

# SAFETY DATA SHEET



Lambda gt11 - EcoR I - CIAP - Treated Vector Kit, Part Number 234211

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

### 1.1 Product identifier

**Product name** : Lambda gt11 - EcoR I - CIAP - Treated Vector Kit, Part Number 234211

**Part no. (chemical kit)** : 234211

**Part no.** : Lambda gt11 Vector 234211-51  
 Digested With EcoR I  
 And Dephosphorylated  
 pRheo/EcoR I Test Insert 210200-51  
 Y1088 E. coli Strain 200263-81  
 Y1089r- E. coli Strain 200260-81  
 Y1090r- E. coli Strain 200281-81

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

**Material uses** : Analytical reagent.

Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert	0.01 ml (10 µg 1 µg/µl)
Y1088 E. coli Strain	0.005 ml (1.25 µg 0.25 µg/µl)
Y1089r- E. coli Strain	0.5 ml
Y1090r- E. coli Strain	0.5 ml

### 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** : Lambda gt11 Vector Mixture  
 Digested With EcoR I  
 And Dephosphorylated  
 pRheo/EcoR I Test Insert Mixture  
 Y1088 E. coli Strain Mixture  
 Y1089r- E. coli Strain Mixture  
 Y1090r- E. coli Strain Mixture

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

Not classified.

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**SECTION 2: Hazards identification**

<b>Ingredients of unknown toxicity</b>	: Y1088 E. coli Strain	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%
	Y1089r- E. coli Strain	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%
	Y1090r- 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**

<b>Signal word</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	No signal word.  No signal word. No signal word. No signal word. No signal word.
<b>Hazard statements</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	No known significant effects or critical hazards.  No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b><u>Precautionary statements</u></b>		
<b>Prevention</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	Not applicable.  Not applicable. Not applicable. Not applicable.
<b>Response</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	Not applicable.  Not applicable. Not applicable. Not applicable.
<b>Storage</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	Not applicable.  Not applicable. Not applicable. Not applicable.
<b>Disposal</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	Not applicable.  Not applicable. Not applicable. Not applicable.
<b>Hazardous ingredients</b>	: Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	Not applicable. Not applicable. Not applicable.

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**SECTION 2: Hazards identification**

**Supplemental label elements** : Lambda gt11 Vector Not applicable.  
 Digested With EcoR I  
 And Dephosphorylated  
 pRheo/EcoR I Test Insert Not applicable.  
 Y1088 E. coli Strain Safety data sheet available on request.  
 Y1089- E. coli Strain Safety data sheet available on request.  
 Y1090- E. coli Strain Safety data sheet available on request.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Lambda gt11 Vector Not applicable.  
 Digested With EcoR I  
 And Dephosphorylated  
 pRheo/EcoR I Test Insert Not applicable.  
 Y1088 E. coli Strain Not applicable.  
 Y1089- E. coli Strain Not applicable.  
 Y1090- E. coli Strain Not applicable.

**Special packaging requirements**

**Tactile warning of danger** : Lambda gt11 Vector Not applicable.  
 Digested With EcoR I  
 And Dephosphorylated  
 pRheo/EcoR I Test Insert Not applicable.  
 Y1088 E. coli Strain Not applicable.  
 Y1089- E. coli Strain Not applicable.  
 Y1090- E. coli Strain Not applicable.

**2.3 Other hazards**

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : Lambda gt11 Vector This mixture does not contain any substances that are assessed to be a PBT or a vPvB.  
 Digested With EcoR I  
 And Dephosphorylated  
 pRheo/EcoR I Test Insert This mixture does not contain any substances that are assessed to be a PBT or a vPvB.  
 Y1088 E. coli Strain This mixture does not contain any substances that are assessed to be a PBT or a vPvB.  
 Y1089- E. coli Strain This mixture does not contain any substances that are assessed to be a PBT or a vPvB.  
 Y1090- 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 gt11 Vector None known.  
 Digested With EcoR I  
 And Dephosphorylated  
 pRheo/EcoR I Test Insert None known.  
 Y1088 E. coli Strain None known.  
 Y1089- E. coli Strain None known.  
 Y1090- E. coli Strain None known.

