

SAFETY DATA SHEET



Lambda Dash II BamH I-treated/Gigapack III Cloning Kit, Part Number 247613

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

1.1 Product identifier

Product name	:	Lambda Dash II BamH I-treated/Gigapack III Cloning Kit, Part Number 247613
Part no. (chemical kit)	:	247613
Part no.	:	Lambda DASH II Vector 247211-51 Double Digested With BamH I And Xho I CIAP Treated
	:	XL1-Blue MRA E.coli Strain 200302-81
	:	XL1-Blue MRA (p2) E. coli Strain 200303-81
	:	pME/Bam HI Test Insert 210200-53
	:	Gigapack III packaging extract 200201-41
	:	VCS257 E. coli Strain 200256-51
	:	Wild-Type Lambda DNA c1857ind 1 Sam7 246203-51

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

Material uses	:	Analytical reagent.
	:	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated 0.01 ml (10 µg 1 µg/µl)
	:	XL1-Blue MRA E.coli Strain 0.5 ml
	:	XL1-Blue MRA (p2) E.coli Strain 0.5 ml
	:	pME/Bam HI Test Insert 0.01 ml (2.5 µg 0.25 µg/µl)
	:	Gigapack III packaging extract 0.275 ml
	:	VCS257 E. coli Strain 1 ml
	:	Wild-Type Lambda DNA c1857ind 1 Sam7 0.005 ml (1.05 µg 0.21 µg/µl)

1.3 Details of the supplier of the safety data sheet

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

e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

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

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Lambda Dash II BamH I-treated/Gigapack III Cloning Kit, Part Number 247613

SECTION 2: Hazards identification

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

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

Not classified.

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

Ingredients of unknown ecotoxicity	:	Lambda DASH II vector	Not applicable.
		XL1-Blue MRA host cells	Not applicable.
		XL1-Blue MRA (P2) host cells	Not applicable.
		pME/BamH I test insert	Not applicable.
		Gigapack III Gold-11 packaging extract	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 8%
		VCS257 host strain	Not applicable.
		λc1857 Sam7 wild-type lambda control DNA	Not applicable.

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

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

2.2 Label elements

Signal word	:	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No signal word.
		XL1-Blue MRA E.coli Strain	No signal word.
		XL1-Blue MRA (p2) E. coli Strain	No signal word.
		pME/Bam HI Test Insert	No signal word.
		Gigapack III packaging extract	No signal word.
		VCS257 E. coli Strain	No signal word.
		Wild-Type Lambda DNA c1857ind 1 Sam7	No signal word.

SECTION 2: Hazards identification

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

Precautionary statements

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

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

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

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SECTION 2: Hazards identification

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

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SECTION 2: Hazards identification

c1857ind 1 Sam7

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	:	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
		XL1-Blue MRA E.coli Strain	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
		XL1-Blue MRA (p2) E. coli Strain	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
		pME/Bam HI Test Insert	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
		Gigapack III packaging extract	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
		VCS257 E. coli Strain	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
		Wild-Type Lambda DNA c1857ind 1 Sam7	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification	:	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	None known.
		XL1-Blue MRA E.coli Strain	None known.
		XL1-Blue MRA (p2) E. coli Strain	None known.
		pME/Bam HI Test Insert	None known.
		Gigapack III packaging extract	None known.
		VCS257 E. coli Strain	None known.
		Wild-Type Lambda DNA c1857ind 1 Sam7	None known.

