

SAFETY DATA SHEET



Lambda DASH II BamH I Vector Kit, Part Number 247211

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

1.1 Product identifier

Product name : Lambda DASH II BamH I Vector Kit, Part Number 247211

Part no. (chemical kit) : 247211

Part no. :

pBR322 Test Insert	210200-52
Digested With EcoR I and Sal I	
XL1-Blue MRA E.coli Strain	200302-81
XL1-Blue MRA (p2) E. coli Strain	200303-81
Lambda DASH II Vector	247211-51
Double Digested With BamH I And Xho I CIAP Treated	

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

Material uses : Analytical reagent.

pBR322 Test Insert Digested With EcoR I and Sal I	10 µl (2.5 µg 0.25 µg/µl)
XL1-Blue MRA E.coli Strain	500 µl
XL1-Blue MRA (p2) E.coli Strain	500 µl
Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	10 µl (10 µg 1 µg/µl)

1.3 Details of the supplier of the safety data sheet

Agilent Technologies LDA UK Ltd.
 5500 Lakeside Cheadle Royal Business Park,
 Cheadle, Cheshire, SK8 3GR
 United Kingdom
 Tel: +44 (0) 345 712 5292

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

Product definition :

pBR322 Test Insert Digested With EcoR I and Sal I	Mixture
XL1-Blue MRA E.coli Strain	Mixture
XL1-Blue MRA (p2) E. coli Strain	Mixture
Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Mixture

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

SECTION 2: Hazards identification

Not classified.

Ingredients of unknown toxicity : 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%

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 : pBR322 Test Insert Digested With EcoR I and Sal I No signal word.
 XL1-Blue MRA E.coli Strain No signal word.
 XL1-Blue MRA (p2) E.coli Strain No signal word.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated No signal word.

Hazard statements : pBR322 Test Insert Digested With EcoR I and Sal I No known significant effects or critical hazards.
 XL1-Blue MRA E.coli Strain No known significant effects or critical hazards.
 XL1-Blue MRA (p2) E.coli Strain No known significant effects or critical hazards.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated No known significant effects or critical hazards.

Precautionary statements

Prevention : pBR322 Test Insert Digested With EcoR I and Sal I Not applicable.
 XL1-Blue MRA E.coli Strain Not applicable.
 XL1-Blue MRA (p2) E.coli Strain Not applicable.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not applicable.

Response : pBR322 Test Insert Digested With EcoR I and Sal I Not applicable.
 XL1-Blue MRA E.coli Strain Not applicable.
 XL1-Blue MRA (p2) E.coli Strain Not applicable.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not applicable.

SECTION 2: Hazards identification

Storage	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Not applicable. Not applicable. Not applicable. Not applicable.
Disposal	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Not applicable. Not applicable. Not applicable. Not applicable.
Hazardous ingredients	: XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain	Not applicable. Not applicable.
Supplemental label elements	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Not applicable. Safety data sheet available on request. 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	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Not applicable. Not applicable. Not applicable. Not applicable.
<u>Special packaging requirements</u>		
Tactile warning of danger	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Not applicable. Not applicable. Not applicable. Not applicable.

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SECTION 2: Hazards identification

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	: pBR322 Test Insert	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
	Digested With EcoR I and Sal I	
	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.
Other hazards which do not result in classification	Lambda DASH II Vector	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
	Double Digested With BamH I And Xho I CIAP Treated	
	: pBR322 Test Insert	None known.
	Digested With EcoR I and Sal I	
	XL1-Blue MRA E.coli Strain	None known.
	XL1-Blue MRA (p2) E. coli Strain	None known.
	Lambda DASH II Vector	None known.
	Double Digested With BamH I And Xho I CIAP Treated	

SECTION 3: Composition/information on ingredients

3.1 Substances	: pBR322 Test Insert Digested With EcoR I and Sal I	Mixture
	XL1-Blue MRA E.coli Strain	Mixture
	XL1-Blue MRA (p2) E.coli Strain	Mixture
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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]
			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, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type

