

# SAFETY DATA SHEET



ZAP Express Predigested Gigapack III Gold Cloning Kit, Part Number 239615

## Section 1. Identification

### 1.1 Product identifier

**Product name** : ZAP Express Predigested Gigapack III Gold Cloning Kit, Part Number 239615

**Part no. (chemical kit)** : 239615

**Part no.** :

Gigapack III packaging extract	200201-41	
Wild-Type Lambda DNA c1857ind 1 Sam7	246203-51	
VCS257 E. coli Strain	200256-51	
ZAP Express Vector Digested With BamH I	239212-51	
CIAP Treated		
pBub BamH I Test Insert	239212-52	
R408 Interference-Resistant Helper Phage	200252-81	
ExAssist Interference-Resistant Helper Phage	200253-81	
XL1-Blue MRF' E.coli Strain	200301-81	
XL0LR E. coli Strain	200304-81	

**Validation date** : 6/3/2020

### 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	
Wild-Type Lambda DNA c1857ind 1 Sam7	0.005 ml (1.05 µg	0.21 µg/µl)
VCS257 E. coli Strain	1 ml	
ZAP Express Vector Digested With BamH I	0.005 ml (10 µg	1 µg/µl)
CIAP Treated		
pBub BamH I Test Insert	0.01 ml (2.5 µg	0.25 µg/µl)
R408 Interference-Resistant Helper Phage	1 ml	
ExAssist Interference-Resistant Helper Phage	1 ml >1 X E10	pfu/ml
XL1-Blue MRF' E.coli Strain	0.5 ml	
XL0LR E. coli Strain	0.5 ml	

### 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

<b>OSHA/HCS status</b> :	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.
	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.

## Section 2. Hazards identification

VCS257 E. coli Strain	This SDS should be retained and available for employees and other users of this product.
ZAP Express Vector Digested With BamH I CIAP Treated	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). 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.
pBub 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.
R408 Interference-Resistant Helper Phage	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.
ExAssist Interference- Resistant Helper Phage	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.
XL1-Blue MRF' E.coli Strain	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
XLOLR E. coli Strain	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

### Classification of the substance or mixture

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

H319 EYE IRRITATION - Category 2A

#### **XL1-Blue MRF' E.coli Strain**

H319 EYE IRRITATION - Category 2A

#### **XLOLR E. coli Strain**

H319 EYE IRRITATION - Category 2A

### 2.2 GHS label elements

#### **Hazard pictograms**

: VCS257 E. coli Strain



XL1-Blue MRF' E.coli Strain



XLOLR E. coli Strain



## Section 2. Hazards identification

<b>Signal word</b>	:	Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain ZAP Express Vector Digested With BamH I CIAP Treated pBub BamH I Test Insert R408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain	No signal word. No signal word. Warning No signal word. No signal word. No signal word. No signal word. Warning Warning
<b>Hazard statements</b>	:	Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain ZAP Express Vector Digested With BamH I CIAP Treated pBub BamH I Test Insert R408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain	No known significant effects or critical hazards. No known significant effects or critical hazards. H319 - Causes serious eye irritation. 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. H319 - Causes serious eye irritation. H319 - Causes serious eye irritation.
<b><u>Precautionary statements</u></b>			
<b>Prevention</b>	:	Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain ZAP Express Vector Digested With BamH I CIAP Treated pBub BamH I Test Insert R408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain	Not applicable. Not applicable. P280 - Wear eye or face protection. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. P280 - Wear eye or face protection. P280 - Wear eye or face protection.
<b>Response</b>	:	Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain  ZAP Express Vector Digested With BamH I CIAP Treated pBub BamH I Test Insert R408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' 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. Not applicable. Not applicable. Not applicable. Not applicable. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

## Section 2. Hazards identification

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.

XLOLR E. coli Strain

### Storage

: Gigapack III packaging extract  
 Wild-Type Lambda DNA c1857ind  
 1 Sam7  
 VCS257 E. coli Strain  
 ZAP Express Vector Digested  
 With BamH I CIAP Treated  
 pBub BamH I Test Insert  
 R408 Interference-Resistant  
 Helper Phage  
 ExAssist Interference-Resistant  
 Helper Phage  
 XL1-Blue MRF' E.coli Strain  
 XLOLR E. coli Strain

Not applicable.  
 Not applicable.  
 Not applicable.  
 Not applicable.  
 Not applicable.  
 Not applicable.  
 Not applicable.  
 Not applicable.  
 Not applicable.  
 Not applicable.

### Disposal

: Gigapack III packaging extract  
 Wild-Type Lambda DNA c1857ind  
 1 Sam7  
 VCS257 E. coli Strain  
 ZAP Express Vector Digested  
 With BamH I CIAP Treated  
 pBub BamH I Test Insert  
 R408 Interference-Resistant  
 Helper Phage  
 ExAssist Interference-Resistant  
 Helper Phage  
 XL1-Blue MRF' E.coli Strain  
 XLOLR E. coli Strain

Not applicable.  
 Not applicable.  
 Not applicable.  
 Not applicable.  
 Not applicable.  
 Not applicable.  
 Not applicable.  
 Not applicable.  
 Not applicable.  
 Not applicable.

### Supplemental label elements

: Gigapack III packaging extract  
 Wild-Type Lambda DNA c1857ind  
 1 Sam7  
 VCS257 E. coli Strain  
 ZAP Express Vector Digested  
 With BamH I CIAP Treated  
 pBub BamH I Test Insert  
 R408 Interference-Resistant  
 Helper Phage  
 ExAssist Interference-Resistant  
 Helper Phage  
 XL1-Blue MRF' E.coli Strain  
 XLOLR E. coli Strain

None known.  
 None known.  
 None known.  
 None known.  
 None known.  
 None known.  
 None known.  
 None known.  
 None known.  
 None known.

