<sup>3</sup> 8 hours. Form: Total dust None.</p>
<p>Sodium chloride</p> <p><b>XL1-Blue MRA (p2) E.coli Strain</b> Glycerol</p>	<p><b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction TWA: 10 mg/m<sup>3</sup> 8 hours. Form: Total dust <b>OSHA PEL (United States, 5/2018).</b> TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction TWA: 15 mg/m<sup>3</sup> 8 hours. Form: Total dust None.</p>
<p>Sodium chloride</p>	<p>None.</p>

### 8.2 Exposure controls

#### Appropriate engineering controls

- : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Environmental exposure controls

- : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

#### Hygiene measures

- : 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.

## Section 8. Exposure controls/personal protection

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

## Section 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	: Gigapack III packaging extract	Liquid.
	VCS257 E. coli Strain	Liquid.
	Wild-Type Lambda DNA c1857ind	Liquid.
	1 Sam7	
	Lambda FixII Vector Predigested	Liquid.
	With Xho I	
	XL1-Blue MRA E.coli Strain	Liquid.
	XL1-Blue MRA (p2) E.coli Strain	Liquid.
	pMF/BamH I Test Insert	Liquid.
<b>Color</b>	: Gigapack III packaging extract	Not available.
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda DNA c1857ind	Not available.
	1 Sam7	
	Lambda FixII Vector Predigested	Not available.
	With Xho I	
	XL1-Blue MRA E.coli Strain	Not available.
	XL1-Blue MRA (p2) E.coli Strain	Not available.
	pMF/BamH I Test Insert	Not available.
<b>Odor</b>	: Gigapack III packaging extract	Not available.
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda DNA c1857ind	Not available.
	1 Sam7	
	Lambda FixII Vector Predigested	Not available.
	With Xho I	
	XL1-Blue MRA E.coli Strain	Not available.
	XL1-Blue MRA (p2) E.coli Strain	Not available.
	pMF/BamH I Test Insert	Not available.
<b>Odor threshold</b>	: Gigapack III packaging extract	Not available.
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda DNA c1857ind	Not available.
	1 Sam7	
	Lambda FixII Vector Predigested	Not available.
	With Xho I	
	XL1-Blue MRA E.coli Strain	Not available.
	XL1-Blue MRA (p2) E.coli Strain	Not available.
	pMF/BamH I Test Insert	Not available.
<b>pH</b>	: Gigapack III packaging extract	8
	VCS257 E. coli Strain	7
	Wild-Type Lambda DNA c1857ind	7
	1 Sam7	
	Lambda FixII Vector Predigested	7.5
	With Xho I	
	XL1-Blue MRA E.coli Strain	7
	XL1-Blue MRA (p2) E.coli Strain	7
	pMF/BamH I Test Insert	8

## Section 9. Physical and chemical properties

<b>Melting point</b>	: Gigapack III packaging extract	Not available.	
	VCS257 E. coli Strain	Not available.	
	Wild-Type Lambda DNA c1857ind 1 Sam7	0°C (32°F)	
	Lambda FixII Vector Predigested With Xho I	0°C (32°F)	
	XL1-Blue MRA E.coli Strain	Not available.	
	XL1-Blue MRA (p2) E.coli Strain	Not available.	
	pMF/BamH I Test Insert	0°C (32°F)	
	<b>Boiling point</b>	: Gigapack III packaging extract	Not available.
		VCS257 E. coli Strain	Not available.
Wild-Type Lambda DNA c1857ind 1 Sam7		100°C (212°F)	
Lambda FixII Vector Predigested With Xho I		100°C (212°F)	
XL1-Blue MRA E.coli Strain		Not available.	
XL1-Blue MRA (p2) E.coli Strain		Not available.	
pMF/BamH I Test Insert		100°C (212°F)	
<b>Flash point</b>		: Gigapack III packaging extract	Not available.
		VCS257 E. coli Strain	Not available.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.	
	Lambda FixII Vector Predigested With Xho I	Not available.	
	XL1-Blue MRA E.coli Strain	Not available.	
	XL1-Blue MRA (p2) E.coli Strain	Not available.	
	pMF/BamH I Test Insert	Not available.	
	<b>Evaporation rate</b>	: Gigapack III packaging extract	Not available.
		VCS257 E. coli Strain	Not available.
Wild-Type Lambda DNA c1857ind 1 Sam7		Not available.	
Lambda FixII Vector Predigested With Xho I		Not available.	
XL1-Blue MRA E.coli Strain		Not available.	
XL1-Blue MRA (p2) E.coli Strain		Not available.	
pMF/BamH I Test Insert		Not available.	
<b>Flammability (solid, gas)</b>		: Gigapack III packaging extract	Not applicable.
		VCS257 E. coli Strain	Not applicable.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not applicable.	
	Lambda FixII Vector Predigested With Xho I	Not applicable.	
	XL1-Blue MRA E.coli Strain	Not applicable.	
	XL1-Blue MRA (p2) E.coli Strain	Not applicable.	
	pMF/BamH I Test Insert	Not applicable.	
	<b>Lower and upper explosive (flammable) limits</b>	: Gigapack III packaging extract	Not available.
		VCS257 E. coli Strain	Not available.
Wild-Type Lambda DNA c1857ind 1 Sam7		Not available.	
Lambda FixII Vector Predigested With Xho I		Not available.	
XL1-Blue MRA E.coli Strain		Not available.	
XL1-Blue MRA (p2) E.coli Strain		Not available.	
pMF/BamH I Test Insert		Not available.	

