

# SAFETY DATA SHEET



ABLE Electroporation-Competent Cell Kit, Part Number 200160

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

### 1.1 Product identifier

**Product name** : ABLE Electroporation-Competent Cell Kit, Part Number 200160  
**Part No. (Kit)** : 200160  
**Part No.** : ABLE C electroporation competent cells 200161-41  
ABLE K electroporation competent cells 200162-41  
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.                    |                     |
| ABLE C electroporation competent cells | 5 x 0.1 ml          |
| ABLE K 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** : ABLE C electroporation competent cells Mixture  
ABLE K 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** : ABLE C electroporation competent cells Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 10 - 30%  
ABLE K 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.

**Date of issue/Date of revision** : 27/11/2017

## SECTION 2: Hazards identification

### 2.2 Label elements

|   |  |   |
|---|--|---|
| <b>Signal word</b>  | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control Plasmid | No signal word.<br>No signal word.<br>No signal word.   |
| <b>Hazard statements</b>  | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control Plasmid | No known significant effects or critical hazards.<br>No known significant effects or critical hazards.<br>No known significant effects or critical hazards. |
| <b><u>Precautionary statements</u></b>  |  |   |
| <b>Prevention</b>   | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control Plasmid | Not applicable.<br>Not applicable.<br>Not applicable.   |
| <b>Response</b>   | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control Plasmid | Not applicable.<br>Not applicable.<br>Not applicable.   |
| <b>Storage</b>  | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control Plasmid | Not applicable.<br>Not applicable.<br>Not applicable.   |
| <b>Disposal</b>   | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control Plasmid | Not applicable.<br>Not applicable.<br>Not applicable.   |
| <b>Supplemental label elements</b>  | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control Plasmid | Not applicable.<br>Not applicable.<br>Not applicable.   |
| <b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b> | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control Plasmid | Not applicable.<br>Not applicable.<br>Not applicable.   |
| <b><u>Special packaging requirements</u></b>  |  |   |
| <b>Tactile warning of danger</b>  | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control Plasmid | Not applicable.<br>Not applicable.<br>Not applicable.   |

ABLE Electroporation-Competent Cell Kit, Part Number 200160

## SECTION 2: Hazards identification

### 2.3 Other hazards

**Other hazards which do not result in classification** :

|  |             |
|--|-------------|
| ABLE C electroporation competent cells | None known. |
| ABLE K electroporation competent cells | None known. |
| pUC 18 DNA Control Plasmid             | None known. |

## SECTION 3: Composition/information on ingredients

**3.1 Substances** :

|  |         |
|--|---------|
| ABLE C electroporation competent cells | Mixture |
| ABLE K electroporation competent cells | Mixture |
| pUC 18 DNA Control Plasmid             | Mixture |

| Product/ingredient name                            | Identifiers                                       | %   | Regulation (EC) No. 1272/2008 [CLP]  | Type |
|--|---|-----|--|------|
| ABLE C electroporation competent cells<br>Glycerol | REACH #: Annex V<br>EC: 200-289-5<br>CAS: 56-81-5 | ≤10 | Not classified.  | [2]  |
| ABLE K electroporation competent cells<br>Glycerol | REACH #: Annex V<br>EC: 200-289-5<br>CAS: 56-81-5 | ≤10 | Not classified.<br><br><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

**Eye contact** :

|  |   |
|--|---|
| ABLE C 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. |
| ABLE K 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. |
| 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. |

**ABLE Electroporation-Competent Cell Kit, Part Number 200160**

**SECTION 4: First aid measures**

|                                   |  |   |
|-----------------------------------|--|---|
| <b>Inhalation</b>                 | : ABLE C electroporation competent cells<br><br>ABLE K electroporation competent cells<br><br>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.<br><br>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.<br><br>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>               | : ABLE C electroporation competent cells<br><br>ABLE K electroporation competent cells<br><br>pUC 18 DNA Control Plasmid         | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.<br><br>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.<br><br>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.  |
| <b>Ingestion</b>                  | : ABLE C electroporation competent cells<br><br><br>ABLE K electroporation competent cells<br><br><br>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.<br><br>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.<br><br>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. |
| <b>Protection of first-aiders</b> | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control Plasmid                 | No action shall be taken involving any personal risk or without suitable training.<br>No action shall be taken involving any personal risk or without suitable training.<br>No action shall be taken involving any personal risk or without suitable training.  |