### 2.3 Other hazards

#### Hazards not otherwise classified

: Gigapack III packaging extract  
 Wild-Type Lambda DNA c1857ind  
 1 Sam7  
 VCS257 E. coli Strain  
 ZAP Express Vector Digested  
 With BamH I CIAP Treated  
 pBub BamH I Test Insert  
 R408 Interference-Resistant

None known.  
 None known.  
 None known.  
 None known.  
 None known.  
 None known.

## Section 2. Hazards identification

Helper Phage	
ExAssist Interference-Resistant Helper Phage	None known.
XL1-Blue MRF' E.coli Strain	None known.
XL0LR E. coli Strain	None known.

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	:	Gigapack III packaging extract	Mixture
		Wild-Type Lambda DNA c1857ind 1 Sam7	Mixture
		VCS257 E. coli Strain	Mixture
		ZAP Express Vector Digested With BamH I CIAP Treated	Mixture
		pBub BamH I Test Insert	Mixture
		R408 Interference-Resistant Helper Phage	Mixture
		ExAssist Interference-Resistant Helper Phage	Mixture
		XL1-Blue MRF' E.coli Strain	Mixture
		XL0LR E. coli Strain	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 MRF' E.coli Strain</b>		
Glycerol	≥10 - ≤25	56-81-5
Sodium chloride	≤3	7647-14-5
<b>XL0LR 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.
		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.
		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.
		ZAP Express Vector Digested	Immediately flush eyes with plenty of water,

## Section 4. First aid measures

With BamH I CIAP Treated	occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
pBub 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.
R408 Interference-Resistant Helper Phage	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.
ExAssist Interference-Resistant Helper Phage	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 MRF' 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.
XL0LR 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.
<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.
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.
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.
ZAP Express Vector Digested With BamH I CIAP Treated	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
pBub 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.
R408 Interference-Resistant Helper Phage	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
ExAssist Interference-Resistant Helper Phage	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
XL1-Blue MRF' 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

## Section 4. First aid measures

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.

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.

### Skin contact

: Gigapack III packaging extract

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

Wild-Type Lambda DNA c1857ind  
1 Sam7

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

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.

ZAP Express Vector Digested  
With BamH I CIAP Treated

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

pBub BamH I Test Insert

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

R408 Interference-Resistant  
Helper Phage

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

ExAssist Interference-Resistant  
Helper Phage

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

XL1-Blue MRF' 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.

XL0LR 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.

## Section 4. First aid measures

### Ingestion

: 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.
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.
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.
ZAP Express Vector Digested With BamH 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.
pBub BamH 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.
R408 Interference-Resistant Helper Phage	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.
ExAssist Interference-Resistant Helper Phage	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 MRF' E.coli Strain	Wash out mouth with water. Remove dentures if

## Section 4. First aid measures

XLOLR E. coli Strain	<p>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.</p> <p>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.</p>
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### 4.2 Most important symptoms/effects, acute and delayed

#### Potential acute health effects

<b>Eye contact</b>	<ul style="list-style-type: none"> <li>: Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7</li> <li>VCS257 E. coli Strain</li> <li>ZAP Express Vector Digested With BamH I CIAP Treated</li> <li>pBub BamH I Test Insert</li> <li>R408 Interference-Resistant Helper Phage</li> <li>ExAssist Interference-Resistant Helper Phage</li> <li>XL1-Blue MRF' E.coli Strain</li> <li>XLOLR E. coli Strain</li> </ul>	<p>No known significant effects or critical hazards. No known significant effects or critical hazards.</p> <p>Causes serious eye irritation.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>Causes serious eye irritation. Causes serious eye irritation.</p>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>: Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7</li> <li>VCS257 E. coli Strain</li> <li>ZAP Express Vector Digested With BamH I CIAP Treated</li> <li>pBub BamH I Test Insert</li> <li>R408 Interference-Resistant Helper Phage</li> <li>ExAssist Interference-Resistant Helper Phage</li> </ul>	<p>No known significant effects or critical hazards. No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards. No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards. No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards. No known significant effects or critical hazards.</p>

## Section 4. First aid measures

	XL1-Blue MRF' E.coli Strain	No known significant effects or critical hazards.
	XLOLR E. coli Strain	No known significant effects or critical hazards.
<b>Skin contact</b>	: Gigapack III packaging extract	No known significant effects or critical hazards.
	Wild-Type Lambda DNA c1857ind	No known significant effects or critical hazards.
	1 Sam7	
	VCS257 E. coli Strain	No known significant effects or critical hazards.
	ZAP Express Vector Digested	No known significant effects or critical hazards.
	With BamH I CIAP Treated	
	pBub BamH I Test Insert	No known significant effects or critical hazards.
	R408 Interference-Resistant	No known significant effects or critical hazards.
	Helper Phage	
	ExAssist Interference-Resistant	No known significant effects or critical hazards.
	Helper Phage	
	XL1-Blue MRF' E.coli Strain	No known significant effects or critical hazards.
	XLOLR E. coli Strain	No known significant effects or critical hazards.
<b>Ingestion</b>	: Gigapack III packaging extract	No known significant effects or critical hazards.
	Wild-Type Lambda DNA c1857ind	No known significant effects or critical hazards.
	1 Sam7	
	VCS257 E. coli Strain	No known significant effects or critical hazards.
	ZAP Express Vector Digested	No known significant effects or critical hazards.
	With BamH I CIAP Treated	
	pBub BamH I Test Insert	No known significant effects or critical hazards.
	R408 Interference-Resistant	No known significant effects or critical hazards.
	Helper Phage	
	ExAssist Interference-Resistant	No known significant effects or critical hazards.
	Helper Phage	
	XL1-Blue MRF' E.coli Strain	No known significant effects or critical hazards.
	XLOLR E. coli Strain	No known significant effects or critical hazards.
<b><u>Over-exposure signs/symptoms</u></b>		
<b>Eye contact</b>	: Gigapack III packaging extract	No specific data.
	Wild-Type Lambda DNA c1857ind	No specific data.
	1 Sam7	
	VCS257 E. coli Strain	Adverse symptoms may include the following: pain or irritation watering redness
	ZAP Express Vector Digested	No specific data.
	With BamH I CIAP Treated	
	pBub BamH I Test Insert	No specific data.
	R408 Interference-Resistant	No specific data.
	Helper Phage	
	ExAssist Interference-Resistant	No specific data.
	Helper Phage	
	XL1-Blue MRF' E.coli Strain	Adverse symptoms may include the following: pain or irritation watering redness
	XLOLR E. coli Strain	Adverse symptoms may include the following: pain or irritation watering redness