## Section 9. Physical and chemical properties

<b>Vapor pressure</b>	: Gigapack III packaging extract	Not available.	
	VCS257 E. coli Strain	Not available.	
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.	
	Lambda FixII Vector Predigested With Xho I	Not available.	
	XL1-Blue MRA E.coli Strain	Not available.	
	XL1-Blue MRA (p2) E.coli Strain	Not available.	
	pMF/BamH I Test Insert	Not available.	
<b>Vapor density</b>	: Gigapack III packaging extract	Not available.	
	VCS257 E. coli Strain	Not available.	
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.	
	Lambda FixII Vector Predigested With Xho I	Not available.	
	XL1-Blue MRA E.coli Strain	Not available.	
	XL1-Blue MRA (p2) E.coli Strain	Not available.	
	pMF/BamH I Test Insert	Not available.	
<b>Relative density</b>	: Gigapack III packaging extract	Not available.	
	VCS257 E. coli Strain	Not available.	
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.	
	Lambda FixII Vector Predigested With Xho I	Not available.	
	XL1-Blue MRA E.coli Strain	Not available.	
	XL1-Blue MRA (p2) E.coli Strain	Not available.	
	pMF/BamH I Test Insert	Not available.	
<b>Solubility</b>	: Gigapack III 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.	
	Lambda FixII Vector Predigested With Xho I	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.	
	pMF/BamH I Test Insert	Easily soluble in the following materials: cold water and hot water.	
<b>Partition coefficient: n-octanol/water</b>	: Gigapack III packaging extract	Not available.	
	VCS257 E. coli Strain	Not available.	
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.	
	Lambda FixII Vector Predigested With Xho I	Not available.	
	XL1-Blue MRA E.coli Strain	Not available.	
	XL1-Blue MRA (p2) E.coli Strain	Not available.	
	pMF/BamH I Test Insert	Not available.	
<b>Auto-ignition temperature</b>	: Gigapack III packaging extract	Not available.	
	VCS257 E. coli Strain	Not available.	
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.	
	Lambda FixII Vector Predigested With Xho I	Not available.	
	XL1-Blue MRA E.coli Strain	Not available.	
	XL1-Blue MRA (p2) E.coli Strain	Not available.	

## Section 9. Physical and chemical properties

	pMF/BamH I Test Insert	Not available.
<b>Decomposition temperature</b>	: Gigapack III packaging extract	Not available.
	VCS257 E. coli Strain	Not available.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
	Lambda FixII Vector Predigested With Xho I	Not available.
<b>Viscosity</b>	XL1-Blue MRA E.coli Strain	Not available.
	XL1-Blue MRA (p2) E.coli Strain	Not available.
	pMF/BamH 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.
	Lambda FixII Vector Predigested With Xho I	Not available.
	XL1-Blue MRA E.coli Strain	Not available.
XL1-Blue MRA (p2) E.coli Strain	Not available.	
pMF/BamH I Test Insert	Not available.	

## Section 10. Stability and reactivity

<b>10.1 Reactivity</b>	: 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.
	Lambda FixII Vector Predigested With Xho I	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.
	pMF/BamH I Test Insert	No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: 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.
	Lambda FixII Vector Predigested With Xho I	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.
pMF/BamH I Test Insert	The product is stable.	
<b>10.3 Possibility of hazardous reactions</b>	: 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.
	Lambda FixII Vector Predigested With Xho I	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.

