

# SAFETY DATA SHEET



XL1-Blue Electroporation-Competent Cells, Part Number 200228

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

### 1.1 Product identifier

**Product name** : XL1-Blue Electroporation-Competent Cells, Part Number 200228  
**Part no. (chemical kit)** : 200228  
**Part no.** : pUC 18 DNA Control 200231-42  
 Plasmid  
 XL1-Blue electroporation 200228-41  
 competent cells

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

**Identified uses** :  Analytical reagent.  
 pUC 18 DNA Control Plasmid 0.01 ml (0.1 ng / µl)  
 XL1-Blue electroporation competent cells 5 x 0.1 ml  
**Uses advised against** : None known.

### 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** : pUC 18 DNA Control Mixture  
 Plasmid  
 XL1-Blue electroporation Mixture  
 competent cells

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

Not classified.

<p><input checked="" type="checkbox"/> pUC 18 DNA Control Plasmid</p> <p>XL1-Blue electroporation competent cells</p>	<p>The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.</p> <p>The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.</p>
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<p><b>Ingredients of unknown toxicity</b></p> <p><b>Ingredients of unknown ecotoxicity</b></p>	<p><input checked="" type="checkbox"/> XL1-Blue electroporation competent cells Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%</p> <p><input checked="" type="checkbox"/> XL1-Blue electroporation competent cells Contains 2.3% of components with unknown hazards to the aquatic environment</p>
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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

## SECTION 2: Hazards identification

<b>Signal word</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	No signal word. No signal word.
<b>Hazard statements</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	No known significant effects or critical hazards. No known significant effects or critical hazards.

### Precautionary statements

<b>Prevention</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	Not applicable. Not applicable.
<b>Response</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	Not applicable. Not applicable.
<b>Storage</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	Not applicable. Not applicable.
<b>Disposal</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	Not applicable. Not applicable.
<b>Supplemental label elements</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	Not applicable. Safety data sheet available on request.
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	Not applicable. Not applicable.

### Special packaging requirements

<b>Containers to be fitted with child-resistant fastenings</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	Not applicable. Not applicable.
<b>Tactile warning of danger</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	Not applicable. Not applicable.

### 2.3 Other hazards

<b>Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	This mixture does not contain any substances that are assessed to be a PBT or a vPvB. This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
<b>Other hazards which do not result in classification</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	None known. None known.

**XL1-Blue Electroporation-Competent Cells, Part Number 200228**

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

**3.1 Substances** : pUC 18 DNA Control Plasmid Mixture  
 XL1-Blue electroporation Mixture  
 competent cells

Product/ingredient name	Identifiers	%	Classification	Type
<input checked="" type="checkbox"/> <b>XL1-Blue electroporation competent cells</b> Glycerol	UK (GB) REACH #: Annex V REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≤10	Not classified.  <b>See Section 16 for the full text of the H statements declared above.</b>	[1]

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

XL1-Blue electroporation competent cells [1] Substance with a workplace exposure limit  
 Occupational exposure limits, if available, are listed in Section 8.

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

<b>Eye contact</b>	: <input checked="" type="checkbox"/> pUC 18 DNA Control Plasmid  XL1-Blue electroporation competent cells	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.
<b>Inhalation</b>	: <input checked="" type="checkbox"/> pUC 18 DNA Control Plasmid  XL1-Blue electroporation competent cells	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.
<b>Skin contact</b>	: <input checked="" type="checkbox"/> pUC 18 DNA Control Plasmid  XL1-Blue electroporation competent cells	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.
<b>Ingestion</b>	: <input checked="" type="checkbox"/> pUC 18 DNA Control Plasmid  XL1-Blue electroporation competent cells	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.
<b>Protection of first-aiders</b>	: <input checked="" type="checkbox"/> pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	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.

**4.2 Most important symptoms and effects, both acute and delayed**

Over-exposure signs/symptoms

## SECTION 4: First aid measures

<b>Eye contact</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	No specific data. No specific data.
<b>Inhalation</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	No specific data. No specific data.
<b>Skin contact</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	No specific data. No specific data.
<b>Ingestion</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	No specific data. No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

<b>Notes to physician</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	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.
<b>Specific treatments</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	No specific treatment. No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	None known. None known.