**SECTION 3: Composition/information on ingredients**

**3.1 Substances** : Lambda gt11 Vector Digested Mixture  
 With EcoR I And  
 Dephosphorylated  
 pRheo/EcoR I Test Insert Mixture  
 Y1088 E. coli Strain Mixture  
 Y1089- E. coli Strain Mixture  
 Y1090- E. coli Strain Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type

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**SECTION 3: Composition/information on ingredients**

<b>Y1088 E. coli Strain</b> 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]
<b>Y1089r- E. coli Strain</b> 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]
<b>Y1090r- E. coli Strain</b> 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]
			<b>See Section 16 for the full text of the H statements declared above.</b>	

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

[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 gt11 Vector Digested With EcoR I And Dephosphorylated pRho/EcoR I Test Insert	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Y1088 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.
Y1089r- 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.
Y1090r- 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.

**Inhalation**

: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRho/EcoR I Test Insert	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Y1088 E. coli Strain	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Y1089r- E. coli Strain	Remove victim to fresh air and keep at rest in a position

**SECTION 4: First aid measures**

**Skin contact**

Y1090r- E. coli Strain	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.
: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRho/EcoR I Test Insert	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.
Y1088 E. coli Strain	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Y1089r- E. coli Strain	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Y1090r- E. coli Strain	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

**Ingestion**

: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated  pRho/EcoR I Test Insert	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.
Y1088 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.
Y1089r- 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.
Y1090r- 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.

**Protection of first-aiders**

: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRho/EcoR I Test Insert	No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training.
Y1088 E. coli Strain	No action shall be taken involving any personal risk or without suitable training.
Y1089r- E. coli Strain	No action shall be taken involving any personal risk or without suitable training.
Y1090r- E. coli Strain	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

## SECTION 4: First aid measures

<b>Eye contact</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Inhalation</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Skin contact</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Ingestion</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

### Over-exposure signs/symptoms

<b>Eye contact</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
<b>Inhalation</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
<b>Skin contact</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
<b>Ingestion</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	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

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**SECTION 4: First aid measures**

<b>Notes to physician</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Y1088 E. coli Strain	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Y1089r- E. coli Strain	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Y1090r- E. coli Strain	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert	No specific treatment.
	Y1088 E. coli Strain	No specific treatment.
	Y1089r- E. coli Strain	No specific treatment.
	Y1090r- E. coli Strain	No specific treatment.

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

<b>Suitable extinguishing media</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert	Use an extinguishing agent suitable for the surrounding fire.
	Y1088 E. coli Strain	Use an extinguishing agent suitable for the surrounding fire.
	Y1089r- E. coli Strain	Use an extinguishing agent suitable for the surrounding fire.
	Y1090r- E. coli Strain	Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert	None known.
	Y1088 E. coli Strain	None known.
	Y1089r- E. coli Strain	None known.
	Y1090r- E. coli Strain	None known.

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

<b>Hazards from the substance or mixture</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert	In a fire or if heated, a pressure increase will occur and the container may burst.
	Y1088 E. coli Strain	In a fire or if heated, a pressure increase will occur and the container may burst.
	Y1089r- E. coli Strain	In a fire or if heated, a pressure increase will occur and the container may burst.
	Y1090r- E. coli Strain	In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous combustion products</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert	No specific data.
	Y1088 E. coli Strain	No specific data. Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
	Y1089r- E. coli Strain	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds

## SECTION 5: Firefighting measures

Y1090r- E. coli Strain	metal oxide/oxides Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
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### 5.3 Advice for firefighters

#### Special precautions for fire-fighters

: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. 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.
Y1088 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.
Y1089r- 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.
Y1090r- 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.

#### Special protective equipment for fire-fighters

: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. 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.
Y1088 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.
Y1089r- 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.
Y1090r- 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.

## SECTION 6: Accidental release measures

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

## SECTION 6: Accidental release measures

<b>For non-emergency personnel</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated	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.
	pRheo/EcoR I Test Insert	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	Y1088 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.
	Y1089r- 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.
	Y1090r- 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.
<b>For emergency responders</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated	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".
	pRheo/EcoR I Test Insert	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".
	Y1088 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".
	Y1089r- 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".
	Y1090r- 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".
<b>6.2 Environmental precautions</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated	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).
	pRheo/EcoR I Test Insert	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).
	Y1088 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).
	Y1089r- 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).
	Y1090r- E. coli Strain	Avoid dispersal of spilt material and runoff and contact with

## SECTION 6: Accidental release measures

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

<b>Methods for cleaning up</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated	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.
	pRheo/EcoR I Test Insert	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	Y1088 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.
	Y1089r- 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.
	Y1090r- 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.