SECTION 3: Composition/information on ingredients

3.1 Substances	:	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Mixture
		XL1-Blue MRA E.coli Strain	Mixture
		XL1-Blue MRA (p2) E.coli Strain	Mixture
		pME/Bam HI Test Insert	Mixture
		Gigapack III packaging extract	Mixture
		VCS257 E. coli Strain	Mixture
		Wild-Type Lambda DNA c1857ind 1 Sam7	Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
<input checked="" type="checkbox"/> XL1-Blue MRA E.coli Strain				
Glycerol	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥10 - ≤25	Not classified.	[2]
Sodium chloride	EC: 231-598-3 CAS: 7647-14-5	≤3	Eye Irrit. 2, H319	[1]
XL1-Blue MRA (p2) E.coli Strain				
Glycerol	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥10 - ≤25	Not classified.	[2]
Sodium chloride	EC: 231-598-3 CAS: 7647-14-5	≤3	Eye Irrit. 2, H319	[1]

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SECTION 3: Composition/information on ingredients

Gigapack III packaging extract Sucrose	REACH #: Annex IV EC: 200-334-9 CAS: 57-50-1	≤10	Not classified.	[2]
VCS257 E. coli Strain Glycerol	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥10 - ≤25	Not classified.	[2]
Sodium chloride	REACH #: Annex V EC: 231-598-3 CAS: 7647-14-5	≤3	Eye Irrit. 2, H319	[1]
See Section 16 for the full text of the H statements declared above.				

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

Type

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

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact

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

Inhalation

- : Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated
XL1-Blue MRA E.coli Strain
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- : XL1-Blue MRA (p2) E. coli Strain
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- : pME/Bam HI Test Insert
Remove victim to fresh air and keep at rest in a position

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comfortable for breathing. Get medical attention if symptoms occur.

Gigapack III packaging extract Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

VCS257 E. coli Strain Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Wild-Type Lambda DNA c1857ind 1 Sam7 Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact

: Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

XL1-Blue MRA E.coli Strain Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

XL1-Blue MRA (p2) E. coli Strain Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

pME/Bam HI Test Insert Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

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

VCS257 E. coli Strain Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Wild-Type Lambda DNA c1857ind 1 Sam7 Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion

: Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

XL1-Blue MRA E.coli Strain Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

XL1-Blue MRA (p2) E. coli Strain Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

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

Gigapack III packaging extract Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical

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

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

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

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

Over-exposure signs/symptoms

Eye contact	: Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pME/Bam HI Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Inhalation	: Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pME/Bam HI Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.

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

4.3 Indication of any immediate medical attention and special treatment needed

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

SECTION 5: Firefighting measures

5.1 Extinguishing media

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

5.2 Special hazards arising from the substance or mixture

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

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	halogenated compounds metal oxide/oxides
pME/Bam HI Test Insert Gigapack III packaging extract	No specific data. Decomposition products may include the following materials:
	carbon dioxide carbon monoxide
VCS257 E. coli Strain	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.

5.3 Advice for firefighters

Special precautions for fire-fighters

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

Special protective equipment for fire-fighters

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

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SECTION 5: Firefighting measures

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

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	XL1-Blue MRA E.coli Strain	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	XL1-Blue MRA (p2) E. coli Strain	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	pME/Bam HI Test Insert	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	Gigapack III packaging extract	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	VCS257 E. coli Strain	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

SECTION 6: Accidental release measures

For emergency responders

<p>: Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain</p>	<p>If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p> <p>If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p>
<p>XL1-Blue MRA (p2) E. coli Strain</p>	<p>If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p>
<p>pME/Bam HI Test Insert</p>	<p>If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p>
<p>Gigapack III packaging extract</p>	<p>If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p>
<p>VCS257 E. coli Strain</p>	<p>If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p>
<p>Wild-Type Lambda DNA c1857ind 1 Sam7</p>	<p>If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p>

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

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SECTION 6: Accidental release measures

Methods for cleaning up	: Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	XL1-Blue MRA E.coli Strain	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	XL1-Blue MRA (p2) E. coli Strain	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	pME/Bam HI Test Insert	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	Gigapack III packaging extract	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	VCS257 E. coli Strain	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

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

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures	: Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Put on appropriate personal protective equipment (see Section 8).
	XL1-Blue MRA E.coli Strain	Put on appropriate personal protective equipment (see Section 8).
	XL1-Blue MRA (p2) E. coli Strain	Put on appropriate personal protective equipment (see Section 8).
	pME/Bam HI Test Insert	Put on appropriate personal protective equipment (see Section 8).
	Gigapack III packaging extract	Put on appropriate personal protective equipment (see Section 8).
	VCS257 E. coli Strain	Put on appropriate personal protective equipment (see Section 8).
	Wild-Type Lambda DNA c1857ind 1 Sam7	Put on appropriate personal protective equipment (see Section 8).