## Section 4. First aid measures

<b>Inhalation</b>	: Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain ZAP Express Vector Digested With BamH I CIAP Treated pBub BamH I Test Insert R408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XL0LR E. coli Strain	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
<b>Skin contact</b>	: Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain ZAP Express Vector Digested With BamH I CIAP Treated pBub BamH I Test Insert R408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XL0LR E. coli Strain	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
<b>Ingestion</b>	: Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain ZAP Express Vector Digested With BamH I CIAP Treated pBub BamH I Test Insert R408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XL0LR E. coli Strain	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.

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

<b>Notes to physician</b>	: Gigapack III packaging extract  Wild-Type Lambda DNA c1857ind 1 Sam7  VCS257 E. coli Strain  ZAP Express Vector Digested With BamH I CIAP Treated  pBub BamH I Test Insert  R408 Interference-Resistant Helper Phage	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
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## Section 4. First aid measures

	ExAssist Interference-Resistant Helper Phage	ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	XL1-Blue MRF' E.coli Strain	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	XLOLR E. coli Strain	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	: Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain ZAP Express Vector Digested With BamH I CIAP Treated pBub BamH I Test Insert R408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain	No specific treatment. No specific treatment. 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  Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain  ZAP Express Vector Digested With BamH I CIAP Treated pBub BamH I Test Insert  R408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain  XLOLR E. coli Strain	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. 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.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	: Gigapack III packaging extract	Use an extinguishing agent suitable for the surrounding fire.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Use an extinguishing agent suitable for the surrounding fire.
	VCS257 E. coli Strain	Use an extinguishing agent suitable for the surrounding fire.
	ZAP Express Vector Digested With BamH I CIAP Treated pBub BamH I Test Insert	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
	R408 Interference-Resistant Helper Phage	Use an extinguishing agent suitable for the surrounding fire.
	ExAssist Interference-Resistant Helper Phage	Use an extinguishing agent suitable for the surrounding fire.
	XL1-Blue MRF' E.coli Strain	Use an extinguishing agent suitable for the surrounding fire.
	XL0LR E. coli Strain	Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: Gigapack III packaging extract	None known.
	Wild-Type Lambda DNA c1857ind 1 Sam7	None known.
	VCS257 E. coli Strain	None known.
	ZAP Express Vector Digested With BamH I CIAP Treated pBub BamH I Test Insert	None known. None known.
	R408 Interference-Resistant Helper Phage	None known.
	ExAssist Interference-Resistant Helper Phage	None known.
	XL1-Blue MRF' E.coli Strain	None known.
	XL0LR E. coli Strain	None known.

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

<b>Specific hazards arising from the chemical</b>	: Gigapack III packaging extract	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.
	VCS257 E. coli Strain	In a fire or if heated, a pressure increase will occur and the container may burst.
	ZAP Express Vector Digested With BamH I CIAP Treated pBub BamH I Test Insert	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.
	R408 Interference-Resistant Helper Phage	In a fire or if heated, a pressure increase will occur and the container may burst.
	ExAssist Interference-Resistant Helper Phage	In a fire or if heated, a pressure increase will occur and the container may burst.
	XL1-Blue MRF' E.coli Strain	In a fire or if heated, a pressure increase will occur and the container may burst.
	XL0LR E. coli Strain	In a fire or if heated, a pressure increase will occur and the container may burst.

## Section 5. Fire-fighting measures

<b>Hazardous thermal decomposition products</b>	: Gigapack III packaging extract	Decomposition products may include the following materials: carbon dioxide carbon monoxide No specific data.
	Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides No specific data.
	ZAP Express Vector Digested With BamH I CIAP Treated pBub BamH I Test Insert R408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain	No specific data. No specific data. No specific data. Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
	XL0LR E. coli Strain	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides

### 5.3 Advice for firefighters

<b>Special protective actions for fire-fighters</b>	: 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.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	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.
	ZAP Express Vector Digested With BamH I CIAP Treated	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.
	pBub 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.
	R408 Interference-Resistant Helper Phage	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.
	ExAssist Interference-Resistant	Promptly isolate the scene by removing all persons

## Section 5. Fire-fighting measures

Helper Phage	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 MRF' 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.
XL0LR 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.
<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.
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.
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.
ZAP Express Vector Digested With BamH I CIAP Treated	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
pBub 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.
R408 Interference-Resistant Helper Phage	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
ExAssist Interference-Resistant Helper Phage	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 MRF' 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.
XL0LR 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.

## 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.
Wild-Type Lambda DNA c1857ind 1 Sam7	No action shall be taken involving any personal risk or without suitable training. Evacuate

## Section 6. Accidental release measures

VCS257 E. coli Strain	surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
ZAP Express Vector Digested With BamH I CIAP Treated	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
pBub 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.
R408 Interference-Resistant Helper Phage	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.
ExAssist Interference-Resistant Helper Phage	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 MRF' 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.
XL0LR 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.

