Section 1. Identification

1.1 Product identifier
Product name: StrataClone SoloPack Competent Cells, Part Number 200185
Part no. (chemical kit): 200185
Part no.: StrataClone SoloPack Competent Cells 200185-41
pUC 18 DNA Control Plasmid 200231-42
Validation date: 10/29/2021

1.2 Relevant identified uses of the substance or mixture and uses advised against
Material uses: Analytical reagent.
StrataClone SoloPack Competent Cells 21 x 0.05 ml (50 µl)
pUC 18 DNA Control Plasmid 0.01 ml (0.1 ng/µl)

1.3 Details of the supplier of the safety data sheet
Supplier/Manufacturer: Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

1.4 Emergency telephone number
In case of emergency: CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture
OSHA/HCS status: StrataClone SoloPack Competent Cells
pUC 18 DNA Control Plasmid
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture
StrataClone SoloPack Competent Cells
H319 EYE IRRITATION - Category 2A

2.2 GHS label elements
Hazard pictograms: StrataClone SoloPack Competent Cells

Signal word: StrataClone SoloPack Competent Cells
pUC 18 DNA Control Plasmid
Warning
No signal word.

Hazard statements: StrataClone SoloPack Competent Cells
pUC 18 DNA Control Plasmid
H319 - Causes serious eye irritation.
No known significant effects or critical hazards.

Precautionary statements

Date of issue: 10/29/2021
Section 2. Hazards identification

**Prevention**: StrataClone SoloPack Competent Cells

- pUC 18 DNA Control Plasmid

- P280 - Wear eye or face protection.

**Response**: StrataClone SoloPack Competent Cells

- pUC 18 DNA Control Plasmid

- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

- P337 + P313 - If eye irritation persists: Get medical advice or attention.

**Storage**: StrataClone SoloPack Competent Cells

- pUC 18 DNA Control Plasmid

- Not applicable.

**Disposal**: StrataClone SoloPack Competent Cells

- pUC 18 DNA Control Plasmid

- Not applicable.

**Supplemental label elements**: StrataClone SoloPack Competent Cells

- pUC 18 DNA Control Plasmid

- None known.

### 2.3 Other hazards

**Hazards not otherwise classified**: StrataClone SoloPack Competent Cells

- pUC 18 DNA Control Plasmid

- None known.

Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>StrataClone SoloPack Competent Cells</th>
<th>Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>pUC 18 DNA Control Plasmid</td>
<td>Mixture</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>StrataClone SoloPack Competent Cells</td>
<td>≥10 - ≤25</td>
<td>56-81-5</td>
</tr>
<tr>
<td>Glycerol</td>
<td>≤3</td>
<td>10035-04-8</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

### 4.1 Description of necessary first aid measures

**Eye contact**: StrataClone SoloPack 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. Continue to rinse for at least 10 minutes. Get medical attention.

- 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.

Date of issue: 10/29/2021
### Section 4. First aid measures

| **Inhalation** | **StrataClone SoloPack Competent Cells** | Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| **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. |
| **Skin contact** | **StrataClone SoloPack Competent Cells** | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse. |
| **pUC 18 DNA Control Plasmid** | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| **Ingestion** | **StrataClone SoloPack Competent Cells** | Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| **pUC 18 DNA Control Plasmid** | Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. |

#### 4.2 Most important symptoms/effects, acute and delayed

**Potential acute health effects**

| **Eye contact** | **StrataClone SoloPack Competent Cells** | Causes serious eye irritation. |
| **pUC 18 DNA Control Plasmid** | No known significant effects or critical hazards. |
| **Inhalation** | **StrataClone SoloPack Competent Cells** | No known significant effects or critical hazards. |
| **pUC 18 DNA Control Plasmid** | No known significant effects or critical hazards. |
| **Skin contact** | **StrataClone SoloPack Competent Cells** | No known significant effects or critical hazards. |
| **pUC 18 DNA Control Plasmid** | No known significant effects or critical hazards. |
| **Ingestion** | **StrataClone SoloPack Competent Cells** | No known significant effects or critical hazards. |
| **pUC 18 DNA Control Plasmid** | No known significant effects or critical hazards. |
## Section 4. First aid measures

