

# SAFETY DATA SHEET



XL1-Blue MRF' Electroporation-Competent Cells, Part Number 200158

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

### 1.1 Product identifier

**Product name** : XL1-Blue MRF' Electroporation-Competent Cells, Part Number 200158  
**Part No. (Kit)** : 200158  
**Part No.** : XL1-Blue MRF' electroporation competent cells 200158-41  
pUC 18 DNA Control Plasmid 200231-42

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

Identified uses	
Analytical reagent.	
XL1-Blue MRF' electroporation competent cells	5 x 0.1 ml
pUC 18 DNA Control Plasmid	0.01 ml (0.1 ng/μl)

### 1.3 Details of the supplier of the safety data sheet

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

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

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

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : XL1-Blue MRF' electroporation competent cells Mixture  
pUC 18 DNA Control Plasmid Mixture

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

Not classified.

**Ingredients of unknown toxicity** : XL1-Blue MRF' electroporation competent cells Percentage of the mixture consisting of ingredient(s) of unknown 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

**Date of issue/Date of revision** : 26/09/2017

**XL1-Blue MRF' Electroporation-Competent Cells, Part Number 200158**

## SECTION 2: Hazards identification

<b>Signal word</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	No signal word.  No signal word.
<b>Hazard statements</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.  No known significant effects or critical hazards.
<b><u>Precautionary statements</u></b>		
<b>Prevention</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	Not applicable.  Not applicable.
<b>Response</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	Not applicable.  Not applicable.
<b>Storage</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	Not applicable.  Not applicable.
<b>Disposal</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	Not applicable.  Not applicable.
<b>Supplemental label elements</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	Not applicable.  Not applicable.
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	Not applicable.  Not applicable.
<b><u>Special packaging requirements</u></b>		
<b>Tactile warning of danger</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	Not applicable.  Not applicable.
<b>2.3 Other hazards</b>		
<b>Other hazards which do not result in classification</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	None known.  None known.

XL1-Blue MRF' Electroporation-Competent Cells, Part Number 200158

## SECTION 3: Composition/information on ingredients

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

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
XL1-Blue MRF' electroporation competent cells Glycerol	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>	[2]

### 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

<b>Eye contact</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	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>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	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>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	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>	: XL1-Blue MRF' electroporation competent cells  pUC 18 DNA Control Plasmid	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. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

**XL1-Blue MRF' Electroporation-Competent Cells, Part Number 200158**

**SECTION 4: First aid measures**

<b>Protection of first-aiders</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	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.
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**4.2 Most important symptoms and effects, both acute and delayed**

Potential acute health effects

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

Over-exposure signs/symptoms

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

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

<b>Notes to physician</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.  Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
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**XL1-Blue MRF' Electroporation-Competent Cells, Part Number 200158**

**SECTION 4: First aid measures**

<b>Specific treatments</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	No specific treatment.  No specific treatment.
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**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

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

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

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

**5.3 Advice for firefighters**

<b>Special precautions for fire-fighters</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	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.
<b>Special protective equipment for fire-fighters</b>	: XL1-Blue MRF' electroporation competent cells  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. 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.  Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

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**SECTION 6: Accidental release measures**

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

<b>For non-emergency personnel</b>	: XL1-Blue MRF' 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.
	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.
<b>For emergency responders</b>	: XL1-Blue MRF' 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".
	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".

**6.2 Environmental precautions**

: XL1-Blue MRF' 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).
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).

**6.3 Methods and material for containment and cleaning up**

<b>Methods for cleaning up</b>	: XL1-Blue MRF' 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.
	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.

**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>	: XL1-Blue MRF' electroporation competent cells	Put on appropriate personal protective equipment (see Section 8).
	pUC 18 DNA Control Plasmid	Put on appropriate personal protective equipment (see Section 8).

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**SECTION 7: Handling and storage**

<b>Advice on general occupational hygiene</b>	: XL1-Blue MRF' 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.
	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.

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

<b>Storage</b>	: XL1-Blue MRF' 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.
	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.

**7.3 Specific end use(s)**

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

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

**8.1 Control parameters**

**Occupational exposure limits**

Product/ingredient name	Exposure limit values
XL1-Blue MRF' electroporation competent cells Glycerol	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist

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

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

### DNELs/DMELs

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.