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SECTION 3: Composition/information on ingredients

- [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	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain 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. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. Wash out mouth with water. 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

SECTION 4: First aid measures

	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	symptoms occur. Wash out mouth with water. 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.
Protection of first-aiders	: pBR322 Test Insert Digested With EcoR I and Sal I	No action shall be taken involving any personal risk or without suitable training.
	XL1-Blue MRA E.coli Strain	No action shall be taken involving any personal risk or without suitable training.
	XL1-Blue MRA (p2) E. coli Strain	No action shall be taken involving any personal risk or without suitable training.
	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.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact	: pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.
	XL1-Blue MRA E.coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRA (p2) E. coli Strain	No known significant effects or critical hazards.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No known significant effects or critical hazards.
Inhalation	: pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.
	XL1-Blue MRA E.coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRA (p2) E. coli Strain	No known significant effects or critical hazards.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No known significant effects or critical hazards.
Skin contact	: pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.
	XL1-Blue MRA E.coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRA (p2) E. coli Strain	No known significant effects or critical hazards.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No known significant effects or critical hazards.
Ingestion	: pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.
	XL1-Blue MRA E.coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRA (p2) E. coli Strain	No known significant effects or critical hazards.
	Lambda DASH II Vector Double Digested With	No known significant effects or critical hazards.

SECTION 4: First aid measures

BamH I And Xho I CIAP
Treated

Over-exposure signs/symptoms

Eye contact	:	pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data. No specific data. No specific data. No specific data.
Inhalation	:	pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data. No specific data. No specific data. No specific data.
Skin contact	:	pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data. No specific data. No specific data. No specific data.
Ingestion	:	pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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	:	pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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

Specific treatments	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific treatment. No specific treatment. No specific treatment. No specific treatment.
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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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.
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Unsuitable extinguishing media	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	None known. None known. None known. None known.
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5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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.
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Hazardous combustion products	: pBR322 Test Insert Digested With EcoR I and Sal I 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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SECTION 5: Firefighting measures

	halogenated compounds
	metal oxide/oxides
Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data.

5.3 Advice for firefighters

Special precautions for fire-fighters

: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
XL1-Blue MRA (p2) E. coli Strain	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
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.

Special protective equipment for fire-fighters

: pBR322 Test Insert Digested With EcoR I and Sal I	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.
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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: pBR322 Test Insert Digested With EcoR I and Sal I	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through 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

SECTION 6: Accidental release measures

	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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 spilt material. Put on appropriate personal protective equipment.
For emergency responders	: pBR322 Test Insert Digested With EcoR I and Sal I	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	XL1-Blue MRA E.coli Strain	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	XL1-Blue MRA (p2) E.coli Strain	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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".
6.2 Environmental precautions	: pBR322 Test Insert Digested With EcoR I and Sal I	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	XL1-Blue MRA E.coli Strain	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	XL1-Blue MRA (p2) E.coli Strain	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
6.3 Methods and material for containment and cleaning up		
Methods for cleaning up	: pBR322 Test Insert Digested With EcoR I and Sal I	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	XL1-Blue MRA E.coli Strain	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	XL1-Blue MRA (p2) E.coli Strain	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	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.

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SECTION 6: Accidental release measures

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	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain 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. 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. 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. 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	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled 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 unlabelled containers. Use
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SECTION 7: Handling and storage

XL1-Blue MRA (p2) E. coli Strain

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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

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.

7.3 Specific end use(s)

Recommendations

- : pBR322 Test Insert Digested With EcoR I and Sal I Industrial applications, Professional applications.
- XL1-Blue MRA E.coli Strain Industrial applications, Professional applications.
- XL1-Blue MRA (p2) E. coli Strain Industrial applications, Professional applications.
- Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Industrial applications, Professional applications.