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

Potential acute health effects

|                    |  |   |
|--------------------|--|---|
| <b>Eye contact</b> | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control Plasmid | No known significant effects or critical hazards.<br><br>No known significant effects or critical hazards.<br><br>No known significant effects or critical hazards. |
| <b>Inhalation</b>  | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control Plasmid | No known significant effects or critical hazards.<br><br>No known significant effects or critical hazards.<br><br>No known significant effects or critical hazards. |

**ABLE Electroporation-Competent Cell Kit, Part Number 200160**

**SECTION 4: First aid measures**

**Skin contact** : ABLE C electroporation competent cells No known significant effects or critical hazards.  
 ABLE K electroporation competent cells No known significant effects or critical hazards.  
 pUC 18 DNA Control Plasmid No known significant effects or critical hazards.

**Ingestion** : ABLE C electroporation competent cells No known significant effects or critical hazards.  
 ABLE K electroporation competent cells No known significant effects or critical hazards.  
 pUC 18 DNA Control Plasmid No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

**Eye contact** : ABLE C electroporation competent cells No specific data.  
 ABLE K electroporation competent cells No specific data.  
 pUC 18 DNA Control Plasmid No specific data.

**Inhalation** : ABLE C electroporation competent cells No specific data.  
 ABLE K electroporation competent cells No specific data.  
 pUC 18 DNA Control Plasmid No specific data.

**Skin contact** : ABLE C electroporation competent cells No specific data.  
 ABLE K electroporation competent cells No specific data.  
 pUC 18 DNA Control Plasmid No specific data.

**Ingestion** : ABLE C electroporation competent cells No specific data.  
 ABLE K electroporation competent cells No specific data.  
 pUC 18 DNA Control Plasmid No specific data.

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

**Notes to physician** : ABLE C electroporation competent cells Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.  
 ABLE K electroporation competent cells Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.  
 pUC 18 DNA Control Plasmid Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments** : ABLE C electroporation competent cells No specific treatment.  
 ABLE K electroporation competent cells No specific treatment.  
 pUC 18 DNA Control Plasmid No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

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

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

|  |  |  |
|--|--|--|
| <b>Hazards from the substance or mixture</b> | : ABLE C electroporation competent cells | In a fire or if heated, a pressure increase will occur and the container may burst.              |
|  | ABLE K electroporation competent cells   | In a fire or if heated, a pressure increase will occur and the container may burst.              |
|  | pUC 18 DNA Control Plasmid               | In a fire or if heated, a pressure increase will occur and the container may burst.              |
| <b>Hazardous combustion products</b>         | : ABLE C electroporation competent cells | Decomposition products may include the following materials:<br>carbon dioxide<br>carbon monoxide |
|  | ABLE K electroporation competent cells   | Decomposition products may include the following materials:<br>carbon dioxide<br>carbon monoxide |
|  | pUC 18 DNA Control Plasmid               | No specific data.  |

### 5.3 Advice for firefighters

|   |  |   |
|---|--|---|
| <b>Special precautions for fire-fighters</b>          | : ABLE C 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.   |
|   | ABLE K 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.   |
|   | 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.   |
| <b>Special protective equipment for fire-fighters</b> | : ABLE C 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. |
|   | ABLE K 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. |
|   | 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   |

ABLE Electroporation-Competent Cell Kit, Part Number 200160

## SECTION 5: Firefighting measures

basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

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

|                                    |  |   |
|------------------------------------|--|---|
| <b>For non-emergency personnel</b> | : ABLE C 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. |
|                                    | ABLE K 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>    | : ABLE C 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".   |
|                                    | ABLE K 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

|  |   |
|--|---|
| : ABLE C 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). |
| ABLE K 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> | : ABLE C 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. |
|                                | ABLE K 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  |