## Section 6. Accidental release measures

<p><b>For emergency responders :</b> Gigapack III packaging extract</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>Wild-Type Lambda DNA c1857ind 1 Sam7</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>VCS257 E. coli Strain</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>ZAP Express Vector Digested With BamH I CIAP Treated</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>pBub BamH I Test Insert</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>R408 Interference-Resistant Helper Phage</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>ExAssist Interference-Resistant Helper Phage</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>XL1-Blue MRF' E.coli Strain</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>XL0LR E. coli Strain</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><b>6.2 Environmental precautions</b></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><b>:</b> Gigapack III packaging extract</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>Wild-Type Lambda DNA c1857ind 1 Sam7</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>VCS257 E. coli Strain</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>ZAP Express Vector Digested With BamH I CIAP Treated</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>pBub BamH I Test Insert</p>	<p>Avoid dispersal of spilled material and runoff and</p>

## Section 6. Accidental release measures

R408 Interference-Resistant Helper Phage	contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). 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).
ExAssist Interference-Resistant Helper Phage	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 MRF' 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).
XL0LR 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).

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

**Methods for cleaning up** : Gigapack III packaging extract

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.
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.
ZAP Express Vector Digested With BamH 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.
pBub 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.
R408 Interference-Resistant Helper Phage	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble.

## Section 6. Accidental release measures

ExAssist Interference-Resistant Helper Phage	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. 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 MRF' 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.
XL0LR 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.

## 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).
	Wild-Type Lambda DNA c1857ind 1 Sam7	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.
	ZAP Express Vector Digested With BamH I CIAP Treated pBub BamH I Test Insert	Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8).
	R408 Interference-Resistant Helper Phage	Put on appropriate personal protective equipment (see Section 8).
	ExAssist Interference-Resistant Helper Phage	Put on appropriate personal protective equipment (see Section 8).
	XL1-Blue MRF' 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.
	XL0LR 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

## Section 7. Handling and storage

### Advice on general occupational hygiene

: Gigapack III packaging extract

tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

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.

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.

ZAP Express Vector Digested  
With BamH 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.

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

R408 Interference-Resistant  
Helper Phage

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.

ExAssist Interference-Resistant  
Helper Phage

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 MRF' 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

## Section 7. Handling and storage

	XLOR E. coli Strain	<p>eating areas. See also Section 8 for additional information on hygiene measures.</p> <p>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.</p>
<p><b>7.2 Conditions for safe storage, including any incompatibilities</b></p>	<p>: Gigapack III packaging extract</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>
	Wild-Type Lambda DNA c1857ind 1 Sam7	<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>
	VCS257 E. coli Strain	<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>
	ZAP Express Vector Digested With BamH I CIAP Treated	<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>
	pBub BamH I Test Insert	<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</p>

## Section 7. Handling and storage

R408 Interference-Resistant  
Helper Phage

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.

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.

ExAssist Interference-Resistant  
Helper Phage

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 MRF' 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.

XL0LR 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.

### [7.3 Specific end use\(s\)](#)



## Section 8. Exposure controls/personal protection

Sodium chloride	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.
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### 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: chemical splash goggles.

### Skin protection

#### Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

#### Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

#### Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

#### Respiratory protection

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

## Section 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

## Section 9. Physical and chemical properties

<b>Physical state</b>	: Gigapack III packaging extract	Liquid.
	Wild-Type Lambda DNA c1857ind	Liquid.
	1 Sam7	
	VCS257 E. coli Strain	Liquid.
	ZAP Express Vector Digested	Liquid.
	With BamH I CIAP Treated	
	pBub BamH I Test Insert	Liquid.
	R408 Interference-Resistant	Liquid.
	Helper Phage	
	ExAssist Interference-Resistant	Liquid.
Helper Phage		
XL1-Blue MRF' E.coli Strain	Liquid.	
XL0LR E. coli Strain	Liquid.	
<b>Color</b>	: Gigapack III packaging extract	Not available.
	Wild-Type Lambda DNA c1857ind	Not available.
	1 Sam7	
	VCS257 E. coli Strain	Not available.
	ZAP Express Vector Digested	Not available.
	With BamH I CIAP Treated	
	pBub BamH I Test Insert	Not available.
	R408 Interference-Resistant	Not available.
	Helper Phage	
	ExAssist Interference-Resistant	Not available.
Helper Phage		
XL1-Blue MRF' E.coli Strain	Not available.	
XL0LR E. coli Strain	Not available.	
<b>Odor</b>	: Gigapack III packaging extract	Not available.
	Wild-Type Lambda DNA c1857ind	Not available.
	1 Sam7	
	VCS257 E. coli Strain	Not available.
	ZAP Express Vector Digested	Not available.
	With BamH I CIAP Treated	
	pBub BamH I Test Insert	Not available.
	R408 Interference-Resistant	Not available.
	Helper Phage	
	ExAssist Interference-Resistant	Not available.
Helper Phage		
XL1-Blue MRF' E.coli Strain	Not available.	
XL0LR E. coli Strain	Not available.	
<b>Odor threshold</b>	: Gigapack III packaging extract	Not available.
	Wild-Type Lambda DNA c1857ind	Not available.
	1 Sam7	
	VCS257 E. coli Strain	Not available.
	ZAP Express Vector Digested	Not available.
	With BamH I CIAP Treated	
	pBub BamH I Test Insert	Not available.
	R408 Interference-Resistant	Not available.
	Helper Phage	
	ExAssist Interference-Resistant	Not available.
Helper Phage		
XL1-Blue MRF' E.coli Strain	Not available.	
XL0LR E. coli Strain	Not available.	
<b>pH</b>	:	

