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

<table>
<thead>
<tr>
<th>Product name</th>
<th>Part no. (chemical kit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL1-Blue Electroporation-Competent Cells, Part Number 200228</td>
<td>200228</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part no.</th>
<th>Material uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>pUC 18 DNA Control</td>
<td>Analytical reagent.</td>
</tr>
<tr>
<td>XL1-Blue electroporation competent cells</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Material uses</th>
<th>Part no. (chemical kit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>pUC 18 DNA Control Plasmid</td>
<td>200231-42</td>
</tr>
<tr>
<td>XL1-Blue electroporation competent cells</td>
<td>200228-41</td>
</tr>
</tbody>
</table>

1.3 Details of the supplier of the safety data sheet

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

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

1.4 Emergency telephone number

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

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

<table>
<thead>
<tr>
<th>Product definition</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]</th>
</tr>
</thead>
<tbody>
<tr>
<td>pUC 18 DNA Control Plasmid</td>
<td>Not classified.</td>
</tr>
<tr>
<td>XL1-Blue electroporation competent cells</td>
<td>Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%</td>
</tr>
</tbody>
</table>

Ingredients of unknown toxicity : XL1-Blue electroporation competent cells

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

<table>
<thead>
<tr>
<th>Signal word</th>
<th>Part no. (chemical kit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>pUC 18 DNA Control Plasmid</td>
<td>No signal word.</td>
</tr>
<tr>
<td>XL1-Blue electroporation competent cells</td>
<td>No signal word.</td>
</tr>
</tbody>
</table>
## SECTION 2: Hazards identification

<table>
<thead>
<tr>
<th>Hazard statements</th>
<th>pUC 18 DNA Control Plasmid</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>XL1-Blue electroporation competent cells</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

### Precautionary statements

#### Prevention

- pUC 18 DNA Control Plasmid
- XL1-Blue electroporation competent cells

#### Response

- pUC 18 DNA Control Plasmid
- XL1-Blue electroporation competent cells

#### Storage

- pUC 18 DNA Control Plasmid
- XL1-Blue electroporation competent cells

#### Disposal

- pUC 18 DNA Control Plasmid
- XL1-Blue electroporation competent cells

### Supplemental label elements

- pUC 18 DNA Control Plasmid
- XL1-Blue electroporation competent cells

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

- pUC 18 DNA Control Plasmid
- XL1-Blue electroporation competent cells

### Special packaging requirements

#### Tactile warning of danger

- pUC 18 DNA Control Plasmid
- XL1-Blue electroporation competent cells

### 2.3 Other hazards

#### Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

- 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.

#### Other hazards which do not result in classification

- pUC 18 DNA Control Plasmid
- XL1-Blue electroporation competent cells

- None known.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

<table>
<thead>
<tr>
<th>Substances</th>
<th>pUC 18 DNA Control Plasmid</th>
<th>Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>XL1-Blue electroporation competent cells</td>
<td>Mixture</td>
</tr>
</tbody>
</table>
SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Identifiers</th>
<th>%</th>
<th>Regulation (EC) No. 1272/2008 [CLP]</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Type
[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[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**
- 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.

**Inhalation**
- 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.

**Skin contact**
- 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.

**Ingestion**
- pUC 18 DNA Control Plasmid
- XL1-Blue electroporation competent cells

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

**Protection of first-aiders**
- pUC 18 DNA Control Plasmid
- XL1-Blue electroporation competent cells

No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Date of issue/Date of revision: 23/03/2020
Date of previous issue: 15/02/2018
Version: 3
SECTION 4: First aid measures

Potential acute health effects

<table>
<thead>
<tr>
<th></th>
<th>pUC 18 DNA Control Plasmid</th>
<th>XL1-Blue electroporation competent cells</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

Over-exposure signs/symptoms

<table>
<thead>
<tr>
<th></th>
<th>pUC 18 DNA Control Plasmid</th>
<th>XL1-Blue electroporation competent cells</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

<table>
<thead>
<tr>
<th></th>
<th>pUC 18 DNA Control Plasmid</th>
<th>XL1-Blue electroporation competent cells</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Notes to physician</strong></td>
<td>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</td>
<td>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</td>
</tr>
</tbody>
</table>

Specific treatments

<table>
<thead>
<tr>
<th></th>
<th>pUC 18 DNA Control Plasmid</th>
<th>XL1-Blue electroporation competent cells</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Specific treatments</strong></td>
<td>No specific treatment.</td>
<td>No specific treatment.</td>
</tr>
</tbody>
</table>

SECTION 5: Firefighting measures

5.1 Extinguishing media

<table>
<thead>
<tr>
<th></th>
<th>pUC 18 DNA Control Plasmid</th>
<th>XL1-Blue electroporation competent cells</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Suitable extinguishing media</strong></td>
<td>Use an extinguishing agent suitable for the surrounding fire.</td>
<td>Use an extinguishing agent suitable for the surrounding fire.</td>
</tr>
<tr>
<td><strong>Unsuitable extinguishing media</strong></td>
<td>None known.</td>
<td>None known.</td>
</tr>
</tbody>
</table>

5.2 Special hazards arising from the substance or mixture
## SECTION 5: Firefighting measures

### Hazards from the substance or mixture

- **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.**

### Hazardous combustion products

- **pUC 18 DNA Control Plasmid**
- **XL1-Blue Electroporation Competent Cells**

   - **Decomposition products may include the following materials:**
     - Carbon dioxide
     - Carbon monoxide

### 5.3 Advice for firefighters

#### Special precautions for fire-fighters

- **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.