**ABLE Electroporation-Competent Cell Kit, Part Number 200160**

## SECTION 6: Accidental release measures

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

|   |  |   |
|---|--|---|
| <b>Protective measures</b>                    | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control Plasmid         | Put on appropriate personal protective equipment (see Section 8).<br>Put on appropriate personal protective equipment (see Section 8).<br>Put on appropriate personal protective equipment (see Section 8).   |
| <b>Advice on general occupational hygiene</b> | : ABLE C electroporation competent cells<br><br>ABLE K electroporation competent cells<br><br>pUC 18 DNA Control Plasmid | 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.<br>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.<br>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> | : ABLE C electroporation competent cells<br><br>ABLE K electroporation competent cells<br><br>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.<br>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.<br>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and |
|----------------|--|---|



**ABLE Electroporation-Competent Cell Kit, Part Number 200160**

## SECTION 7: Handling and storage

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>                      | : | ABLE C electroporation competent cells | Industrial applications, Professional applications. |
|   |   | ABLE K electroporation competent cells | Industrial applications, Professional applications. |
|   |   | pUC 18 DNA Control Plasmid             | Industrial applications, Professional applications. |
| <b>Industrial sector specific solutions</b> | : | ABLE C electroporation competent cells | Not applicable.                                     |
|   |   | ABLE K 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  |
|---|--|
| <b>ABLE C electroporation competent cells</b><br>Glycerol | <b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b><br>TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist |
| <b>ABLE K electroporation competent cells</b><br>Glycerol | <b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b><br>TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist |

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

#### DNELs/DMELs

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.

## SECTION 8: Exposure controls/personal protection

### 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

- Physical state** : ABLE C electroporation competent cells Liquid.  
ABLE K electroporation competent cells Liquid.  
pUC 18 DNA Control Plasmid Liquid.
- Colour** : ABLE C electroporation competent cells Not available.  
ABLE K electroporation competent cells Not available.  
pUC 18 DNA Control Plasmid Not available.
- Odour** : ABLE C electroporation competent cells Not available.  
ABLE K electroporation competent cells Not available.  
pUC 18 DNA Control Plasmid Not available.
- Odour threshold** : ABLE C electroporation competent cells Not available.  
ABLE K electroporation competent cells Not available.  
pUC 18 DNA Control Plasmid Not available.

**ABLE Electroporation-Competent Cell Kit, Part Number 200160**

**SECTION 9: Physical and chemical properties**

|   |   |   |
|---|---|---|
| <b>pH</b>   | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control<br>Plasmid | Not available.<br>Not available.<br>7.5               |
| <b>Melting point/freezing point</b>                 | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control<br>Plasmid | Not available.<br>Not available.<br>0°C               |
| <b>Initial boiling point and boiling range</b>      | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control<br>Plasmid | Not available.<br>Not available.<br>100°C             |
| <b>Flash point</b>                                  | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control<br>Plasmid | Not available.<br>Not available.<br>Not available.    |
| <b>Evaporation rate</b>                             | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control<br>Plasmid | Not available.<br>Not available.<br>Not available.    |
| <b>Flammability (solid, gas)</b>                    | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control<br>Plasmid | Not applicable.<br>Not applicable.<br>Not applicable. |
| <b>Upper/lower flammability or explosive limits</b> | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control<br>Plasmid | Not available.<br>Not available.<br>Not available.    |
| <b>Vapour pressure</b>                              | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control<br>Plasmid | Not available.<br>Not available.<br>Not available.    |
| <b>Vapour density</b>                               | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control<br>Plasmid | Not available.<br>Not available.<br>Not available.    |

**ABLE Electroporation-Competent Cell Kit, Part Number 200160**

**SECTION 9: Physical and chemical properties**

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

**9.2 Other information**

No additional information.