<b>6.4 Reference to other sections</b>	: 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.
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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

<b>Protective measures</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated	Put on appropriate personal protective equipment (see Section 8).
	pRheo/EcoR I Test Insert	Put on appropriate personal protective equipment (see Section 8).
	Y1088 E. coli Strain	Put on appropriate personal protective equipment (see Section 8).
	Y1089r- E. coli Strain	Put on appropriate personal protective equipment (see Section 8).
	Y1090r- E. coli Strain	Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated	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.
	pRheo/EcoR I Test Insert	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	Y1088 E. coli Strain	Potentially biohazardous material. Eating, drinking and

**SECTION 7: Handling and storage**

	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.
Y1089r- 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.
Y1090r- 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.

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

**Storage**

: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated	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.
pRheo/EcoR I Test Insert	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Y1088 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.
Y1089r- 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.
Y1090r- E. coli Strain	Store in accordance with local regulations. Store in original

## SECTION 7: Handling and storage

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)

<b>Recommendations</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRho/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications.
<b>Industrial sector specific solutions</b>	: <input checked="" type="checkbox"/> Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRho/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	Not available. Not available. Not available. Not available. Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
Y1088 E. coli Strain Glycerol	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist
Y1089r- E. coli Strain Glycerol	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist
Y1090r- E. coli Strain Glycerol	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> TWA: 10 mg/m <sup>3</sup> 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 measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

**SECTION 8: Exposure controls/personal protection**

Product/ingredient name	Type	Exposure	Value	Population	Effects
<b>Y1088 E. coli Strain</b> 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 <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	443.28 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Short term Inhalation	2068.62 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	2068.62 mg/m <sup>3</sup>	Workers	Systemic
<b>Y1089r- E. coli Strain</b> 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 <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	443.28 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Short term Inhalation	2068.62 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	2068.62 mg/m <sup>3</sup>	Workers	Systemic
<b>Y1090r- E. coli Strain</b> 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 <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	443.28 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Short term Inhalation	2068.62 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	2068.62 mg/m <sup>3</sup>	Workers	Systemic

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**SECTION 8: Exposure controls/personal protection**

	DNEL	Inhalation Long term Inhalation	mg/m <sup>3</sup> 2068.62 mg/m <sup>3</sup>	Workers	Systemic
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**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**

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** : Lambda gt11 Vector Liquid.  
 Digested With EcoR I  
 And Dephosphorylated  
 pRho/EcoR I Test Insert Liquid.  
 Y1088 E. coli Strain Liquid.  
 Y1089r- E. coli Strain Liquid.  
 Y1090r- E. coli Strain Liquid.

**Colour** : Lambda gt11 Vector Not available.  
 Digested With EcoR I  
 And Dephosphorylated  
 pRho/EcoR I Test Insert Not available.  
 Y1088 E. coli Strain Not available.  
 Y1089r- E. coli Strain Not available.  
 Y1090r- E. coli Strain Not available.

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**SECTION 9: Physical and chemical properties**

**Odour** : Lambda gt11 Vector Not available.  
 Digested With EcoR I  
 And Dephosphorylated  
 pRheo/EcoR I Test Insert Not available.  
 Y1088 E. coli Strain Not available.  
 Y1089r- E. coli Strain Not available.  
 Y1090r- E. coli Strain Not available.

**Odour threshold** : Lambda gt11 Vector Not available.  
 Digested With EcoR I  
 And Dephosphorylated  
 pRheo/EcoR I Test Insert Not available.  
 Y1088 E. coli Strain Not available.  
 Y1089r- E. coli Strain Not available.  
 Y1090r- E. coli Strain Not available.

**Melting point/freezing point** : Lambda gt11 Vector 0°C  
 Digested With EcoR I  
 And Dephosphorylated  
 pRheo/EcoR I Test Insert 0°C  
 Y1088 E. coli Strain Not available.  
 Y1089r- E. coli Strain Not available.  
 Y1090r- E. coli Strain Not available.

**Initial boiling point and boiling range** : Lambda gt11 Vector 100°C (212°F)  
 Digested With EcoR I  
 And Dephosphorylated  
 pRheo/EcoR I Test Insert 100°C (212°F)  
 Y1088 E. coli Strain Not available.  
 Y1089r- E. coli Strain Not available.  
 Y1090r- E. coli Strain Not available.