#### Special protective equipment for fire-fighters

- **pUC 18 DNA Control Plasmid**
- **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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

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

#### For non-emergency personnel

- **pUC 18 DNA Control Plasmid**
- **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 spill material. Put on appropriate personal protective equipment.

#### For emergency responders

- **pUC 18 DNA Control Plasmid**
- **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**
- **XL1-Blue Electroporation Competent Cells**

   - Avoid dispersal of spill 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).

---

Date of issue/Date of revision: 23/03/2020  
Date of previous issue: 15/02/2018  
Version: 3
SECTION 6: Accidental release measures

6.3 Methods and material for containment and cleaning up

Methods for cleaning up:
- 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.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures:
- 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).

Advice on general occupational hygiene:
- 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

Storage:
- 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.
**SECTION 7: Handling and storage**

### 7.3 Specific end use(s)

#### Recommendations

- pUC 18 DNA Control Plasmid
- XL1-Blue electroporation competent cells

#### Industrial sector specific solutions

- pUC 18 DNA Control Plasmid
- XL1-Blue electroporation competent cells

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

### 8.1 Control parameters

#### Occupational exposure limits

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Exposure limit values</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL1-Blue electroporation competent cells, Glycerol</td>
<td>EH40/2005 WELs (United Kingdom (UK), 8/2018). TWA: 10 mg/m³ 8 hours. Form: Mist</td>
</tr>
</tbody>
</table>

#### 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

No DNELs/DMELs available.

#### 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.
SECTION 8: Exposure controls/personal protection

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

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

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

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

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance
Physical state:
- pUC 18 DNA Control Plasmid: Liquid.
- XL1-Blue electroporation competent cells: Liquid.

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

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

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

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

Melting point/freezing point:
- pUC 18 DNA Control Plasmid: 0°C
- XL1-Blue electroporation competent cells: Not available.

Initial boiling point and boiling range:
- pUC 18 DNA Control Plasmid: 100°C
- XL1-Blue electroporation competent cells: Not available.

Flash point:
- pUC 18 DNA Control Plasmid: Not available.
- XL1-Blue electroporation competent cells: Not available.
### SECTION 9: Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>pUC 18 DNA Control Plasmid</th>
<th>Not available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaporation rate</td>
<td>XL1-Blue electroporation competent cells</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>XL1-Blue electroporation competent cells</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapour density</td>
<td>XL1-Blue electroporation competent cells</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>XL1-Blue electroporation competent cells</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>XL1-Blue electroporation competent cells</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>XL1-Blue electroporation competent cells</td>
<td>Not available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>XL1-Blue electroporation competent cells</td>
<td>Not available.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>XL1-Blue electroporation competent cells</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>XL1-Blue electroporation competent cells</td>
<td>Not available.</td>
</tr>
</tbody>
</table>
SECTION 9: Physical and chemical properties

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.

9.2 Other information
No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity
: pUC 18 DNA Control Plasmid
: No specific test data related to reactivity available for this product or its ingredients.
: XL1-Blue electroporation competent cells
: No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability
: pUC 18 DNA Control Plasmid
: The product is stable.
: XL1-Blue electroporation competent cells
: The product is stable.

10.3 Possibility of hazardous reactions
: pUC 18 DNA Control Plasmid
: Under normal conditions of storage and use, hazardous reactions will not occur.
: XL1-Blue electroporation competent cells
: Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid
: pUC 18 DNA Control Plasmid
: No specific data.
: XL1-Blue electroporation competent cells
: No specific data.

10.5 Incompatible materials
: pUC 18 DNA Control Plasmid
: May react or be incompatible with oxidising materials.
: XL1-Blue electroporation competent cells
: May react or be incompatible with oxidising materials.

10.6 Hazardous decomposition products
: pUC18 Control Plasmid DNA
: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
: XL1-Blue electroporation competent cells
: 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
: Not available.

Acute toxicity estimates
: N/A

Irritation/Corrosion
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)
- **Conclusion/Summary**: Not available.