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SECTION 7: Handling and storage

Advice on general occupational hygiene

: Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
XL1-Blue MRA E.coli Strain	Potentially biohazardous material. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
XL1-Blue MRA (p2) E. coli Strain	Potentially biohazardous material. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
pME/Bam HI Test Insert	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Gigapack III packaging extract	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
VCS257 E. coli Strain	Potentially biohazardous material. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Wild-Type Lambda DNA c1857ind 1 Sam7	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Storage

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

SECTION 7: Handling and storage

	been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
XL1-Blue MRA (p2) E. coli Strain	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
pME/Bam HI Test Insert	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Gigapack III packaging extract	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
VCS257 E. coli Strain	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Wild-Type Lambda DNA c1857ind 1 Sam7	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

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

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the

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SECTION 8: Exposure controls/personal protection

measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
XL1-Blue MRA E.coli Strain Sodium chloride	DNEL	Short term Oral	126.65 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	126.65 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	126.65 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	126.65 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	295.52 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	295.52 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	443.28 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	443.28 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	2068.62 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	2068.62 mg/m ³	Workers	Systemic
XL1-Blue MRA (p2) E.coli Strain Sodium chloride	DNEL	Short term Oral	126.65 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	126.65 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	126.65 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	126.65 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	295.52 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	295.52 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	443.28 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	443.28 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	2068.62 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	2068.62 mg/m ³	Workers	Systemic
VCS257 E. coli Strain Sodium chloride	DNEL	Short term Oral	126.65 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	126.65 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	126.65 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	126.65 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	295.52 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	295.52 mg/kg bw/day	Workers	Systemic
	DNEL	Short term	443.28 mg/	General	Systemic

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SECTION 8: Exposure controls/personal protection

	DNEL	Inhalation Long term	m ³ 443.28 mg/	population General	Systemic
	DNEL	Inhalation Short term	m ³ 2068.62	population Workers	Systemic
	DNEL	Inhalation Long term	mg/m ³ 2068.62	Workers	Systemic
		Inhalation	mg/m ³		

PNECs

No PNECs available

8.2 Exposure controls

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

Individual protection measures

Hygiene measures : Handle as biohazard material (Biosafety level 1). Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

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

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

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

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

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Lambda DASH II Liquid.
Vector Double Digested
With BamH I And Xho I
CIAP Treated
XL1-Blue MRA E.coli Liquid.
Strain
XL1-Blue MRA (p2) E. Liquid.
coli Strain
pME/Bam HI Test Insert Liquid.
Gigapack III packaging Liquid.
extract

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SECTION 9: Physical and chemical properties

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

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SECTION 9: Physical and chemical properties

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

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SECTION 9: Physical and chemical properties

Flammability (solid, gas) : Lambda DASH II Not applicable.
 Vector Double
 Digested With BamH I
 And Xho I CIAP
 Treated
 XL1-Blue MRA E.coli Not applicable.
 Strain
 XL1-Blue MRA (p2) E. Not applicable.
 coli Strain
 pME/Bam HI Test Not applicable.
 Insert
 Gigapack III packaging Not applicable.
 extract
 VCS257 E. coli Strain Not applicable.
 Wild-Type Lambda Not applicable.
 DNA c1857ind 1 Sam7

Upper/lower flammability or explosive limits : Lambda DASH II Not available.
 Vector Double Digested
 With BamH I And Xho I
 CIAP Treated
 XL1-Blue MRA E.coli Not available.
 Strain
 XL1-Blue MRA (p2) E. Not available.
 coli Strain
 pME/Bam HI Test Insert Not available.
 Gigapack III packaging Not available.
 extract
 VCS257 E. coli Strain Not available.
 Wild-Type Lambda Not available.
 DNA c1857ind 1 Sam7