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

<b>Hazards from the substance or mixture</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	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.
<b>Hazardous combustion products</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	No specific data. Decomposition products may include the following materials:  carbon dioxide carbon monoxide

### 5.3 Advice for firefighters

<b>Special protective actions for fire-fighters</b>	: pUC 18 DNA Control Plasmid  XL1-Blue electroporation competent cells	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.
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## SECTION 5: Firefighting measures

<b>Special protective equipment for fire-fighters</b>	: pUC 18 DNA Control Plasmid	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	XL1-Blue electroporation competent cells	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## SECTION 6: Accidental release measures

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

<b>For non-emergency personnel</b>	: pUC 18 DNA Control Plasmid	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 electroporation competent cells	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>	: pUC 18 DNA Control Plasmid	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 electroporation competent cells	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

: pUC 18 DNA Control Plasmid	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 electroporation competent cells	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

<b>Methods for cleaning up</b>	: pUC 18 DNA Control Plasmid	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 electroporation competent cells	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

### 6.4 Reference to other sections

: See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.
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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

<b>Protective measures</b>	: pUC 18 DNA Control Plasmid	Put on appropriate personal protective equipment (see Section 8).
	: XL1-Blue electroporation competent cells	Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	: pUC 18 DNA Control Plasmid	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	: XL1-Blue electroporation competent cells	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

<b>Storage</b>	: pUC 18 DNA Control Plasmid	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
	: XL1-Blue electroporation competent cells	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)

<b>Recommendations</b>	: pUC 18 DNA Control Plasmid	Industrial applications, Professional applications.
	: XL1-Blue electroporation competent cells	Industrial applications, Professional applications.
<b>Industrial sector specific solutions</b>	: pUC 18 DNA Control Plasmid	Not available.
	: XL1-Blue electroporation competent cells	Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits



## SECTION 8: Exposure controls/personal protection

Product/ingredient name	Exposure limit values
<input checked="" type="checkbox"/> <b>XL1-Blue electroporation competent cells</b> Glycerol	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist

### Biological exposure indices

No exposure indices known.

**Recommended monitoring procedures** :  Reference should be made to appropriate monitoring standards. 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
<input checked="" type="checkbox"/> <b>XL1-Blue electroporation competent cells</b> Glycerol	DNEL	Long term Inhalation	33 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	56 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Oral	229 mg/kg bw/day	General population	Systemic

### 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** : pUC 18 DNA Control Liquid.  
Plasmid  
XL1-Blue electroporation competent cells Liquid.
- Colour** : pUC 18 DNA Control Not available.  
Plasmid  
XL1-Blue electroporation competent cells Not available.
- Odour** : pUC 18 DNA Control Not available.  
Plasmid  
XL1-Blue electroporation competent cells Not available.
- Odour threshold** : pUC 18 DNA Control Not available.  
Plasmid  
XL1-Blue electroporation competent cells Not available.
- Melting point/freezing point** : pUC 18 DNA Control 0°C  
Plasmid  
XL1-Blue electroporation competent cells Not available.
- Initial boiling point and boiling range** : pUC 18 DNA Control 100°C  
Plasmid  
XL1-Blue electroporation competent cells Not available.
- Flammability** : pUC 18 DNA Control Not applicable.  
Plasmid  
XL1-Blue electroporation competent cells Not applicable.
- Upper/lower flammability or explosive limits** : pUC 18 DNA Control Not available.  
Plasmid  
XL1-Blue electroporation competent cells Not available.

**Flash point** :

Ingredient name	Closed cup		Open cup	
	°C	Method	°C	Method
<b>XL1-Blue electroporation competent cells</b>				
Glycerol	-	-	177	-
D-Glucitol	-	-	282.85	-

**Auto-ignition temperature** :

Ingredient name	°C	Method
<b>XL1-Blue electroporation competent cells</b>		
Glycerol	370	-

- Decomposition temperature** : pUC 18 DNA Control Not available.  
Plasmid  
XL1-Blue electroporation competent cells Not available.

- pH** : pUC 18 DNA Control 7.5  
Plasmid  
XL1-Blue electroporation competent cells Not available.



## SECTION 9: Physical and chemical properties

**Viscosity** : pUC 18 DNA Control Plasmid Not available.  
XL1-Blue electroporation competent cells Not available.

<b>Solubility(ies)</b>	<b>Media</b>	<b>Result</b>
	pUC 18 DNA Control Plasmid water	Soluble
	XL1-Blue electroporation competent cells water	Soluble

**Partition coefficient: n-octanol/water** : pUC 18 DNA Control Plasmid Not applicable.  
XL1-Blue electroporation competent cells Not applicable.

<b>Vapour pressure</b>	<b>Ingredient name</b>	<b>Vapour Pressure at 20°C</b>			<b>Vapour pressure at 50°C</b>		
		<b>mm Hg</b>	<b>kPa</b>	<b>Method</b>	<b>mm Hg</b>	<b>kPa</b>	<b>Method</b>
	pUC 18 DNA Control Plasmid water	17.5	2.3	-	92.258	12.3	-
	XL1-Blue electroporation competent cells water	17.5	2.3	-	92.258	12.3	-
	Glycerol	0.000075	0.00001	-	0.0025	0.00033	-

**Evaporation rate** : pUC 18 DNA Control Plasmid Not available.  
XL1-Blue electroporation competent cells Not available.