<table>
<thead>
<tr>
<th>Over-exposure signs/symptoms</th>
<th>StrataClone SoloPack Competent Cells</th>
<th>pUC 18 DNA Control Plasmid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
<td>Adverse symptoms may include the following:</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>pain or irritation</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>watering</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>redness</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

| **Inhalation**              | No specific data. |
|                            | No specific data. |

| **Skin contact**            | No specific data. |
|                            | No specific data. |

| **Ingestion**              | No specific data. |
|                           | No specific data. |

### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

<table>
<thead>
<tr>
<th>Notes to physician</th>
<th>StrataClone SoloPack Competent Cells</th>
<th>pUC 18 DNA Control Plasmid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Protection of first-aiders</strong></td>
<td>No action shall be taken involving any personal risk or without suitable training. The person providing aid to give mouth-to-mouth resuscitation.</td>
<td>No action shall be taken involving any personal risk or without suitable training.</td>
</tr>
</tbody>
</table>

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### 5.1 Extinguishing media

<table>
<thead>
<tr>
<th>Suitable extinguishing media</th>
<th>StrataClone SoloPack Competent Cells</th>
<th>pUC 18 DNA Control Plasmid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unsuitable extinguishing media</th>
<th>StrataClone SoloPack Competent Cells</th>
<th>pUC 18 DNA Control Plasmid</th>
</tr>
</thead>
<tbody>
<tr>
<td>None known.</td>
<td>None known.</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Specific hazards arising from the chemical</th>
<th>StrataClone SoloPack Competent Cells</th>
<th>pUC 18 DNA Control Plasmid</th>
</tr>
</thead>
<tbody>
<tr>
<td>In a fire or if heated, a pressure increase will occur and the container may burst.</td>
<td>In a fire or if heated, a pressure increase will occur and the container may burst.</td>
<td></td>
</tr>
</tbody>
</table>
Section 5. Fire-fighting measures

| Hazardous thermal decomposition products | StrataClone SoloPack Competent Cells | Decomposition products may include the following materials: carbon dioxide, carbon monoxide, halogenated compounds, metal oxide/oxides |

| pUC 18 DNA Control Plasmid | No specific data. |

5.3 Advice for firefighters

| Special protective actions for fire-fighters | StrataClone SoloPack 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. |

| Special protective equipment for fire-fighters | StrataClone SoloPack 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. |

| 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. |

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

| For non-emergency personnel | StrataClone SoloPack 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 spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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 spilled material. Put on appropriate personal protective equipment. |

| For emergency responders | StrataClone SoloPack Competent Cells | If specialized 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 specialized 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". |
Section 6. Accidental release measures

6.2 Environmental precautions:

<table>
<thead>
<tr>
<th>StrataClone SoloPack Competent Cells</th>
<th>pUC 18 DNA Control Plasmid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoid dispersal of spilled 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).</td>
<td>Avoid dispersal of spilled 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).</td>
</tr>
</tbody>
</table>

6.3 Methods and materials for containment and cleaning up:

<table>
<thead>
<tr>
<th>Methods for cleaning up</th>
<th>StrataClone SoloPack Competent Cells</th>
<th>pUC 18 DNA Control Plasmid</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>

Section 7. Handling and storage

7.1 Precautions for safe handling:

<table>
<thead>
<tr>
<th>Protective measures</th>
<th>StrataClone SoloPack Competent Cells</th>
<th>pUC 18 DNA Control Plasmid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.</td>
<td>Put on appropriate personal protective equipment (see Section 8).</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Advice on general occupational hygiene</th>
<th>StrataClone SoloPack Competent Cells</th>
<th>pUC 18 DNA Control Plasmid</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>
Section 7. Handling and storage

7.2 Conditions for safe storage, including any incompatibilities

- **StrataClone SoloPack 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 unlabeled 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

- **StrataClone SoloPack Competent Cells**
  - Industrial applications, Professional applications.

- **pUC 18 DNA Control Plasmid**
  - Industrial applications, Professional applications.