Vapour pressure : Lambda DASH II Not available.
 Vector Double Digested
 With BamH I And Xho I
 CIAP Treated
 XL1-Blue MRA E.coli Not available.
 Strain
 XL1-Blue MRA (p2) E. Not available.
 coli Strain
 pME/Bam HI Test Insert Not available.
 Gigapack III packaging Not available.
 extract
 VCS257 E. coli Strain Not available.
 Wild-Type Lambda Not available.
 DNA c1857ind 1 Sam7

Vapour density : Lambda DASH II Not available.
 Vector Double Digested
 With BamH I And Xho I
 CIAP Treated
 XL1-Blue MRA E.coli Not available.
 Strain
 XL1-Blue MRA (p2) E. Not available.
 coli Strain
 pME/Bam HI Test Insert Not available.
 Gigapack III packaging Not available.
 extract
 VCS257 E. coli Strain Not available.
 Wild-Type Lambda Not available.
 DNA c1857ind 1 Sam7

Lambda Dash II BamH I-treated/Gigapack III Cloning Kit, Part Number 247613

SECTION 9: Physical and chemical properties

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

Lambda Dash II BamH I-treated/Gigapack III Cloning Kit, Part Number 247613

SECTION 9: Physical and chemical properties

Decomposition temperature : Lambda DASH II Not available.
Vector Double Digested
With BamH I And Xho I
CIAP Treated
XL1-Blue MRA E.coli Not available.
Strain
XL1-Blue MRA (p2) E. Not available.
coli Strain
pME/Bam HI Test Insert Not available.
Gigapack III packaging Not available.
extract
VCS257 E. coli Strain Not available.
Wild-Type Lambda Not available.
DNA c1857ind 1 Sam7

Viscosity : Lambda DASH II Not available.
Vector Double Digested
With BamH I And Xho I
CIAP Treated
XL1-Blue MRA E.coli Not available.
Strain
XL1-Blue MRA (p2) E. Not available.
coli Strain
pME/Bam HI Test Insert Not available.
Gigapack III packaging Not available.
extract
VCS257 E. coli Strain Not available.
Wild-Type Lambda Not available.
DNA c1857ind 1 Sam7

Explosive properties : Lambda DASH II Not available.
Vector Double Digested
With BamH I And Xho I
CIAP Treated
XL1-Blue MRA E.coli Not available.
Strain
XL1-Blue MRA (p2) E. Not available.
coli Strain
pME/Bam HI Test Insert Not available.
Gigapack III packaging Not available.
extract
VCS257 E. coli Strain Not available.
Wild-Type Lambda Not available.
DNA c1857ind 1 Sam7

Oxidising properties : Lambda DASH II Not available.
Vector Double Digested
With BamH I And Xho I
CIAP Treated
XL1-Blue MRA E.coli Not available.
Strain
XL1-Blue MRA (p2) E. Not available.
coli Strain
pME/Bam HI Test Insert Not available.
Gigapack III packaging Not available.
extract
VCS257 E. coli Strain Not available.
Wild-Type Lambda Not available.
DNA c1857ind 1 Sam7

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

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

Lambda Dash II BamH I-treated/Gigapack III Cloning Kit, Part Number 247613

SECTION 10: Stability and reactivity

Wild-Type Lambda DNA c1857ind 1 Sam7 No specific data.

10.5 Incompatible materials

- : Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated May react or be incompatible with oxidising materials.
- XL1-Blue MRA E.coli Strain May react or be incompatible with oxidising materials.
- XL1-Blue MRA (p2) E. coli Strain May react or be incompatible with oxidising materials.
- pME/Bam HI Test Insert Gigapack III packaging extract May react or be incompatible with oxidising materials.
- VCS257 E. coli Strain May react or be incompatible with oxidising materials.
- Wild-Type Lambda DNA c1857ind 1 Sam7 May react or be incompatible with oxidising materials.