## Section 9. Physical and chemical properties

	Gigapack III packaging extract	8
	Wild-Type Lambda DNA c1857ind 1 Sam7	7
	VCS257 E. coli Strain	7
	ZAP Express Vector Digested With BamH I CIAP Treated	7.5
	pBub BamH I Test Insert	7.5
	R408 Interference-Resistant Helper Phage	7.5
	ExAssist Interference-Resistant Helper Phage	7.5
	XL1-Blue MRF' E.coli Strain	7
	XL0LR E. coli Strain	7
<b>Melting point</b>	: Gigapack III packaging extract	Not available.
	Wild-Type Lambda DNA c1857ind 1 Sam7	0°C (32°F)
	VCS257 E. coli Strain	Not available.
	ZAP Express Vector Digested With BamH I CIAP Treated	0°C (32°F)
	pBub BamH I Test Insert	0°C (32°F)
	R408 Interference-Resistant Helper Phage	0°C (32°F)
	ExAssist Interference-Resistant Helper Phage	0°C (32°F)
	XL1-Blue MRF' E.coli Strain	Not available.
	XL0LR E. coli Strain	Not available.
<b>Boiling point</b>	: Gigapack III packaging extract	Not available.
	Wild-Type Lambda DNA c1857ind 1 Sam7	100°C (212°F)
	VCS257 E. coli Strain	Not available.
	ZAP Express Vector Digested With BamH I CIAP Treated	100°C (212°F)
	pBub BamH I Test Insert	100°C (212°F)
	R408 Interference-Resistant Helper Phage	100°C (212°F)
	ExAssist Interference-Resistant Helper Phage	100°C (212°F)
	XL1-Blue MRF' E.coli Strain	Not available.
	XL0LR E. coli Strain	Not available.
<b>Flash point</b>	: Gigapack III packaging extract	Not available.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
	VCS257 E. coli Strain	Not available.
	ZAP Express Vector Digested With BamH I CIAP Treated	Not available.
	pBub BamH I Test Insert	Not available.
	R408 Interference-Resistant Helper Phage	Not available.
	ExAssist Interference-Resistant Helper Phage	Not available.
	XL1-Blue MRF' E.coli Strain	Not available.
	XL0LR E. coli Strain	Not available.

## Section 9. Physical and chemical properties

<b>Evaporation rate</b>	:	Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain ZAP Express Vector Digested With BamH I CIAP Treated pBub BamH I Test Insert R408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XL0LR E. coli Strain	Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available.
<b>Flammability (solid, gas)</b>	:	Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain ZAP Express Vector Digested With BamH I CIAP Treated pBub BamH I Test Insert R408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XL0LR E. coli Strain	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
<b>Lower and upper explosive (flammable) limits</b>	:	Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain ZAP Express Vector Digested With BamH I CIAP Treated pBub BamH I Test Insert R408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XL0LR E. coli Strain	Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available.
<b>Vapor pressure</b>	:	Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain ZAP Express Vector Digested With BamH I CIAP Treated pBub BamH I Test Insert R408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XL0LR E. coli Strain	Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available.
<b>Vapor density</b>	:		

## Section 9. Physical and chemical properties

	Gigapack III packaging extract	Not available.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
	VCS257 E. coli Strain	Not available.
	ZAP Express Vector Digested With BamH I CIAP Treated	Not available.
	pBub BamH I Test Insert	Not available.
	R408 Interference-Resistant Helper Phage	Not available.
	ExAssist Interference-Resistant Helper Phage	Not available.
	XL1-Blue MRF' E.coli Strain	Not available.
	XL0LR E. coli Strain	Not available.
<b>Relative density</b>	: Gigapack III packaging extract	Not available.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
	VCS257 E. coli Strain	Not available.
	ZAP Express Vector Digested With BamH I CIAP Treated	Not available.
	pBub BamH I Test Insert	Not available.
	R408 Interference-Resistant Helper Phage	Not available.
	ExAssist Interference-Resistant Helper Phage	Not available.
	XL1-Blue MRF' E.coli Strain	Not available.
	XL0LR E. coli Strain	Not available.
<b>Solubility</b>	: Gigapack III packaging extract	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.
	VCS257 E. coli Strain	Easily soluble in the following materials: cold water and hot water.
	ZAP Express Vector Digested With BamH I CIAP Treated	Easily soluble in the following materials: cold water and hot water.
	pBub BamH I Test Insert	Easily soluble in the following materials: cold water and hot water.
	R408 Interference-Resistant Helper Phage	Easily soluble in the following materials: cold water and hot water.
	ExAssist Interference-Resistant Helper Phage	Easily soluble in the following materials: cold water and hot water.
	XL1-Blue MRF' E.coli Strain	Soluble in the following materials: cold water and hot water.
	XL0LR E. coli Strain	Soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n- octanol/water</b>	: Gigapack III packaging extract	Not available.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
	VCS257 E. coli Strain	Not available.
	ZAP Express Vector Digested With BamH I CIAP Treated	Not available.
	pBub BamH I Test Insert	Not available.
	R408 Interference-Resistant Helper Phage	Not available.
	ExAssist Interference-Resistant Helper Phage	Not available.
	XL1-Blue MRF' E.coli Strain	Not available.
	XL0LR E. coli Strain	Not available.