## Section 10. Stability and reactivity

XL1-Blue MRA (p2) E.coli Strain	Under normal conditions of storage and use, hazardous reactions will not occur.
pMF/BamH I Test Insert	Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** :

Gigapack III packaging extract	No specific data.
VCS257 E. coli Strain	No specific data.
Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.
Lambda FixII Vector Predigested With Xho I	No specific data.
XL1-Blue MRA E.coli Strain	No specific data.
XL1-Blue MRA (p2) E.coli Strain	No specific data.
pMF/BamH I Test Insert	No specific data.

**10.5 Incompatible materials** :

Gigapack III packaging extract	May react or be incompatible with oxidizing materials.
VCS257 E. coli Strain	May react or be incompatible with oxidizing materials.
Wild-Type Lambda DNA c1857ind 1 Sam7	May react or be incompatible with oxidizing materials.
Lambda FixII Vector Predigested With Xho I	May react or be incompatible with oxidizing materials.
XL1-Blue MRA E.coli Strain	May react or be incompatible with oxidizing materials.
XL1-Blue MRA (p2) E.coli Strain	May react or be incompatible with oxidizing materials.
pMF/BamH I Test Insert	May react or be incompatible with oxidizing materials.

**10.6 Hazardous decomposition products** :

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.
Lambda FixII Vector Predigested With Xho I	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.
pMF/BamH I Test Insert	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

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

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<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	-
<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	Rabbit	-	10 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
<b>XL1-Blue MRA (p2) 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.

## Section 11. Toxicological information

### 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>	: Gigapack III packaging extract VCS257 E. coli Strain	Not available. Routes of entry anticipated: Oral, Dermal, Inhalation.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
	Lambda FixII Vector Predigested With Xho I	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.
	pMF/BamH I Test Insert	Not available.

### Potential acute health effects

<b>Eye contact</b>	: Gigapack III packaging extract VCS257 E. coli Strain	No known significant effects or critical hazards. Causes serious eye irritation.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.
	Lambda FixII Vector Predigested With Xho I	No known significant effects or critical hazards.
	XL1-Blue MRA E.coli Strain	Causes serious eye irritation.
	XL1-Blue MRA (p2) E.coli Strain	Causes serious eye irritation.
	pMF/BamH I Test Insert	No known significant effects or critical hazards.
<b>Inhalation</b>	: Gigapack III packaging extract VCS257 E. coli Strain	No known significant effects or critical hazards. No known significant effects or critical hazards.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.
	Lambda FixII Vector Predigested With Xho I	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.
	pMF/BamH I Test Insert	No known significant effects or critical hazards.
<b>Skin contact</b>	: Gigapack III packaging extract VCS257 E. coli Strain	No known significant effects or critical hazards. No known significant effects or critical hazards.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.
	Lambda FixII Vector Predigested With Xho I	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.
	pMF/BamH I Test Insert	No known significant effects or critical hazards.

## Section 11. Toxicological information

<b>Ingestion</b>	: 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.
	Lambda FixII Vector Predigested With Xho I	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 pMF/BamH I Test Insert	No known significant effects or critical hazards.

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

<b>Eye contact</b>	: Gigapack III packaging extract	No specific data.
	VCS257 E. coli Strain	Adverse symptoms may include the following: pain or irritation watering redness
	Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.
	Lambda FixII Vector Predigested With Xho I	No specific data.
	XL1-Blue MRA E.coli Strain	Adverse symptoms may include the following: pain or irritation watering redness
	XL1-Blue MRA (p2) E.coli Strain	Adverse symptoms may include the following: pain or irritation watering redness
<b>Inhalation</b>	: pMF/BamH 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.
	Lambda FixII Vector Predigested With Xho I	No specific data.
	XL1-Blue MRA E.coli Strain	No specific data.
<b>Skin contact</b>	: XL1-Blue MRA (p2) E.coli Strain	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.
	Lambda FixII Vector Predigested With Xho I	No specific data.
	XL1-Blue MRA E.coli Strain	No specific data.
<b>Ingestion</b>	: XL1-Blue MRA (p2) E.coli Strain	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.
	Lambda FixII Vector Predigested With Xho I	No specific data.
	XL1-Blue MRA E.coli Strain	No specific data.
	: XL1-Blue MRA (p2) E.coli Strain	No specific data.
	: pMF/BamH I Test Insert	No specific data.