Industrial sector specific solutions

- : pBR322 Test Insert Digested With EcoR I and Sal I Not available.
- XL1-Blue MRA E.coli Strain Not available.
- XL1-Blue MRA (p2) E. coli Strain Not available.
- Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not available.

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), 1/2020). TWA: 10 mg/m ³ 8 hours. Form: Mist
XL1-Blue MRA (p2) E.coli Strain Glycerol	EH40/2005 WELs (United Kingdom (UK), 1/2020). TWA: 10 mg/m ³ 8 hours. Form: Mist

SECTION 8: Exposure controls/personal protection

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 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

PNECs

No PNECs available

SECTION 8: Exposure controls/personal protection

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

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state	:	pBR322 Test Insert Digested With EcoR I and Sal I	Liquid.
	:	XL1-Blue MRA E.coli Strain	Liquid.
	:	XL1-Blue MRA (p2) E. coli Strain	Liquid.
	:	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Liquid.
	:		
Colour	:	pBR322 Test Insert Digested With EcoR I and Sal I	Not available.
	:	XL1-Blue MRA E.coli Strain	Not available.
	:	XL1-Blue MRA (p2) E. coli Strain	Not available.
	:	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP	Not available.
	:		

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SECTION 9: Physical and chemical properties

		Treated	
Odour	:	pBR322 Test Insert Digested With EcoR I and Sal I	Not available.
		XL1-Blue MRA E.coli Strain	Not available.
		XL1-Blue MRA (p2) E. coli Strain	Not available.
		Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Not available.
Odour threshold	:	pBR322 Test Insert Digested With EcoR I and Sal I	Not available.
		XL1-Blue MRA E.coli Strain	Not available.
		XL1-Blue MRA (p2) E. coli Strain	Not available.
		Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Not available.
Melting point/freezing point	:	pBR322 Test Insert Digested With EcoR I and Sal I	0°C
		XL1-Blue MRA E.coli Strain	Not available.
		XL1-Blue MRA (p2) E. coli Strain	Not available.
		Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	0°C
Initial boiling point and boiling range	:	pBR322 Test Insert Digested With EcoR I and Sal I	100°C (212°F)
		XL1-Blue MRA E.coli Strain	Not available.
		XL1-Blue MRA (p2) E. coli Strain	Not available.
		Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	100°C (212°F)
Flammability (solid, gas)	:	pBR322 Test Insert Digested With EcoR I and Sal I	Not applicable.
		XL1-Blue MRA E.coli Strain	Not applicable.
		XL1-Blue MRA (p2) E. coli Strain	Not applicable.
		Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Not applicable.

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SECTION 9: Physical and chemical properties

Upper/lower flammability or explosive limits : pBR322 Test Insert Not available.
 Digested With EcoR I and Sal I
 XL1-Blue MRA E.coli Strain Not available.
 XL1-Blue MRA (p2) E. coli Strain Not available.
 Lambda DASH II Vector Not available.
 Double Digested With BamH I And Xho I CIAP Treated

Flash point :

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
pBR322 Test Insert Digested With EcoR I and Sal I						
Edetic acid	>100	>212	DIN 51758			
XL1-Blue MRA E.coli Strain						
Glycerol			Pensky-Martens	177	350.6	
XL1-Blue MRA (p2) E. coli Strain						
Glycerol			Pensky-Martens	177	350.6	
Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated						
Edetic acid	>100	>212	DIN 51758			

Auto-ignition temperature :

Ingredient name	°C	°F	Method
pBR322 Test Insert Digested With EcoR I and Sal I			
Edetic acid	>400	>752	VDI 2263
XL1-Blue MRA E.coli Strain			
Glycerol	370	698	
XL1-Blue MRA (p2) E.coli Strain			
Glycerol	370	698	
Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated			
Edetic acid	>400	>752	VDI 2263