## Section 9. Physical and chemical properties

<b>Auto-ignition temperature</b>	: Gigapack III packaging extract	Not available.
	Wild-Type Lambda DNA c1857ind	Not available.
	1 Sam7	
	VCS257 E. coli Strain	Not available.
	ZAP Express Vector Digested	Not available.
	With BamH I CIAP Treated	
	pBub BamH I Test Insert	Not available.
	R408 Interference-Resistant	Not available.
	Helper Phage	
	ExAssist Interference-Resistant	Not available.
	Helper Phage	
	XL1-Blue MRF' E.coli Strain	Not available.
	XL0LR E. coli Strain	Not available.
<b>Decomposition temperature</b>	: Gigapack III packaging extract	Not available.
	Wild-Type Lambda DNA c1857ind	Not available.
	1 Sam7	
	VCS257 E. coli Strain	Not available.
	ZAP Express Vector Digested	Not available.
	With BamH I CIAP Treated	
	pBub BamH I Test Insert	Not available.
	R408 Interference-Resistant	Not available.
	Helper Phage	
	ExAssist Interference-Resistant	Not available.
	Helper Phage	
	XL1-Blue MRF' E.coli Strain	Not available.
	XL0LR E. coli Strain	Not available.
<b>Viscosity</b>	: Gigapack III packaging extract	Not available.
	Wild-Type Lambda DNA c1857ind	Not available.
	1 Sam7	
	VCS257 E. coli Strain	Not available.
	ZAP Express Vector Digested	Not available.
	With BamH I CIAP Treated	
	pBub BamH I Test Insert	Not available.
	R408 Interference-Resistant	Not available.
	Helper Phage	
	ExAssist Interference-Resistant	Not available.
	Helper Phage	
	XL1-Blue MRF' E.coli Strain	Not available.
	XL0LR E. coli Strain	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.
	Wild-Type Lambda DNA c1857ind	No specific test data related to reactivity available for this product or its ingredients.
	1 Sam7	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.
	ZAP Express Vector Digested	No specific test data related to reactivity available for this product or its ingredients.
	With BamH I CIAP Treated	No specific test data related to reactivity available for this product or its ingredients.
	pBub BamH I Test Insert	No specific test data related to reactivity available for this product or its ingredients.
	R408 Interference-Resistant	No specific test data related to reactivity available for this product or its ingredients.
	Helper Phage	No specific test data related to reactivity available for this product or its ingredients.
	ExAssist Interference-Resistant	No specific test data related to reactivity available for this product or its ingredients.
	Helper Phage	No specific test data related to reactivity available for this product or its ingredients.
	XL1-Blue MRF' E.coli Strain	No specific test data related to reactivity available for this product or its ingredients.
	XL0LR E. coli Strain	No specific test data related to reactivity available for this product or its ingredients.

## Section 10. Stability and reactivity

for this product or its ingredients.

<b>10.2 Chemical stability</b>	<ul style="list-style-type: none"> <li>: Gigapack III packaging extract</li> <li>Wild-Type Lambda DNA c1857ind</li> <li>1 Sam7</li> <li>VCS257 E. coli Strain</li> <li>ZAP Express Vector Digested With BamH I CIAP Treated</li> <li>pBub BamH I Test Insert</li> <li>R408 Interference-Resistant Helper Phage</li> <li>ExAssist Interference-Resistant Helper Phage</li> <li>XL1-Blue MRF' E.coli Strain</li> <li>XL0LR E. coli Strain</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> <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>10.3 Possibility of hazardous reactions</b>	<ul style="list-style-type: none"> <li>: Gigapack III packaging extract</li> <li>Wild-Type Lambda DNA c1857ind</li> <li>1 Sam7</li> <li>VCS257 E. coli Strain</li> <li>ZAP Express Vector Digested With BamH I CIAP Treated</li> <li>pBub BamH I Test Insert</li> <li>R408 Interference-Resistant Helper Phage</li> <li>ExAssist Interference-Resistant Helper Phage</li> <li>XL1-Blue MRF' E.coli Strain</li> <li>XL0LR E. coli Strain</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> <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>10.4 Conditions to avoid</b>	<ul style="list-style-type: none"> <li>: Gigapack III packaging extract</li> <li>Wild-Type Lambda DNA c1857ind</li> <li>1 Sam7</li> <li>VCS257 E. coli Strain</li> <li>ZAP Express Vector Digested With BamH I CIAP Treated</li> <li>pBub BamH I Test Insert</li> <li>R408 Interference-Resistant Helper Phage</li> <li>ExAssist Interference-Resistant Helper Phage</li> <li>XL1-Blue MRF' E.coli Strain</li> <li>XL0LR E. coli Strain</li> </ul>	<ul style="list-style-type: none"> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> <li>No specific data.</li> </ul>
<b>10.5 Incompatible materials</b>	<ul style="list-style-type: none"> <li>: Gigapack III packaging extract</li> <li>Wild-Type Lambda DNA c1857ind</li> <li>1 Sam7</li> <li>VCS257 E. coli Strain</li> <li>ZAP Express Vector Digested With BamH I CIAP Treated</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> </ul>

## Section 10. Stability and reactivity

pBub BamH I Test Insert	May react or be incompatible with oxidizing materials.
R408 Interference-Resistant Helper Phage	May react or be incompatible with oxidizing materials.
ExAssist Interference-Resistant Helper Phage	May react or be incompatible with oxidizing materials.
XL1-Blue MRF' E.coli Strain	May react or be incompatible with oxidizing materials.
XL0LR E. coli Strain	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.
Wild-Type Lambda DNA c1857ind 1 Sam7	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.
ZAP Express Vector Digested With BamH I CIAP Treated	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
pBub BamH I Test Insert	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
R408 Interference-Resistant Helper Phage	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
ExAssist Interference-Resistant Helper Phage	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
XL1-Blue MRF' E.coli Strain	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
XL0LR E. coli Strain	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 MRF' E.coli Strain</b>				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-
<b>XL0LR E. coli Strain</b>				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-

#### Irritation/Corrosion

## Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>✓CS257 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 MRF' 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>XLOLR 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	- -