## Section 11. Toxicological information

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

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Potential chronic health effects

<b>General</b>	: Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain pMF/BamH I Test Insert	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>Carcinogenicity</b>	: Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain pMF/BamH I Test Insert	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>	: Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain pMF/BamH I Test Insert	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>	: Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain pMF/BamH I Test Insert	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>	: Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain pMF/BamH I Test Insert	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.

## Section 11. Toxicological information

<b>Fertility effects</b>	: 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.
	Lambda FixII Vector Predigested With Xho I	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.
	PMF/BamH I Test Insert	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>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
<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

## Section 12. Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
<b>VCS257 E. coli Strain</b>			
Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
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
	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
<b>XL1-Blue MRA E.coli Strain</b>			
Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
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

## Section 12. Ecological information

<b>XL1-Blue MRA (p2) E.coli Strain</b> Glycerol Sodium chloride	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
	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 Acute EC50 4.74 g/L Fresh water	Fish - Oncorhynchus mykiss Algae - Chlamydomonas reinhardtii	96 hours 96 hours
	Acute EC50 519.6 mg/l Fresh water Acute IC50 6.87 g/L Fresh water Acute LC50 1000000 µg/l Fresh water Chronic LC10 781 mg/l Fresh water	Crustaceans - Cypris subglobosa Aquatic plants - Lemna minor Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	48 hours 96 hours 96 hours 3 weeks
	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

### 12.2 Persistence and degradability

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

### 12.3 Bioaccumulative potential

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

## Section 12. Ecological information

Glycerol	-1.76	-	low
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### 12.4 Mobility in soil

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

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

## Section 13. Disposal considerations

### 13.1 Waste treatment methods

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

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

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

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

## Section 14. Transport information

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

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

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

## Section 15. Regulatory information

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

**U.S. Federal regulations** : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined  
**Clean Water Act (CWA) 311:** Edetic acid

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

## Section 15. Regulatory information

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

### SARA 302/304

#### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

### SARA 311/312

**Classification** :

Gigapack III packaging extract	Not applicable.
VCS257 E. coli Strain	EYE IRRITATION - Category 2A
Wild-Type Lambda DNA c1857ind 1 Sam7	Not applicable.
Lambda FixII Vector Predigested With Xho I	Not applicable.
XL1-Blue MRA E.coli Strain	EYE IRRITATION - Category 2A
XL1-Blue MRA (p2) E.coli Strain	EYE IRRITATION - Category 2A
PMF/BamH I Test Insert	Not applicable.

#### Composition/information on ingredients

Name	%	Classification
<b>Gigapack III packaging extract</b>		
Sucrose	≤10	COMBUSTIBLE DUSTS
<b>VCS257 E. coli Strain</b>		
Glycerol	≥10 - ≤25	EYE IRRITATION - Category 2B
Sodium chloride	≤3	EYE IRRITATION - Category 2A
<b>XL1-Blue MRA E.coli Strain</b>		
Glycerol	≥10 - ≤25	EYE IRRITATION - Category 2B
Sodium chloride	≤3	EYE IRRITATION - Category 2A
<b>XL1-Blue MRA (p2) E.coli Strain</b>		
Glycerol	≥10 - ≤25	EYE IRRITATION - Category 2B
Sodium chloride	≤3	EYE IRRITATION - Category 2A

### State regulations

**Massachusetts** : The following components are listed: SUCROSE DUST; GLYCERINE MIST

**New York** : None of the components are listed.

**New Jersey** : The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL

**Pennsylvania** : The following components are listed: .ALPHA.-D-GLUCOPYRANOSIDE, .BETA.-D-FRUCTOFURANOSYL; 1,2,3-PROPANETRIOL

### California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

### International regulations

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

## Section 15. Regulatory information

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

<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>	: All components are active or exempted.
<b>Viet Nam</b>	: Not determined.

## Section 16. Other information

### History

**Date of issue** : 07/20/2020

**Date of previous issue** : 04/30/2018

**Version** : 5

### Key to abbreviations

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

### Procedure used to derive the classification

## Section 16. Other information

Classification	Justification
<b>✓CS257 E. coli Strain</b> EYE IRRITATION - Category 2A	Calculation method
<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

✓ Indicates information that has changed from previously issued version.

### Notice to reader

**Disclaimer:** The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.