Decomposition temperature :

pBR322 Test Insert Not available.
 Digested With EcoR I and Sal I
 XL1-Blue MRA E.coli Strain Not available.
 XL1-Blue MRA (p2) E. coli Strain Not available.
 Lambda DASH II Vector Not available.
 Double Digested With BamH I And Xho I CIAP Treated

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SECTION 9: Physical and chemical properties

pH : pBR322 Test Insert 7.5
 Digested With EcoR I and Sal I
 XL1-Blue MRA E.coli Strain 7
 XL1-Blue MRA (p2) E. coli Strain 7
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated 7.5

Viscosity : pBR322 Test Insert Digested With EcoR I and Sal I Not available.
 XL1-Blue MRA E.coli Strain Not available.
 XL1-Blue MRA (p2) E. coli Strain Not available.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not available.

Solubility(ies) : pBR322 Test Insert Digested With EcoR I and Sal I Easily soluble in the following materials: cold water and hot water.
 XL1-Blue MRA E.coli Strain Soluble in the following materials: cold water and hot water.
 XL1-Blue MRA (p2) E. coli Strain Soluble in the following materials: cold water and hot water.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Easily soluble in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water : pBR322 Test Insert Digested With EcoR I and Sal I Not applicable.
 XL1-Blue MRA E.coli Strain Not applicable.
 XL1-Blue MRA (p2) E. coli Strain Not applicable.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not applicable.

Vapour pressure :

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
pBR322 Test Insert Digested With EcoR I and Sal I						
Water	23.8	3.2				
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0	0		0.000007501	0.000001	
XL1-Blue MRA E.coli Strain						
Water	23.8	3.2				
Glycerol	0	0		0	0	

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SECTION 9: Physical and chemical properties

XL1-Blue MRA (p2) E. coli Strain					
Water	23.8	3.2			
Glycerol	0	0		0	0
Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated					
Water	23.8	3.2			
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0	0		0.000007501	0.000001

Evaporation rate : pBR322 Test Insert Digested With EcoR I and Sal I Not available.
 XL1-Blue MRA E.coli Strain Not available.
 XL1-Blue MRA (p2) E. coli Strain Not available.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not available.

Relative density : pBR322 Test Insert Digested With EcoR I and Sal I Not available.
 XL1-Blue MRA E.coli Strain Not available.
 XL1-Blue MRA (p2) E. coli Strain Not available.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not available.

Vapour density : pBR322 Test Insert Digested With EcoR I and Sal I Not available.
 XL1-Blue MRA E.coli Strain Not available.
 XL1-Blue MRA (p2) E. coli Strain Not available.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not available.

Oxidising properties : pBR322 Test Insert Digested With EcoR I and Sal I Not available.
 XL1-Blue MRA E.coli Strain Not available.
 XL1-Blue MRA (p2) E. coli Strain Not available.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not available.

Particle characteristics

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SECTION 9: Physical and chemical properties

Median particle size	: pBR322 Test Insert Digested With EcoR I and Sal I	Not applicable.
	XL1-Blue MRA E.coli Strain	Not applicable.
	XL1-Blue MRA (p2) E. coli Strain	Not applicable.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Not applicable.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: pBR322 Test Insert Digested With EcoR I and Sal I	No specific test data related to reactivity available for this product or its ingredients.
	XL1-Blue MRA E.coli Strain	No specific test data related to reactivity available for this product or its ingredients.
	XL1-Blue MRA (p2) E. coli Strain	No specific test data related to reactivity available for this product or its ingredients.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability	: pBR322 Test Insert Digested With EcoR I and Sal I	The product is stable.
	XL1-Blue MRA E.coli Strain	The product is stable.
	XL1-Blue MRA (p2) E. coli Strain	The product is stable.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	The product is stable.