**Flammability (solid, gas)** : Lambda gt11 Vector Not applicable.  
 Digested With EcoR I  
 And Dephosphorylated  
 pRheo/EcoR I Test Insert Not applicable.  
 Y1088 E. coli Strain Not applicable.  
 Y1089r- E. coli Strain Not applicable.  
 Y1090r- E. coli Strain Not applicable.

**Upper/lower flammability or explosive limits** : Lambda gt11 Vector Not available.  
 Digested With EcoR I  
 And Dephosphorylated  
 pRheo/EcoR I Test Insert Not available.  
 Y1088 E. coli Strain Not available.  
 Y1089r- E. coli Strain Not available.  
 Y1090r- E. coli Strain Not available.

**Flash point** :

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
<b>Lambda gt11 Vector Digested With EcoR I And Dephosphorylated</b>						
Edetic acid	>100	>212	DIN 51758			
<b>pRheo/EcoR I Test Insert</b>						
Edetic acid	>100	>212	DIN 51758			
<b>Y1088 E. coli Strain</b>						
Glycerol				177	350.6	
<b>Y1089r- E. coli Strain</b>						
Glycerol				177	350.6	

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**SECTION 9: Physical and chemical properties**

Y1090r- E. coli Strain						
Glycerol				177	350.6	

**Auto-ignition temperature**

Ingredient name	°C	°F	Method
<b>Lambda gt11 Vector Digested With EcoR I And Dephosphorylated</b>			
Edetic acid	>400	>752	VDI 2263
<b>pRheo/EcoR I Test Insert</b>			
Edetic acid	>400	>752	VDI 2263
<b>Y1088 E. coli Strain</b>			
Glycerol	370	698	
<b>Y1089r- E. coli Strain</b>			
Glycerol	370	698	
<b>Y1090r- E. coli Strain</b>			
Glycerol	370	698	

**Decomposition temperature**

Lambda gt11 Vector Digested With EcoR I And Dephosphorylated	Not available.
pRheo/EcoR I Test Insert	Not available.
Y1088 E. coli Strain	Not available.
Y1089r- E. coli Strain	Not available.
Y1090r- E. coli Strain	Not available.

**pH**

Lambda gt11 Vector Digested With EcoR I And Dephosphorylated	7.5
pRheo/EcoR I Test Insert	7.5
Y1088 E. coli Strain	7
Y1089r- E. coli Strain	7
Y1090r- E. coli Strain	7

**Viscosity**

Lambda gt11 Vector Digested With EcoR I And Dephosphorylated	Not available.
pRheo/EcoR I Test Insert	Not available.
Y1088 E. coli Strain	Not available.
Y1089r- E. coli Strain	Not available.
Y1090r- E. coli Strain	Not available.

**Solubility(ies)**

Lambda gt11 Vector Digested With EcoR I And Dephosphorylated	Easily soluble in the following materials: cold water and hot water.
pRheo/EcoR I Test Insert	Easily soluble in the following materials: cold water and hot water.
Y1088 E. coli Strain	Easily soluble in the following materials: cold water and hot water.
Y1089r- E. coli Strain	Easily soluble in the following materials: cold water and hot water.
Y1090r- E. coli Strain	Easily soluble in the following materials: cold water and hot water.

**Partition coefficient: n-octanol/water**

Lambda gt11 Vector Digested With EcoR I And Dephosphorylated	Not applicable.
pRheo/EcoR I Test Insert	Not applicable.
Y1088 E. coli Strain	Not applicable.
Y1089r- E. coli Strain	Not applicable.
Y1090r- E. coli Strain	Not applicable.

**SECTION 9: Physical and chemical properties**

Vapour pressure :

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
<b>Lambda gt11 Vector Digested With EcoR I And Dephosphorylated</b>						
water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
<b>pRheo/EcoR I Test Insert</b>						
water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
<b>Y1088 E. coli Strain</b>						
water	23.8	3.2		92.258	12.3	
Glycerol	0.000075	0.00001		0.0025	0.00033	
<b>Y1089r- E. coli Strain</b>						
water	23.8	3.2		92.258	12.3	
Glycerol	0.000075	0.00001		0.0025	0.00033	
<b>Y1090r- E. coli Strain</b>						
water	23.8	3.2		92.258	12.3	
Glycerol	0.000075	0.00001		0.0025	0.00033	

**Evaporation rate** : Lambda gt11 Vector Digested With EcoR I And Dephosphorylated Not available.  
 pRheo/EcoR I Test Insert Not available.  
 Y1088 E. coli Strain Not available.  
 Y1089r- E. coli Strain Not available.  
 Y1090r- E. coli Strain Not available.