Section 8. Exposure controls/personal protection

8.1 Control parameters

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>StrataClone SoloPack Competent Cells Glycerol</td>
<td>OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction</td>
</tr>
<tr>
<td></td>
<td>TWA: 10 mg/m³ 8 hours. Form: Total dust</td>
</tr>
<tr>
<td>Calcium chloride (CaCl2), dihydrate</td>
<td>OSHA PEL (United States, 5/2018). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction</td>
</tr>
<tr>
<td></td>
<td>TWA: 15 mg/m³ 8 hours. Form: Total dust None.</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

- **Appropriate engineering controls**: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

- **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 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.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state: StrataClone SoloPack Competent Cells, Liquid. StrataClone SoloPack Competent Cells, pUC 18 DNA Control Plasmid, Liquid.

Color: StrataClone SoloPack Competent Cells, Not available. StrataClone SoloPack Competent Cells, pUC 18 DNA Control Plasmid, Not available.

Odor: StrataClone SoloPack Competent Cells, Not available. StrataClone SoloPack Competent Cells, pUC 18 DNA Control Plasmid, Not available.

Odor threshold: StrataClone SoloPack Competent Cells, Not available. StrataClone SoloPack Competent Cells, pUC 18 DNA Control Plasmid, Not available.

pH: StrataClone SoloPack Competent Cells, Not available. StrataClone SoloPack Competent Cells, pUC 18 DNA Control Plasmid, 7.5

Melting point/freezing point: StrataClone SoloPack Competent Cells, Not available. StrataClone SoloPack Competent Cells, pUC 18 DNA Control Plasmid, 0°C (32°F)

Boiling point, initial boiling point, and boiling range: StrataClone SoloPack Competent Cells, Not available. StrataClone SoloPack Competent Cells, pUC 18 DNA Control Plasmid, 100°C (212°F)

Flash point: 

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### Section 9. Physical and chemical properties and safety characteristics

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Vapor Pressure at 20°C</th>
<th>Vapor pressure at 50°C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mm Hg</td>
<td>kPa</td>
</tr>
<tr>
<td><strong>StrataClone SoloPack Competent Cells</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>23.8</td>
<td>3.2</td>
</tr>
<tr>
<td>Glycerol</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>pUC 18 DNA Control Plasmid</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>23.8</td>
<td>3.2</td>
</tr>
<tr>
<td>2-Amino-2-((\text{hydroxymethyl})\propane-1,3-diol) hydrochloride</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Closed cup</th>
<th>Open cup</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>StrataClone SoloPack Competent Cells</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-Morpholinopropanesulphonic acid</td>
<td>116</td>
<td>240.8</td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>pUC 18 DNA Control Plasmid</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Edetic acid</td>
<td>&gt;100</td>
<td>&gt;212</td>
</tr>
</tbody>
</table>

**Evaporation rate**: StrataClone SoloPack Competent Cells Not available. pUC 18 DNA Control Plasmid Not available.

**Flammability**: StrataClone SoloPack Competent Cells Not applicable. pUC 18 DNA Control Plasmid Not applicable.

**Lower and upper explosion limit/flammability limit**: StrataClone SoloPack Competent Cells Not available. pUC 18 DNA Control Plasmid Not available.

**Relative vapor density**: StrataClone SoloPack Competent Cells Not available. pUC 18 DNA Control Plasmid Not available.

**Relative density**: StrataClone SoloPack Competent Cells Not available. pUC 18 DNA Control Plasmid Not available.

**Solubility**: StrataClone SoloPack 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.

**Partition coefficient: n-octanol/water**: StrataClone SoloPack Competent Cells Not applicable. pUC 18 DNA Control Plasmid Not applicable.

**Auto-ignition temperature**: 

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**Section 9. Physical and chemical properties and safety characteristics**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>°C</th>
<th>°F</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>StrataClone SoloPack Competent Cells, Glycerol</td>
<td>370</td>
<td>698</td>
<td></td>
</tr>
<tr>
<td>pUC 18 DNA Control Plasmid</td>
<td>&gt;400</td>
<td>&gt;752</td>
<td>VDI 2263</td>
</tr>
</tbody>
</table>

**Decomposition temperature**
- StrataClone SoloPack Competent Cells: Not available.
- pUC 18 DNA Control Plasmid: Not available.