**Relative density** : pUC 18 DNA Control Plasmid Not available.  
XL1-Blue electroporation competent cells Not available.

**Vapour density** : pUC 18 DNA Control Plasmid Not available.  
XL1-Blue electroporation competent cells Not available.

**Explosive properties** : pUC 18 DNA Control Plasmid Not available.  
XL1-Blue electroporation competent cells Not available.

**Oxidising properties** : pUC 18 DNA Control Plasmid Not available.  
XL1-Blue electroporation competent cells Not available.

### Particle characteristics

**Median particle size** : pUC 18 DNA Control Plasmid Not applicable.  
XL1-Blue electroporation competent cells Not applicable.

### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	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.
<b>10.2 Chemical stability</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	The product is stable. The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	No specific data. No specific data.
<b>10.5 Incompatible materials</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
<b>10.6 Hazardous decomposition products</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	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
XL1-Blue electroporation competent cells Glycerol	LD50 Oral	Rat	12600 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 electroporation competent cells Glycerol	12600	N/A	N/A	N/A	N/A

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
XL1-Blue electroporation competent cells Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

**Conclusion/Summary** : Not available.

#### Sensitiser

**Conclusion/Summary** : Not available.

## SECTION 11: Toxicological information

### 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

: pUC 18 DNA Control Plasmid	Not available.
: XL1-Blue electroporation competent cells	Not available.

### Potential acute health effects

<b>Inhalation</b>	: pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
	: XL1-Blue electroporation competent cells	No known significant effects or critical hazards.
<b>Ingestion</b>	: pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
	: XL1-Blue electroporation competent cells	No known significant effects or critical hazards.
<b>Skin contact</b>	: pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
	: XL1-Blue electroporation competent cells	No known significant effects or critical hazards.
<b>Eye contact</b>	: pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
	: XL1-Blue electroporation competent cells	No known significant effects or critical hazards.

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

<b>Inhalation</b>	: pUC 18 DNA Control Plasmid	No specific data.
	: XL1-Blue electroporation competent cells	No specific data.
<b>Ingestion</b>	: pUC 18 DNA Control Plasmid	No specific data.
	: XL1-Blue electroporation competent cells	No specific data.
<b>Skin contact</b>	: pUC 18 DNA Control Plasmid	No specific data.
	: XL1-Blue electroporation competent cells	No specific data.
<b>Eye contact</b>	: pUC 18 DNA Control Plasmid	No specific data.
	: XL1-Blue electroporation competent cells	No specific data.

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

#### Short term exposure

## SECTION 11: Toxicological information

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

**Conclusion/Summary** : Not available.

**General** : pUC 18 DNA Control Plasmid No known significant effects or critical hazards.  
 XL1-Blue electroporation competent cells No known significant effects or critical hazards.

**Carcinogenicity** : pUC 18 DNA Control Plasmid No known significant effects or critical hazards.  
 XL1-Blue electroporation competent cells No known significant effects or critical hazards.

**Mutagenicity** : pUC 18 DNA Control Plasmid No known significant effects or critical hazards.  
 XL1-Blue electroporation competent cells No known significant effects or critical hazards.

**Reproductive toxicity** : pUC 18 DNA Control Plasmid No known significant effects or critical hazards.  
 XL1-Blue electroporation competent cells No known significant effects or critical hazards.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
XL1-Blue electroporation competent cells Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Trout - <i>Oncorhynchus mykiss</i>	96 hours

**Conclusion/Summary** : Not available.

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
XL1-Blue electroporation competent cells Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

**Conclusion/Summary** : Not available.

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
XL1-Blue electroporation competent cells Glycerol	-1.76	-	Low

### 12.4 Mobility in soil

## SECTION 12: Ecological information

- 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

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

#### UK (GB)/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.

###### Ozone depleting substances

Not listed.

###### Prior Informed Consent (PIC)

Not listed.

###### Persistent Organic Pollutants

Not listed.

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

No listed substance

**Label** : pUC 18 DNA Control Plasmid Not applicable.  
XL1-Blue electroporation Not applicable.  
competent cells

###### Seveso Directive

This product is not controlled under the Seveso Directive.

#### EU regulations

**Industrial emissions (integrated pollution prevention and control) - Air** : Not listed

**Industrial emissions (integrated pollution prevention and control) - Water** : Not listed

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

#### 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

**United States** : All components are active or exempted.

**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

Classification	Justification
Not classified.	

Full text of abbreviated H statements

Not applicable.

Full text of classifications

Not applicable.

- Date of issue/ Date of revision** : 30/06/2023
- Date of previous issue** : 23/03/2020
- Version** : 4

Notice to reader

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