10.3 Possibility of hazardous reactions	: pBR322 Test Insert Digested With EcoR I and Sal I	Under normal conditions of storage and use, hazardous reactions will not occur.
	XL1-Blue MRA E.coli Strain	Under normal conditions of storage and use, hazardous reactions will not occur.
	XL1-Blue MRA (p2) E. coli Strain	Under normal conditions of storage and use, hazardous reactions will not occur.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid	: pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.
	XL1-Blue MRA E.coli Strain	No specific data.
	XL1-Blue MRA (p2) E. coli Strain	No specific data.
	Lambda DASH II Vector Double Digested With	No specific data.

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SECTION 10: Stability and reactivity

BamH I And Xho I CIAP
Treated

- 10.5 Incompatible materials** :
- pBR322 Test Insert Digested With EcoR I and Sal I 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.
 - Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated May react or be incompatible with oxidising materials.

- 10.6 Hazardous decomposition products** :
- pBR322 Test Insert Digested With EcoR I and Sal I Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 - XL1-Blue MRA E.coli Strain Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 - XL1-Blue MRA (p2) E.coli Strain Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 - 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.

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	-

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)
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

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					

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SECTION 11: Toxicological information

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

: pBR322 Test Insert Digested With EcoR I and Sal I	Not available.
XL1-Blue MRA E.coli Strain	Routes of entry anticipated: Oral, Dermal, Inhalation.
XL1-Blue MRA (p2) E. coli Strain	Routes of entry anticipated: Oral, Dermal, Inhalation.
Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Not available.

Potential acute health effects

Inhalation	: pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.
	XL1-Blue MRA E.coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRA (p2) E. coli Strain	No known significant effects or critical hazards.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No known significant effects or critical hazards.
Ingestion	: pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.
	XL1-Blue MRA E.coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRA (p2) E. coli Strain	No known significant effects or critical hazards.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No known significant effects or critical hazards.

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Skin contact	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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.
Eye contact	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data. No specific data. No specific data. No specific data.
Ingestion	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data. No specific data. No specific data. No specific data.
Skin contact	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data. No specific data. No specific data.

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Eye contact	: pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.
	XL1-Blue MRA E.coli Strain	No specific data.
	XL1-Blue MRA (p2) E. coli Strain	No specific data.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data.

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

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	: pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.
	XL1-Blue MRA E.coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRA (p2) E. coli Strain	No known significant effects or critical hazards.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No known significant effects or critical hazards.
Carcinogenicity	: pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.
	XL1-Blue MRA E.coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRA (p2) E. coli Strain	No known significant effects or critical hazards.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No known significant effects or critical hazards.
Mutagenicity	: pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.
	XL1-Blue MRA E.coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRA (p2) E. coli Strain	No known significant effects or critical hazards.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No known significant effects or critical hazards.

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SECTION 11: Toxicological information

Reproductive toxicity	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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.
Other information	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Not available. Not available. Not available. Not available.

SECTION 12: Ecological information

12.1 Toxicity

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

SECTION 12: Ecological information

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.

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.

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SECTION 14: Transport information

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	:	pBR322 Test Insert Digested With EcoR I and Sal I	Not applicable.
		XL1-Blue MRA E.coli Strain	Not applicable.
		XL1-Blue MRA (p2) E.coli Strain	Not applicable.
		Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Not applicable.

Other EU regulations

Ozone depleting substances (1005/2009/EU)

Not listed.

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

Not listed.

Persistent Organic Pollutants

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	:	All components are listed or exempted.
Canada	:	All components are listed or exempted.
China	:	All components are listed or exempted.
Europe	:	All components are listed or exempted.

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SECTION 15: Regulatory information

- Japan** : **Japan inventory (CSCL):** All components are listed or exempted.
Japan inventory (ISHL): All components are listed or exempted.
- New Zealand** : All components are listed or exempted.
- Philippines** : All components are listed or exempted.
- Republic of Korea** : All components are listed or exempted.
- Taiwan** : All components are listed or exempted.
- Thailand** : Not determined.
- Turkey** : Not determined.
- United States** : All components are active or exempted.
- Viet Nam** : All components are listed or exempted.

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

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.

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

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