**Viscosity**
- StrataClone SoloPack Competent Cells: Not available.
- pUC 18 DNA Control Plasmid: Not available.

**Particle characteristics**

<table>
<thead>
<tr>
<th>Median particle size</th>
</tr>
</thead>
<tbody>
<tr>
<td>StrataClone SoloPack Competent Cells, pUC 18 DNA Control Plasmid: Not applicable.</td>
</tr>
</tbody>
</table>

**Section 10. Stability and reactivity**

**10.1 Reactivity**
- StrataClone SoloPack Competent Cells, pUC 18 DNA Control Plasmid: No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability**
- StrataClone SoloPack Competent Cells, pUC 18 DNA Control Plasmid: The product is stable.

**10.3 Possibility of hazardous reactions**
- StrataClone SoloPack Competent Cells, pUC 18 DNA Control Plasmid: Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid**
- StrataClone SoloPack Competent Cells, pUC 18 DNA Control Plasmid: No specific data.

**10.5 Incompatible materials**
- StrataClone SoloPack Competent Cells, pUC 18 DNA Control Plasmid: May react or be incompatible with oxidizing materials.

**10.6 Hazardous decomposition products**
- StrataClone SoloPack Competent Cells, pUC 18 DNA Control Plasmid: 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

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>StrataClone SoloPack Competent Cells Glycerol</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>12600 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>StrataClone SoloPack Competent Cells Glycerol</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 mg</td>
<td>-</td>
</tr>
</tbody>
</table>

Sensitization

Not available.

Mutagenicity

Conclusion/Summary: Not available.

Carcinogenicity

Conclusion/Summary: Not available.

Reproductive toxicity

Conclusion/Summary: Not available.

Teratogenicity

Conclusion/Summary: Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

<table>
<thead>
<tr>
<th></th>
<th>StrataClone SoloPack Competent Cells</th>
<th>pUC 18 DNA Control Plasmid</th>
<th>Routes of entry anticipated: Oral, Dermal, Inhalation.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not available.</td>
<td></td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Potential acute health effects

Eye contact

<table>
<thead>
<tr>
<th></th>
<th>StrataClone SoloPack Competent Cells</th>
<th>pUC 18 DNA Control Plasmid</th>
<th>Causes serious eye irritation.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No known significant effects or critical hazards.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Inhalation

<table>
<thead>
<tr>
<th></th>
<th>StrataClone SoloPack Competent Cells</th>
<th>pUC 18 DNA Control Plasmid</th>
<th>Causes serious eye irritation.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No known significant effects or critical hazards.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Skin contact

<table>
<thead>
<tr>
<th></th>
<th>StrataClone SoloPack Competent Cells</th>
<th>pUC 18 DNA Control Plasmid</th>
<th>Causes serious eye irritation.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No known significant effects or critical hazards.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ingestion

<table>
<thead>
<tr>
<th></th>
<th>StrataClone SoloPack Competent Cells</th>
<th>pUC 18 DNA Control Plasmid</th>
<th>Causes serious eye irritation.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No known significant effects or critical hazards.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section 11. Toxicological information

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: StrataClone SoloPack Competent Cells
Adverse symptoms may include the following:
pain or irritation
watering
redness
pUC 18 DNA Control Plasmid
No specific data.

Inhalation: StrataClone SoloPack Competent Cells
pUC 18 DNA Control Plasmid
No specific data.

Skin contact: StrataClone SoloPack Competent Cells
pUC 18 DNA Control Plasmid
No specific data.

Ingestion: StrataClone SoloPack Competent Cells
pUC 18 DNA Control Plasmid
No specific data.

Carcinogenicity:
StrataClone SoloPack Competent Cells
pUC 18 DNA Control Plasmid
No known significant effects or critical hazards.

Mutagenicity:
StrataClone SoloPack Competent Cells
pUC 18 DNA Control Plasmid
No known significant effects or critical hazards.

Reproductive toxicity:
StrataClone SoloPack Competent Cells
pUC 18 DNA Control Plasmid
No known significant effects or critical hazards.

Delayed and immediate effects and also 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
General: StrataClone SoloPack Competent Cells
pUC 18 DNA Control Plasmid
No known significant effects or critical hazards.

