SAFETY DATA SHEET
StrataClone SoloPack Competent Cells, Part Number 200185

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: 4/16/2019

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
Ingredients of unknown toxicity: StrataClone SoloPack Competent Cells
EYE IRRITATION - Category 2A
Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 1 - 10%
Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%
Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 1 - 10%

2.2 GHS label elements
Hazard pictograms: StrataClone SoloPack Competent Cells
**Section 2. Hazards identification**

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

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

**Precautionary statements**

**Prevention**
- *StrataClone SoloPack Competent Cells*
  - P280 - Wear eye or face protection.
- *pUC 18 DNA Control Plasmid*
  - Not applicable.

**Response**
- *StrataClone SoloPack Competent Cells*
  - P264 - Wash hands thoroughly after handling.
  - 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 attention.
- *pUC 18 DNA Control Plasmid*
  - Not applicable.

**Storage**
- *StrataClone SoloPack Competent Cells*
  - Not applicable.
- *pUC 18 DNA Control Plasmid*
  - Not applicable.

**Disposal**
- *StrataClone SoloPack Competent Cells*
  - Not applicable.
- *pUC 18 DNA Control Plasmid*
  - Not applicable.

**Supplemental label elements**
- *StrataClone SoloPack Competent Cells*
  - None known.
- *pUC 18 DNA Control Plasmid*
  - None known.

**2.3 Other hazards**
- *StrataClone SoloPack Competent Cells*
  - None known.
- *pUC 18 DNA Control Plasmid*
  - None known.

**Section 3. Composition/information on ingredients**

**Substance/mixture**
- *StrataClone SoloPack Competent Cells*
- *pUC 18 DNA Control Plasmid*
  - Mixture

**Ingredient name** | % | CAS number
--- | --- | ---
*StrataClone SoloPack Competent Cells* |  | 56-81-5
Glycerol | ≥10 - ≤25 | 10035-04-8
Calcium chloride (CaCl₂), dihydrate | ≤3 |  |

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 as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.
### 4.1 Description of necessary first aid measures

#### Eye contact
- **StrataClone SoloPack Competent Cells**
  - 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.
- **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.

#### 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. 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. 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. 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.
Section 4. First aid measures

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

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

Over-exposure signs/symptoms

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

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

Notes to physician

<table>
<thead>
<tr>
<th></th>
<th>StrataClone SoloPack Competent Cells</th>
<th>pUC 18 DNA Control Plasmid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>pUC 18 DNA Control Plasmid</td>
<td>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</td>
</tr>
</tbody>
</table>

Specific treatments

<table>
<thead>
<tr>
<th></th>
<th>StrataClone SoloPack Competent Cells</th>
<th>pUC 18 DNA Control Plasmid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No specific treatment.</td>
<td>No specific treatment.</td>
</tr>
</tbody>
</table>

Protection of first-aiders

<table>
<thead>
<tr>
<th></th>
<th>StrataClone SoloPack Competent Cells</th>
<th>pUC 18 DNA Control Plasmid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>pUC 18 DNA Control Plasmid</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>Use an extinguishing agent suitable for the surrounding fire.</th>
</tr>
</thead>
<tbody>
<tr>
<td>pUC 18 DNA Control Plasmid</td>
<td></td>
<td>Use an extinguishing agent suitable for the surrounding fire.</td>
</tr>
</tbody>
</table>

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

5.2 Special hazards arising from the chemical

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

<table>
<thead>
<tr>
<th>Hazardous thermal decomposition products</th>
<th>StrataClone SoloPack Competent Cells</th>
<th>Decomposition products may include the following materials:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>pUC 18 DNA Control Plasmid</td>
<td>carbon dioxide</td>
</tr>
<tr>
<td></td>
<td></td>
<td>carbon monoxide</td>
</tr>
<tr>
<td></td>
<td></td>
<td>halogenated compounds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>metal oxide/oxides</td>
</tr>
</tbody>
</table>

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

5.3 Advice for firefighters

<table>
<thead>
<tr>
<th>Special protective actions for fire-fighters</th>
<th>StrataClone SoloPack Competent Cells</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>pUC 18 DNA Control Plasmid</td>
<td></td>
<td>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.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Special protective equipment for fire-fighters</th>
<th>StrataClone SoloPack Competent Cells</th>
<th>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</th>
</tr>
</thead>
<tbody>
<tr>
<td>pUC 18 DNA Control Plasmid</td>
<td></td>
<td>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</td>
</tr>
</tbody>
</table>

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

<table>
<thead>
<tr>
<th>For non-emergency personnel</th>
<th>StrataClone SoloPack Competent Cells</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>pUC 18 DNA Control Plasmid</td>
<td></td>
<td>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</td>
</tr>
</tbody>
</table>
Section 6. Accidental release measures

For emergency responders : StrataClone SoloPack Competent Cells

StrataClone SoloPack Competent Cells

pUC 18 DNA Control Plasmid

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).