### Specific target organ toxicity (repeated exposure)
- **Conclusion/Summary**: Not available.

### Aspiration hazard
- **Conclusion/Summary**: Not available.

### Information on likely routes of exposure

<table>
<thead>
<tr>
<th>Route</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>pUC 18 DNA Control Plasmid</td>
</tr>
<tr>
<td>Inhalation</td>
<td>XL1-Blue electroporation competent cells</td>
</tr>
</tbody>
</table>

### Potential acute health effects

<table>
<thead>
<tr>
<th>Route</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>pUC 18 DNA Control Plasmid</td>
</tr>
<tr>
<td>Inhalation</td>
<td>XL1-Blue electroporation competent cells</td>
</tr>
<tr>
<td>Ingestion</td>
<td>pUC 18 DNA Control Plasmid</td>
</tr>
<tr>
<td>Ingestion</td>
<td>XL1-Blue electroporation competent cells</td>
</tr>
<tr>
<td>Skin contact</td>
<td>pUC 18 DNA Control Plasmid</td>
</tr>
<tr>
<td>Skin contact</td>
<td>XL1-Blue electroporation competent cells</td>
</tr>
<tr>
<td>Eye contact</td>
<td>pUC 18 DNA Control Plasmid</td>
</tr>
<tr>
<td>Eye contact</td>
<td>XL1-Blue electroporation competent cells</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Route</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>pUC 18 DNA Control Plasmid</td>
</tr>
<tr>
<td>Inhalation</td>
<td>XL1-Blue electroporation competent cells</td>
</tr>
<tr>
<td>Ingestion</td>
<td>pUC 18 DNA Control Plasmid</td>
</tr>
<tr>
<td>Ingestion</td>
<td>XL1-Blue electroporation competent cells</td>
</tr>
<tr>
<td>Skin contact</td>
<td>pUC 18 DNA Control Plasmid</td>
</tr>
<tr>
<td>Skin contact</td>
<td>XL1-Blue electroporation competent cells</td>
</tr>
<tr>
<td>Eye contact</td>
<td>pUC 18 DNA Control Plasmid</td>
</tr>
<tr>
<td>Eye contact</td>
<td>XL1-Blue electroporation competent cells</td>
</tr>
</tbody>
</table>

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

**Date of issue/Date of revision**: 23/03/2020  
**Date of previous issue**: 15/02/2018  
**Version**: 3
SECTION 11: Toxicological information

### Short term exposure

Potential immediate effects: Not available.

Potential delayed effects: Not available.

### Long term exposure

Potential immediate effects: Not available.

Potential delayed effects: Not available.

### Potential chronic health effects

**General**: pUC 18 DNA Control Plasmid
- Not available.

**XL1-Blue electroporation competent cells**: Not available.

**Carcinogenicity**: pUC 18 DNA Control Plasmid
- Not available.

**XL1-Blue electroporation competent cells**: Not available.

**Mutagenicity**: pUC 18 DNA Control Plasmid
- Not available.

**XL1-Blue electroporation competent cells**: Not available.

**Teratogenicity**: pUC 18 DNA Control Plasmid
- Not available.

**XL1-Blue electroporation competent cells**: Not available.

**Developmental Effects**: pUC 18 DNA Control Plasmid
- Not available.

**XL1-Blue electroporation competent cells**: Not available.

**Fertility effects**: pUC 18 DNA Control Plasmid
- Not available.

**XL1-Blue electroporation competent cells**: Not available.

### SECTION 12: Ecological information

**12.1 Toxicity**

Conclusion/Summary: Not available.

**12.2 Persistence and degradability**

Not available.

**12.3 Bioaccumulative potential**

Not available.

**12.4 Mobility in soil**

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

Mobility: Not available.

**12.5 Results of PBT and vPvB assessment**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
SECTION 12: Ecological information

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 spill material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

<table>
<thead>
<tr>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2 UN proper shipping name</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.3 Transport hazard class(es)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.4 Packing group</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.5 Environmental hazards</td>
<td>No.</td>
<td>No.</td>
</tr>
</tbody>
</table>

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.

Date of issue/Date of revision: 23/03/2020  Date of previous issue: 15/02/2018  Version: 3
SECTION 15: Regulatory information

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

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

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

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

Label:

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

Other EU regulations

Ozone depleting substances (1005/2009/EU)

Not listed.

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

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

- Australia: All components are listed or exempted.
- Canada: All components are listed or exempted.
- China: All components are listed or exempted.
- Europe: All components are listed or exempted.
- Japan: Japan inventory (ENCS): All components are listed or exempted. Japan inventory (ISHL): All components are listed or exempted.
- New Zealand: All components are listed or exempted.
- Philippines: All components are listed or exempted.
- Republic of Korea: All components are listed or exempted.
- Taiwan: All components are listed or exempted.
- Thailand: Not determined.
- Turkey: Not determined.
- United States: All components are active or exempted.
- Viet Nam: All components are listed or exempted.
SECTION 15: Regulatory information

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

SECTION 16: Other information

Indicates information that has changed from previously issued version.

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

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

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not classified.</td>
<td></td>
</tr>
</tbody>
</table>

Full text of abbreviated H statements
Not applicable.

Full text of classifications [CLP/GHS]
Not applicable.

Date of issue/Date of revision: 23/03/2020
Date of previous issue: 15/02/2018
Version: 3

Notice to reader
Disclaimer: The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.