**Relative density** : Lambda gt11 Vector Digested With EcoR I And Dephosphorylated Not available.  
 pRheo/EcoR I Test Insert Not available.  
 Y1088 E. coli Strain Not available.  
 Y1089r- E. coli Strain Not available.  
 Y1090r- E. coli Strain Not available.

**Vapour density** : Lambda gt11 Vector Digested With EcoR I And Dephosphorylated Not available.  
 pRheo/EcoR I Test Insert Not available.  
 Y1088 E. coli Strain Not available.  
 Y1089r- E. coli Strain Not available.  
 Y1090r- E. coli Strain Not available.

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**SECTION 9: Physical and chemical properties**

<b>Oxidising properties</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	Not available.  Not available. Not available. Not available. Not available.
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**Particle characteristics**

<b>Median particle size</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	Not applicable.  Not applicable. Not applicable. Not applicable. Not applicable.
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**9.2 Other information**

No additional information.

**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert  Y1088 E. coli Strain  Y1089r- E. coli Strain  Y1090r- E. coli Strain	No specific test data related to reactivity available for this product or its ingredients.  No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
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<b>10.2 Chemical stability</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	The product is stable.  The product is stable. The product is stable. The product is stable. The product is stable.
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<b>10.3 Possibility of hazardous reactions</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert  Y1088 E. coli Strain  Y1089r- E. coli Strain  Y1090r- E. coli Strain	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.
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<b>10.4 Conditions to avoid</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	No specific data.  No specific data. No specific data. No specific data. No specific data.
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## SECTION 10: Stability and reactivity

<b>10.5 Incompatible materials</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRho/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
<b>10.6 Hazardous decomposition products</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRho/EcoR I Test Insert  Y1088 E. coli Strain  Y1089r- E. coli Strain  Y1090r- E. coli Strain	Under normal conditions of storage and use, hazardous decomposition products should not be produced.  Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. 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
Y1088 E. coli Strain Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-
Y1089r- E. coli Strain Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-
Y1090r- 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)
Y1088 E. coli Strain Sodium chloride	3000	N/A	N/A	N/A	N/A
Y1089r- E. coli Strain Sodium chloride	3000	N/A	N/A	N/A	N/A
Y1090r- E. coli Strain Sodium chloride	3000	N/A	N/A	N/A	N/A

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Y1088 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	-
Y1089r- E. coli Strain Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	10 mg	-

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Y1090r- E. coli Strain Sodium chloride	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
	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 gt11 Vector	Not available.
Digested With EcoR I	
And Dephosphorylated	
pRheo/EcoR I Test Insert	Not available.
Y1088 E. coli Strain	Routes of entry anticipated: Oral, Dermal, Inhalation.
Y1089r- E. coli Strain	Routes of entry anticipated: Oral, Dermal, Inhalation.
Y1090r- E. coli Strain	Routes of entry anticipated: Oral, Dermal, Inhalation.

**Potential acute health effects**

<b>Inhalation</b>	: Lambda gt11 Vector	No known significant effects or critical hazards.
	Digested With EcoR I	
	And Dephosphorylated	
	pRheo/EcoR I Test Insert	No known significant effects or critical hazards.
	Y1088 E. coli Strain	No known significant effects or critical hazards.
	Y1089r- E. coli Strain	No known significant effects or critical hazards.
	Y1090r- E. coli Strain	No known significant effects or critical hazards.
<b>Ingestion</b>	: Lambda gt11 Vector	No known significant effects or critical hazards.
	Digested With EcoR I	
	And Dephosphorylated	
	pRheo/EcoR I Test Insert	No known significant effects or critical hazards.
	Y1088 E. coli Strain	No known significant effects or critical hazards.
	Y1089r- E. coli Strain	No known significant effects or critical hazards.
	Y1090r- E. coli Strain	No known significant effects or critical hazards.
<b>Skin contact</b>	: Lambda gt11 Vector	No known significant effects or critical hazards.
	Digested With EcoR I	
	And Dephosphorylated	
	pRheo/EcoR I Test Insert	No known significant effects or critical hazards.
	Y1088 E. coli Strain	No known significant effects or critical hazards.
	Y1089r- E. coli Strain	No known significant effects or critical hazards.
	Y1090r- E. coli Strain	No known significant effects or critical hazards.