### 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.

## Section 11. Toxicological information

<b>Information on the likely routes of exposure</b>	: Gigapack III packaging extract	Not available.	
	Wild-Type Lambda DNA c1857ind	Not available.	
	1 Sam7		
	VCS257 E. coli Strain	Routes of entry anticipated: Oral, Dermal, Inhalation.	
	ZAP Express Vector Digested With BamH I CIAP Treated	Not available.	
	pBub BamH I Test Insert	Not available.	
<b>Potential acute health effects</b>	R408 Interference-Resistant Helper Phage	Not available.	
	ExAssist Interference-Resistant Helper Phage	Not available.	
	XL1-Blue MRF' E.coli Strain	Routes of entry anticipated: Oral, Dermal, Inhalation.	
	XLOLR E. coli Strain	Routes of entry anticipated: Oral, Dermal, Inhalation.	
	<b>Eye contact</b>		
	: Gigapack III packaging extract	No known significant effects or critical hazards.	
Wild-Type Lambda DNA c1857ind	No known significant effects or critical hazards.		
1 Sam7			
VCS257 E. coli Strain	Causes serious eye irritation.		
ZAP Express Vector Digested With BamH I CIAP Treated	No known significant effects or critical hazards.		
pBub BamH I Test Insert	No known significant effects or critical hazards.		
R408 Interference-Resistant Helper Phage	No known significant effects or critical hazards.		
ExAssist Interference-Resistant Helper Phage	No known significant effects or critical hazards.		
XL1-Blue MRF' E.coli Strain	Causes serious eye irritation.		
XLOLR E. coli Strain	Causes serious eye irritation.		
<b>Inhalation</b>			
: Gigapack III packaging extract	No known significant effects or critical hazards.		
Wild-Type Lambda DNA c1857ind	No known significant effects or critical hazards.		
1 Sam7			
VCS257 E. coli Strain	No known significant effects or critical hazards.		
ZAP Express Vector Digested With BamH I CIAP Treated	No known significant effects or critical hazards.		
pBub BamH I Test Insert	No known significant effects or critical hazards.		
R408 Interference-Resistant Helper Phage	No known significant effects or critical hazards.		
ExAssist Interference-Resistant Helper Phage	No known significant effects or critical hazards.		
XL1-Blue MRF' E.coli Strain	No known significant effects or critical hazards.		
XLOLR E. coli Strain	No known significant effects or critical hazards.		
<b>Skin contact</b>			
: Gigapack III packaging extract	No known significant effects or critical hazards.		
Wild-Type Lambda DNA c1857ind	No known significant effects or critical hazards.		
1 Sam7			
VCS257 E. coli Strain	No known significant effects or critical hazards.		
ZAP Express Vector Digested With BamH I CIAP Treated	No known significant effects or critical hazards.		
pBub BamH I Test Insert	No known significant effects or critical hazards.		
R408 Interference-Resistant Helper Phage	No known significant effects or critical hazards.		
ExAssist Interference-Resistant Helper Phage	No known significant effects or critical hazards.		
XL1-Blue MRF' E.coli Strain	No known significant effects or critical hazards.		
XLOLR E. coli Strain	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.
	Wild-Type Lambda DNA c1857ind	No known significant effects or critical hazards.
	1 Sam7	
	VCS257 E. coli Strain	No known significant effects or critical hazards.
	ZAP Express Vector Digested	No known significant effects or critical hazards.
	With BamH I CIAP Treated	
	pBub BamH I Test Insert	No known significant effects or critical hazards.
	R408 Interference-Resistant	No known significant effects or critical hazards.
	Helper Phage	
ExAssist Interference-Resistant	No known significant effects or critical hazards.	
Helper Phage		
XL1-Blue MRF' E.coli Strain	No known significant effects or critical hazards.	
XL0LR E. coli Strain	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.
	Wild-Type Lambda DNA c1857ind	No specific data.
	1 Sam7	
	VCS257 E. coli Strain	Adverse symptoms may include the following: pain or irritation watering redness
	ZAP Express Vector Digested	No specific data.
	With BamH I CIAP Treated	
	pBub BamH I Test Insert	No specific data.
	R408 Interference-Resistant	No specific data.
	Helper Phage	
ExAssist Interference-Resistant	No specific data.	
Helper Phage		
XL1-Blue MRF' E.coli Strain	Adverse symptoms may include the following: pain or irritation watering redness	
XL0LR E. coli Strain	Adverse symptoms may include the following: pain or irritation watering redness	
<b>Inhalation</b>	: Gigapack III packaging extract	No specific data.
	Wild-Type Lambda DNA c1857ind	No specific data.
	1 Sam7	
	VCS257 E. coli Strain	No specific data.
	ZAP Express Vector Digested	No specific data.
	With BamH I CIAP Treated	
	pBub BamH I Test Insert	No specific data.
	R408 Interference-Resistant	No specific data.
	Helper Phage	
ExAssist Interference-Resistant	No specific data.	
Helper Phage		
XL1-Blue MRF' E.coli Strain	No specific data.	
XL0LR E. coli Strain	No specific data.	
<b>Skin contact</b>	: Gigapack III packaging extract	No specific data.
	Wild-Type Lambda DNA c1857ind	No specific data.
	1 Sam7	
	VCS257 E. coli Strain	No specific data.
	ZAP Express Vector Digested	No specific data.
With BamH I CIAP Treated		
pBub BamH I Test Insert	No specific data.	

## Section 11. Toxicological information

<b>Ingestion</b>	R408 Interference-Resistant Helper Phage	No specific data.
	ExAssist Interference-Resistant Helper Phage	No specific data.
	XL1-Blue MRF' E.coli Strain	No specific data.
	XL0LR E. coli Strain	No specific data.
	: Gigapack III packaging extract	No specific data.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.
	VCS257 E. coli Strain	No specific data.
	ZAP Express Vector Digested With BamH I CIAP Treated	No specific data.
	pBub BamH I Test Insert	No specific data.
	R408 Interference-Resistant Helper Phage	No specific data.
	ExAssist Interference-Resistant Helper Phage	No specific data.
	XL1-Blue MRF' E.coli Strain	No specific data.
	XL0LR E. coli Strain	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.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Potential chronic health effects

<b>Carcinogenicity</b>	<b>General</b>	: Gigapack III packaging extract	No known significant effects or critical hazards.
		Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.
		VCS257 E. coli Strain	No known significant effects or critical hazards.
		ZAP Express Vector Digested With BamH I CIAP Treated	No known significant effects or critical hazards.
		pBub BamH I Test Insert	No known significant effects or critical hazards.
		R408 Interference-Resistant Helper Phage	No known significant effects or critical hazards.
		ExAssist Interference-Resistant Helper Phage	No known significant effects or critical hazards.
		XL1-Blue MRF' E.coli Strain	No known significant effects or critical hazards.
		XL0LR E. coli Strain	No known significant effects or critical hazards.
		: Gigapack III packaging extract	No known significant effects or critical hazards.
		Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.
		VCS257 E. coli Strain	No known significant effects or critical hazards.
		ZAP Express Vector Digested With BamH I CIAP Treated	No known significant effects or critical hazards.
		pBub BamH I Test Insert	No known significant effects or critical hazards.
	R408 Interference-Resistant Helper Phage	No known significant effects or critical hazards.	
	ExAssist Interference-Resistant Helper Phage	No known significant effects or critical hazards.	
	XL1-Blue MRF' E.coli Strain	No known significant effects or critical hazards.	