10.6 Hazardous decomposition products

- : Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- XL1-Blue MRA E.coli Strain Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- XL1-Blue MRA (p2) E. coli Strain Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- pME/Bam HI Test Insert Gigapack III packaging extract Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- VCS257 E. coli Strain Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Wild-Type Lambda DNA c1857ind 1 Sam7 Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

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

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)

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SECTION 11: Toxicological information

XL1-Blue MRA E.coli Strain Sodium chloride	3000	N/A	N/A	N/A	N/A
XL1-Blue MRA (p2) E.coli Strain Sodium chloride	3000	N/A	N/A	N/A	N/A
VCS257 E. coli Strain Sodium chloride	3000	N/A	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
XL1-Blue MRA E.coli Strain Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
XL1-Blue MRA (p2) E.coli Strain Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
VCS257 E. coli Strain Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

Sensitiser

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure : Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated
 XL1-Blue MRA E.coli Strain Routes of entry anticipated: Oral, Dermal, Inhalation.
 XL1-Blue MRA (p2) E. Routes of entry anticipated: Oral, Dermal, Inhalation.

Lambda Dash II BamH I-treated/Gigapack III Cloning Kit, Part Number 247613

SECTION 11: Toxicological information

coli Strain	
pME/Bam HI Test Insert	Not available.
Gigapack III packaging extract	Not available.
VCS257 E. coli Strain	Routes of entry anticipated: Oral, Dermal, Inhalation.
Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.

Potential acute health effects

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

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SECTION 11: Toxicological information

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

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	: Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pME/Bam HI Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Ingestion	: Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pME/Bam HI Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Skin contact	: Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pME/Bam HI Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Eye contact	: Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pME/Bam HI Test Insert Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.

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

Short term exposure

Lambda Dash II BamH I-treated/Gigapack III Cloning Kit, Part Number 247613

SECTION 11: Toxicological information

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

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

Lambda Dash II BamH I-treated/Gigapack III Cloning Kit, Part Number 247613

SECTION 11: Toxicological information

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

SECTION 12: Ecological information

12.1 Toxicity

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

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SECTION 12: Ecological information

VCS257 E. coli Strain Sodium chloride	Chronic LC10 781 mg/l Fresh water	Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	3 weeks
	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days
	Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks
	Acute EC50 4.74 g/L Fresh water	Algae - Chlamydomonas reinhardtii	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	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	

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Not available.

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

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

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

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

Packaging

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

Lambda Dash II BamH I-treated/Gigapack III Cloning Kit, Part Number 247613

SECTION 13: Disposal considerations

Special precautions : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

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

Additional information

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

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

SECTION 15: Regulatory information

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

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

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

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

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

Ozone depleting substances (1005/2009/EU)

Lambda Dash II BamH I-treated/Gigapack III Cloning Kit, Part Number 247613

SECTION 15: Regulatory information

Not listed.

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

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals


Not listed.

Inventory list

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

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

SECTION 16: Other information

 Indicates information that has changed from previously issued version.

Abbreviations and acronyms	: ATE = Acute Toxicity Estimate CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EUH statement = CLP-specific Hazard statement N/A = Not available PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number vPvB = Very Persistent and Very Bioaccumulative
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Lambda Dash II BamH I-treated/Gigapack III Cloning Kit, Part Number 247613

SECTION 16: Other information

[Procedure used to derive the classification according to Regulation \(EC\) No. 1272/2008 \[CLP/GHS\]](#)

Classification	Justification
Not classified.	

[Full text of abbreviated H statements](#)

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

[Full text of classifications \[CLP/GHS\]](#)

<input checked="" type="checkbox"/> XL1-Blue MRA E.coli Strain Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
XL1-Blue MRA (p2) E.coli Strain Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
VCS257 E. coli Strain Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2

Date of issue/ Date of revision : 27/05/2020

Date of previous issue : 21/02/2018

Version : 3

[Notice to reader](#)

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