## SECTION 11: Toxicological information

<b>Eye contact</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated	No known significant effects or critical hazards.
	pRheo/EcoR I Test Insert	No known significant effects or critical hazards.
	Y1088 E. coli Strain	No known significant effects or critical hazards.
	Y1089r- E. coli Strain	No known significant effects or critical hazards.
	Y1090r- E. coli Strain	No known significant effects or critical hazards.

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

<b>Inhalation</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated	No specific data.
	pRheo/EcoR I Test Insert	No specific data.
	Y1088 E. coli Strain	No specific data.
	Y1089r- E. coli Strain	No specific data.
	Y1090r- E. coli Strain	No specific data.

<b>Ingestion</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated	No specific data.
	pRheo/EcoR I Test Insert	No specific data.
	Y1088 E. coli Strain	No specific data.
	Y1089r- E. coli Strain	No specific data.
	Y1090r- E. coli Strain	No specific data.

<b>Skin contact</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated	No specific data.
	pRheo/EcoR I Test Insert	No specific data.
	Y1088 E. coli Strain	No specific data.
	Y1089r- E. coli Strain	No specific data.
	Y1090r- E. coli Strain	No specific data.

<b>Eye contact</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated	No specific data.
	pRheo/EcoR I Test Insert	No specific data.
	Y1088 E. coli Strain	No specific data.
	Y1089r- E. coli Strain	No specific data.
	Y1090r- E. coli Strain	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

<b>General</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated	No known significant effects or critical hazards.
	pRheo/EcoR I Test Insert	No known significant effects or critical hazards.
	Y1088 E. coli Strain	No known significant effects or critical hazards.
	Y1089r- E. coli Strain	No known significant effects or critical hazards.
	Y1090r- E. coli Strain	No known significant effects or critical hazards.

## SECTION 11: Toxicological information

<b>Carcinogenicity</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Mutagenicity</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	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.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Y1088 E. coli Strain Sodium chloride	Acute EC50 2430000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute EC50 402.6 mg/l Fresh water	Daphnia - Daphnia magna	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
	Y1089r- E. coli Strain Sodium chloride	Acute EC50 2430000 µg/l Fresh water	Algae - Navicula seminulum
Acute EC50 519.6 mg/l Fresh water		Crustaceans - Cypris subglobosa	48 hours
Acute EC50 402.6 mg/l Fresh water		Daphnia - Daphnia magna	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
Y1090r- E. coli Strain Sodium chloride		Acute EC50 2430000 µg/l Fresh water	Algae - Navicula seminulum
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute EC50 402.6 mg/l Fresh water	Daphnia - Daphnia magna	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**

	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<sub>oc</sub>)** : 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**

	<b>ADR/RID</b>	<b>IMDG</b>	<b>IATA</b>
<b>14.1 UN number</b>	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-

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**SECTION 14: Transport information**

<b>14.3 Transport hazard class(es)</b>	-	-	-
<b>14.4 Packing group</b>	-	-	-
<b>14.5 Environmental hazards</b>	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**

<b>Label</b>	: Lambda gt11 Vector Digested With EcoR I And Dephosphorylated pRheo/EcoR I Test Insert Y1088 E. coli Strain Y1089r- E. coli Strain Y1090r- E. coli Strain	Not applicable.  Not applicable. Not applicable. Not applicable.
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**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**

## SECTION 15: Regulatory information

Not listed.

### [Rotterdam Convention on Prior Informed Consent \(PIC\)](#)

Not listed.

### [UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

### [Inventory list](#)

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

**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]  
DNEL = Derived No Effect Level  
EUH statement = CLP-specific Hazard statement  
PNEC = Predicted No Effect Concentration  
RRN = REACH Registration Number

### [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](#)

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**SECTION 16: Other information**

Y1088 E. coli Strain H319	Causes serious eye irritation.
Y1089r- E. coli Strain H319	Causes serious eye irritation.
Y1090r- E. coli Strain H319	Causes serious eye irritation.

Full text of classifications [CLP/GHS]

Y1088 E. coli Strain Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Y1089r- E. coli Strain Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Y1090r- E. coli Strain Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2

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Notice to reader

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