## Section 11. Toxicological information

<b>Mutagenicity</b>	XLOLR E. coli Strain	No known significant effects or critical hazards.
	: Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Teratogenicity</b>	VCS257 E. coli Strain	No known significant effects or critical hazards.
	ZAP Express Vector Digested With BamH I CIAP Treated	No known significant effects or critical hazards.
	pBub BamH I Test Insert	No known significant effects or critical hazards.
	R408 Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	ExAssist Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	XL1-Blue MRF' E.coli Strain	No known significant effects or critical hazards.
	XLOLR E. coli Strain	No known significant effects or critical hazards.
	: Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards. No known significant effects or critical hazards.
	VCS257 E. coli Strain	No known significant effects or critical hazards.
	ZAP Express Vector Digested With BamH I CIAP Treated	No known significant effects or critical hazards.
<b>Developmental effects</b>	pBub BamH I Test Insert	No known significant effects or critical hazards.
	R408 Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	ExAssist Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	XL1-Blue MRF' E.coli Strain	No known significant effects or critical hazards.
	XLOLR E. coli Strain	No known significant effects or critical hazards.
	: Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards. No known significant effects or critical hazards.
	VCS257 E. coli Strain	No known significant effects or critical hazards.
	ZAP Express Vector Digested With BamH I CIAP Treated	No known significant effects or critical hazards.
	pBub BamH I Test Insert	No known significant effects or critical hazards.
	R408 Interference-Resistant Helper Phage	No known significant effects or critical hazards.
<b>Fertility effects</b>	ExAssist Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	XL1-Blue MRF' E.coli Strain	No known significant effects or critical hazards.
	XLOLR E. coli Strain	No known significant effects or critical hazards.
	: Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards. No known significant effects or critical hazards.
	VCS257 E. coli Strain	No known significant effects or critical hazards.
	ZAP Express Vector Digested With BamH I CIAP Treated	No known significant effects or critical hazards.
	pBub BamH I Test Insert	No known significant effects or critical hazards.
	R408 Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	ExAssist Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	XL1-Blue MRF' E.coli Strain	No known significant effects or critical hazards.
XLOLR E. coli Strain	No known significant effects or critical hazards.	

### Numerical measures of toxicity

#### Acute toxicity estimates

## Section 11. Toxicological information

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 MRF' E.coli Strain</b>					
XL1-Blue MRF' 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>XLOLR E. coli Strain</b>					
XLOLR 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 MRF' 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>XLOLR 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	96 hours

## Section 12. Ecological information

	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  Chronic NOEC 6 g/L Fresh water Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water	reinhardtii Crustaceans - Cypris subglobosa Aquatic plants - Lemna minor Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling) Aquatic plants - Lemna minor Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult	48 hours 96 hours 96 hours 3 weeks  96 hours 21 days 8 weeks
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**Conclusion/Summary** : Not available.

### 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 MRF' E.coli Strain</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
<b>XLOLR 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 MRF' E.coli Strain</b> Glycerol	-1.76	-	low
<b>XLOLR E. coli Strain</b> Glycerol	-1.76	-	low

### 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. 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.

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

**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

## Section 15. Regulatory information

### 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.
Wild-Type Lambda DNA c1857ind	Not applicable.
1 Sam7	
VCS257 E. coli Strain	EYE IRRITATION - Category 2A
ZAP Express Vector Digested	Not applicable.
With BamH I CIAP Treated	
pBub BamH I Test Insert	Not applicable.
R408 Interference-Resistant	Not applicable.
Helper Phage	
ExAssist Interference-Resistant	Not applicable.
Helper Phage	
XL1-Blue MRF' E.coli Strain	EYE IRRITATION - Category 2A
XL0LR E. coli Strain	EYE IRRITATION - Category 2A

#### 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 MRF' E.coli Strain</b>		
Glycerol	≥10 - ≤25	EYE IRRITATION - Category 2B
Sodium chloride	≤3	EYE IRRITATION - Category 2A
<b>XL0LR 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: 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: 1,2,3-PROPANETRIOL

### California Prop. 65

**⚠ WARNING:** This product can expose you to Tetracycline, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Ingredient name	No significant risk level	Maximum acceptable dosage level
<b>XL0LR E. coli Strain</b> Tetracycline	-	-

### 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>	: Not determined.
<b>China</b>	: Not determined.
<b>Europe</b>	: All components are listed or exempted.
<b>Japan</b>	: <b>Japan inventory (ENCS)</b> : Not determined. <b>Japan inventory (ISHL)</b> : Not determined.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: <input checked="" type="checkbox"/> All components are active or exempted.
<b>Viet Nam</b>	: Not determined.

## Section 16. Other information

### History

<b>Date of issue</b>	: 06/03/2020
<b>Date of previous issue</b>	: 03/26/2018
<b>Version</b>	: 6

### 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 MRF' E.coli Strain</b> EYE IRRITATION - Category 2A	Calculation method
<b>XLOLR E. coli Strain</b> EYE IRRITATION - Category 2A	Calculation method

✓ Indicates information that has changed from previously issued version.

### Notice to reader

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