Carcinogenicity: StrataClone SoloPack Competent Cells
pUC 18 DNA Control Plasmid
No known significant effects or critical hazards.

Mutagenicity: StrataClone SoloPack Competent Cells
pUC 18 DNA Control Plasmid
No known significant effects or critical hazards.

Reproductive toxicity: StrataClone SoloPack Competent Cells
pUC 18 DNA Control Plasmid
No known significant effects or critical hazards.

Numerical measures of toxicity
Acute toxicity estimates

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Oral (mg/kg)</th>
<th>Dermal (mg/kg)</th>
<th>Inhalation (gases) (ppm)</th>
<th>Inhalation (vapors) (mg/l)</th>
<th>Inhalation (dusts and mists) (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>StrataClone SoloPack Competent Cells</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>12600</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Other information
StrataClone SoloPack Competent Cells
pUC 18 DNA Control Plasmid
Adverse symptoms may include the following: May cause skin sensitization.
Not available.

Date of issue: 10/29/2021
Section 12. Ecological information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>StrataClone SoloPack Competent Cells</td>
<td>Acute LC50 54000 mg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 2900 mg/l Fresh water</td>
<td>Algae</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute NOEC 2000 mg/l Fresh water</td>
<td>Daphnia</td>
<td>48 hours</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
<th>Dose</th>
<th>Inoculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>StrataClone SoloPack Competent Cells</td>
<td>301D Ready Biodegradability - Closed Bottle Test</td>
<td>93 % - 30 days</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>StrataClone SoloPack Competent Cells</td>
<td>-1.76</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

| Soil/water partition coefficient (K<sub>oc</sub>) | : Not available. |

12.5 Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods

The generation of waste should be avoided or minimized 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Date of issue: 10/29/2021
Section 14. Transport information

**DOT / TDG / Mexico / IMDG / IATA**: Not regulated.

**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.

**Transport in bulk according to IMO instruments**: Not available.

Section 15. Regulatory information

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

**U.S. Federal regulations**
- **Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)**: Not listed
- **Clean Air Act Section 602 Class I Substances**: Not listed
- **Clean Air Act Section 602 Class II Substances**: Not listed
- **DEA List I Chemicals (Precursor Chemicals)**: Not listed
- **DEA List II Chemicals (Essential Chemicals)**: Not listed
- **SARA 302/304**
  - **Composition/information on ingredients**: No products were found.
  - **SARA 304 RQ**: Not applicable.
- **SARA 311/312**
  - **Classification**: StrataClone SoloPack Competent Cells, pUC 18 DNA Control Plasmid
  - **Composition/information on ingredients**: Glycerol: ≥10 - ≤25 EYE IRRITATION - Category 2B, Calcium chloride (CaCl2), dihydrate: ≤3 EYE IRRITATION - Category 2A

**State regulations**
- **Massachusetts**: The following components are listed: GLYCERINE MIST
- **New York**: None of the components are listed.
- **New Jersey**: The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL
- **Pennsylvania**: The following components are listed: 1,2,3-PROPANETRIOL
- **California Prop. 65**: This product does not require a Safe Harbor warning under California Prop. 65.

**Date of issue**: 10/29/2021
Section 15. Regulatory information

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.

UNEP 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 (CSCL): Not determined.
Japan inventory (ISHL): Not determined.
New Zealand : All components are listed or exempted.
Philippines : Not determined.
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 16. Other information

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>StrataClone SoloPack Competent Cells</td>
<td></td>
</tr>
<tr>
<td>EYE IRRITATION - Category 2A</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

History

Date of issue : 10/29/2021
Date of previous issue : 04/16/2019
Version : 7
Key to abbreviations : ATE = Acute Toxicity Estimate
                        BCF = Bioconcentration Factor
                        GHS = Globally Harmonized System of Classification and Labelling of Chemicals
                        IATA = International Air Transport Association
                        IBC = Intermediate Bulk Container
                        IMDG = International Maritime Dangerous Goods
                        LogPow = logarithm of the octanol/water partition coefficient
                        N/A = Not available
                        UN = United Nations
Section 16. Other information

Indicates information that has changed from previously issued version.

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.