**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

<b>Physical state</b>	: XL1-Blue MRF' electroporation competent cells	Liquid.
	pUC 18 DNA Control Plasmid	Liquid.
<b>Colour</b>	: XL1-Blue MRF' electroporation competent cells	Not available.
	pUC 18 DNA Control Plasmid	Not available.
<b>Odour</b>	: XL1-Blue MRF' electroporation competent cells	Not available.
	pUC 18 DNA Control Plasmid	Not available.
<b>Odour threshold</b>	: XL1-Blue MRF' electroporation competent cells	Not available.
	pUC 18 DNA Control Plasmid	Not available.
<b>pH</b>	: XL1-Blue MRF' electroporation competent cells	Not available.
	pUC 18 DNA Control Plasmid	7.5
<b>Melting point/freezing point</b>	: XL1-Blue MRF' electroporation competent cells	Not available.
	pUC 18 DNA Control Plasmid	0°C
<b>Initial boiling point and boiling range</b>	: XL1-Blue MRF' electroporation competent cells	Not available.
	pUC 18 DNA Control Plasmid	100°C
<b>Flash point</b>	: XL1-Blue MRF' electroporation competent cells	Not available.
	pUC 18 DNA Control Plasmid	Not available.
<b>Evaporation rate</b>	: XL1-Blue MRF' electroporation competent cells	Not available.
	pUC 18 DNA Control Plasmid	Not available.
<b>Flammability (solid, gas)</b>	: XL1-Blue MRF' electroporation competent cells	Not applicable.
	pUC 18 DNA Control Plasmid	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	: XL1-Blue MRF' electroporation competent cells	Not available.
	pUC 18 DNA Control Plasmid	Not available.

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## **SECTION 9: Physical and chemical properties**

<b>Vapour pressure</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	Not available. Not available.
<b>Vapour density</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	Not available. Not available.
<b>Relative density</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	Not available. Not available.
<b>Solubility(ies)</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	Not available. Not available.
<b>Auto-ignition temperature</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	Not available. Not available.
<b>Decomposition temperature</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	Not available. Not available.
<b>Viscosity</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	Not available. Not available.
<b>Explosive properties</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	Not available. Not available.
<b>Oxidising properties</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	Not available. Not available.

### **9.2 Other information**

No additional information.

**XL1-Blue MRF' Electroporation-Competent Cells, Part Number 200158**

**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	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>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	The product is stable.  The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	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>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	No specific data.  No specific data.
<b>10.5 Incompatible materials</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	May react or be incompatible with oxidising materials.  May react or be incompatible with oxidising materials.
<b>10.6 Hazardous decomposition products</b>	: XL1-Blue MRF' electroporation competent cells pUC 18 DNA Control Plasmid	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**

Not available.

**Acute toxicity estimates**

Not available.

**Irritation/Corrosion**

**Conclusion/Summary** : Not available.

**Sensitiser**

**Conclusion/Summary** : Not available.

**Specific target organ toxicity (single exposure)**

Not available.

**Specific target organ toxicity (repeated exposure)**

Not available.

**Aspiration hazard**

Not available.

**XL1-Blue MRF' Electroporation-Competent Cells, Part Number 200158**

**SECTION 11: Toxicological information**

<b>Information on likely routes of exposure</b>	: XL1-Blue MRF' electroporation competent cells	Not available.
	pUC 18 DNA Control Plasmid	Not available.

**Potential acute health effects**

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

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

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

## SECTION 11: Toxicological information

**Potential delayed effects** : Not available.

### Potential chronic health effects

<b>General</b>	: XL1-Blue MRF' electroporation competent cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: XL1-Blue MRF' electroporation competent cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
<b>Mutagenicity</b>	: XL1-Blue MRF' electroporation competent cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
<b>Teratogenicity</b>	: XL1-Blue MRF' electroporation competent cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
<b>Developmental effects</b>	: XL1-Blue MRF' electroporation competent cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
<b>Fertility effects</b>	: XL1-Blue MRF' electroporation competent cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.

## 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

**PBT** : Not applicable.

**vPvB** : Not applicable.

**XL1-Blue MRF' Electroporation-Competent Cells, Part Number 200158**

## 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

**ADR/RID / IMDG / IATA** : Not regulated.

**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 Annex II of Marpol and the IBC Code** : 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** : XL1-Blue MRF' electroporation competent cells Not applicable.  
pUC 18 DNA Control Plasmid Not applicable.

#### Other EU regulations

##### Ozone depleting substances (1005/2009/EU)

Not listed.

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

Not listed.

#### Seveso Directive

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**XL1-Blue MRF' Electroporation-Competent Cells, Part Number 200158**

## SECTION 15: Regulatory information

This product is not controlled under the Seveso Directive.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol (Annexes A, B, C, E)

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

<b>Australia</b>	: All components are listed or exempted.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Europe</b>	: All components are listed or exempted.
<b>Japan</b>	: <b>Japan inventory (ENCS)</b> : All components are listed or exempted. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>Malaysia</b>	: Not determined.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: All components are listed or exempted.
<b>Republic of Korea</b>	: All components are listed or exempted.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are listed 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

Not applicable.

### Full text of classifications [CLP/GHS]

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*XL1-Blue MRF' Electroporation-Competent Cells, Part Number 200158*

## **SECTION 16: Other information**

Not applicable.

**Date of issue/ Date of revision** : 26/09/2017

**Date of previous issue** : No previous validation.

**Version** : 1

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