Methods for cleaning up

Methods for cleaning up : StrataClone SoloPack Competent Cells

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

6.3 Methods and materials for containment and cleaning up

pUC 18 DNA Control Plasmid

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).

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures : StrataClone SoloPack Competent Cells

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.

Advice on general occupational hygiene : StrataClone SoloPack Competent Cells

Put on appropriate personal protective equipment (see Section 8).

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.
Section 7. Handling and storage

7.2 Conditions for safe storage, including any incompatibilities

- 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.

- 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)

- Recommendations:
  - Industrial applications, Professional applications.

- Industrial sector specific solutions:
  - Not applicable.

Section 8. Exposure controls/personal protection

8.1 Control parameters

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>StrataClone SoloPack Competent Cells</td>
<td>OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction</td>
</tr>
<tr>
<td>Glycerol</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</td>
</tr>
<tr>
<td></td>
<td>None.</td>
</tr>
</tbody>
</table>
Section 8. Exposure controls/personal protection

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.

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

9.1 Information on basic physical and chemical properties

Appearance

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

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

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

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

pH: StrataClone SoloPack Competent Cells Not available. pUC 18 DNA Control Plasmid 7.5
Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>StrataClone SoloPack Competent Cells</th>
<th>pUC 18 DNA Control Plasmid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable.</td>
<td></td>
</tr>
<tr>
<td>Lower and upper explosive (flammable) limits</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in the following materials: cold water and hot water.</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available.</td>
<td></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.

Date of issue : 04/16/2019
Section 10. Stability and reactivity

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 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</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)

Date of issue : 04/16/2019
Section 11. Toxicological information

Information on the likely routes of exposure:

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

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.

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: No specific data.
  - pUC 18 DNA Control Plasmid: No specific data.

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

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

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: No known significant effects or critical hazards.
  - pUC 18 DNA Control Plasmid: No known significant effects or critical hazards.

Date of issue: 04/16/2019
Chapter 11. Toxicological information

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

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

Teratogenicity: StrataClone SoloPack Competent Cells and pUC 18 DNA Control Plasmid have no known significant effects or critical hazards.

Developmental effects: StrataClone SoloPack Competent Cells and pUC 18 DNA Control Plasmid have no known significant effects or critical hazards.

Fertility effects: StrataClone SoloPack Competent Cells and pUC 18 DNA Control Plasmid have 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>12600</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chapter 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, Acute EC50 2900 mg/l Fresh water, Acute NOEC 2000 mg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss, Algae, Daphnia</td>
<td>96 hours, 72 hours, 48 hours</td>
</tr>
<tr>
<td>Glycerol</td>
<td>Calcium chloride (CaCl2), dihydrate</td>
<td></td>
<td></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>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential

Date of issue: 04/16/2019
Section 12. Ecological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP\textsubscript{ow}</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>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**12.4 Mobility in soil**

Soil/water partition coefficient (K\textsubscript{OC}) : 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.

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 Annex II of MARPOL and the IBC Code** : Not available.

Date of issue : 04/16/2019
## 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
  - **EYE IRRITATION - Category 2A**
  - Not applicable.

#### 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.

#### 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.

**Date of issue:** 04/16/2019
Section 15. Regulatory information

Rotterdam Convention on Prior Informed Consent (PIC)
Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals
Not listed.

Inventory list

Australia : All components are listed or exempted.
Canada : All components are listed or exempted.
China : All components are listed or exempted.
Europe : All components are listed or exempted.
Japan : Japan inventory (ENCS): 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 listed or exempted.
Viet Nam : Not determined.

Section 16. Other information

History
Date of issue : 04/16/2019
Date of previous issue : 12/28/2017
Version : 6

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
                        MARPOL = International Convention for the Prevention of Pollution From Ships, 1973
                               as modified by the Protocol of 1978. ("Marpol" = marine pollution)
                        N/A = Not available
                        UN = United Nations

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>

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.