## SECTION 10: Stability and reactivity

|  |  |  |
|--|--|--|
| <b>10.1 Reactivity</b>                         | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control Plasmid | No specific test data related to reactivity available for this product or its ingredients.<br>No specific test data related to reactivity available for this product or its ingredients.<br>No specific test data related to reactivity available for this product or its ingredients.                               |
| <b>10.2 Chemical stability</b>                 | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control Plasmid | The product is stable.<br>The product is stable.<br>The product is stable.   |
| <b>10.3 Possibility of hazardous reactions</b> | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control Plasmid | Under normal conditions of storage and use, hazardous reactions will not occur.<br>Under normal conditions of storage and use, hazardous reactions will not occur.<br>Under normal conditions of storage and use, hazardous reactions will not occur.  |
| <b>10.4 Conditions to avoid</b>                | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control Plasmid | No specific data.<br>No specific data.<br>No specific data.  |
| <b>10.5 Incompatible materials</b>             | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control Plasmid | May react or be incompatible with oxidising materials.<br>May react or be incompatible with oxidising materials.<br>May react or be incompatible with oxidising materials.   |
| <b>10.6 Hazardous decomposition products</b>   | : ABLE C electroporation competent cells<br>ABLE K electroporation competent cells<br>pUC 18 DNA Control Plasmid | Under normal conditions of storage and use, hazardous decomposition products should not be produced.<br>Under normal conditions of storage and use, hazardous decomposition products should not be produced.<br>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.

## SECTION 11: Toxicological information

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

### Information on likely routes of exposure

|  |  |
|--|--|
| : ABLE C electroporation competent cells | Routes of entry anticipated: Oral, Dermal, Inhalation. |
| ABLE K electroporation competent cells   | Routes of entry anticipated: Oral, Dermal, Inhalation. |
| pUC 18 DNA Control Plasmid               | Not available.   |

### Potential acute health effects

|                     |  |   |
|---------------------|--|---|
| <b>Inhalation</b>   | : ABLE C electroporation competent cells | No known significant effects or critical hazards. |
|                     | ABLE K 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>    | : ABLE C electroporation competent cells | No known significant effects or critical hazards. |
|                     | ABLE K 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> | : ABLE C electroporation competent cells | No known significant effects or critical hazards. |
|                     | ABLE K 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>  | : ABLE C electroporation competent cells | No known significant effects or critical hazards. |
|                     | ABLE K 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>   | : ABLE C electroporation competent cells | No specific data. |
|                     | ABLE K electroporation competent cells   | No specific data. |
|                     | pUC 18 DNA Control Plasmid               | No specific data. |
| <b>Ingestion</b>    | : ABLE C electroporation competent cells | No specific data. |
|                     | ABLE K electroporation competent cells   | No specific data. |
|                     | pUC 18 DNA Control Plasmid               | No specific data. |
| <b>Skin contact</b> | : ABLE C electroporation competent cells | No specific data. |
|                     | ABLE K electroporation competent cells   | No specific data. |
|                     | pUC 18 DNA Control Plasmid               | No specific data. |

**ABLE Electroporation-Competent Cell Kit, Part Number 200160**

**SECTION 11: Toxicological information**

|                    |  |                   |
|--------------------|--|-------------------|
| <b>Eye contact</b> | : ABLE C electroporation competent cells | No specific data. |
|                    | ABLE K 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.

**Potential delayed effects** : Not available.

**Potential chronic health effects**

|                              |  |   |
|------------------------------|--|---|
| <b>General</b>               | : ABLE C electroporation competent cells | No known significant effects or critical hazards. |
|                              | ABLE K 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>       | : ABLE C electroporation competent cells | No known significant effects or critical hazards. |
|                              | ABLE K 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>          | : ABLE C electroporation competent cells | No known significant effects or critical hazards. |
|                              | ABLE K 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>        | : ABLE C electroporation competent cells | No known significant effects or critical hazards. |
|                              | ABLE K 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> | : ABLE C electroporation competent cells | No known significant effects or critical hazards. |
|                              | ABLE K 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>     | : ABLE C electroporation competent cells | No known significant effects or critical hazards. |
|                              | ABLE K 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.

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.

#### 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 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.

|   |  |                 |
|---|--|-----------------|
| <b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b> | : ABLE C electroporation competent cells | Not applicable. |
|   | : ABLE K 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

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.<br><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.   |

**ABLE Electroporation-Competent Cell Kit, Part Number 200160**

## SECTION 15: Regulatory information

**Viet Nam** : 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]

Not applicable.

**Date of issue/ Date of revision** : 27/11/2017

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

**Version** : 1

### Notice to reader

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