SAFETY DATA SHEET

pMC1neo and pMC1neo Poly(A) Vectors, Part Number 213201

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

1.1 Product identifier

Product name: pMC1neo and pMC1neo Poly(A) Vectors, Part Number 213201
Part no. (chemical kit): 213201

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

Material uses: Analytical reagent.
- pMC1neo Vector: 25 µl (25 µg 1 µg/µl)
- pMC1neo Poly A: 25 µl (25 µg 1 µg/µl)
- AG1 E. coli Strain: 500 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: Mixture
- pMC1neo Vector
- pMC1neo Poly A
- AG1 E. coli Strain

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
Not classified.

Ingredients of unknown toxicity: AG1 E. coli Strain
Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%

See Section 16 for the full text of the H statements declared above.
See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Signal word: No signal word.
- pMC1neo Vector
- pMC1neo Poly A
- AG1 E. coli Strain

Date of issue/Date of revision: 23/05/2019
SECTION 2: Hazards identification

Hazard statements:
- **pMC1neo Vector**: No known significant effects or critical hazards.
- **pMC1neo Poly A**: No known significant effects or critical hazards.
- **AG1 E. coli Strain**: No known significant effects or critical hazards.

Precautionary statements:
- **Prevention**:
  - **pMC1neo Vector**: Not applicable.
  - **pMC1neo Poly A**: Not applicable.
  - **AG1 E. coli Strain**: Not applicable.
- **Response**:
  - **pMC1neo Vector**: Not applicable.
  - **pMC1neo Poly A**: Not applicable.
  - **AG1 E. coli Strain**: Not applicable.
- **Storage**:
  - **pMC1neo Vector**: Not applicable.
  - **pMC1neo Poly A**: Not applicable.
  - **AG1 E. coli Strain**: Not applicable.
- **Disposal**:
  - **pMC1neo Vector**: Not applicable.
  - **pMC1neo Poly A**: Not applicable.
  - **AG1 E. coli Strain**: Not applicable.

Hazardous ingredients:
- **AG1 E. coli Strain**: Not applicable.

Supplemental label elements:
- **Annex XVII - Restrictions on the manufacture, placing on the market, and use of certain dangerous substances, mixtures and articles**:
  - **pMC1neo Vector**: Not applicable.
  - **pMC1neo Poly A**: Not applicable.
  - **AG1 E. coli Strain**: Not applicable.

Special packaging requirements:
- **Tactile warning of danger**:
  - **pMC1neo Vector**: Not applicable.
  - **pMC1neo Poly A**: Not applicable.
  - **AG1 E. coli Strain**: Not applicable.

2.3 Other hazards

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII**:
- **pMC1neo Vector**: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
- **pMC1neo Poly A**: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
- **AG1 E. coli Strain**: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification**:
- **pMC1neo Vector**: None known.
- **pMC1neo Poly A**: None known.
- **AG1 E. coli Strain**: None known.

SECTION 3: Composition/information on ingredients

3.1 Substances

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Identifiers</th>
<th>%</th>
<th>Regulation (EC) No. 1272/2008 [CLP]</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AG1 E. coli Strain</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Date of issue/Date of revision: 23/05/2019

2/16
SECTION 3: Composition/information on ingredients

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

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[5] Substance of equivalent concern
[6] Additional disclosure due to company policy

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact

<table>
<thead>
<tr>
<th>Substance</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>pMC1neo Vector</td>
<td>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.</td>
</tr>
<tr>
<td>pMC1neo Poly A</td>
<td>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.</td>
</tr>
<tr>
<td>AG1 E. coli Strain</td>
<td>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.</td>
</tr>
</tbody>
</table>

Inhalation

<table>
<thead>
<tr>
<th>Substance</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>pMC1neo Vector</td>
<td>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td>pMC1neo Poly A</td>
<td>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td>AG1 E. coli Strain</td>
<td>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.</td>
</tr>
</tbody>
</table>

Skin contact

<table>
<thead>
<tr>
<th>Substance</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>pMC1neo Vector</td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td>pMC1neo Poly A</td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td>AG1 E. coli Strain</td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</td>
</tr>
</tbody>
</table>

Ingestion

<table>
<thead>
<tr>
<th>Substance</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>pMC1neo Vector</td>
<td>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.</td>
</tr>
<tr>
<td>pMC1neo Poly A</td>
<td>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.</td>
</tr>
<tr>
<td>AG1 E. coli Strain</td>
<td>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.</td>
</tr>
</tbody>
</table>
SECTION 4: First aid measures

Protection of first-aiders:
- **pMC1neo Vector**
- **pMC1neo Poly A**
- **AG1 E. coli Strain**

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**

<table>
<thead>
<tr>
<th>Exposure</th>
<th>pMC1neo Vector</th>
<th>pMC1neo Poly A</th>
<th>AG1 E. coli Strain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

**Over-exposure signs/symptoms**

<table>
<thead>
<tr>
<th>Exposure</th>
<th>pMC1neo Vector</th>
<th>pMC1neo Poly A</th>
<th>AG1 E. coli Strain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye contact</td>
<td>No specific data.</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>No specific data.</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>No specific data.</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No specific data.</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

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

**Notes to physician**

- **pMC1neo Vector**
- **pMC1neo Poly A**
- **AG1 E. coli Strain**

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments**

- **pMC1neo Vector**
- **pMC1neo Poly A**
- **AG1 E. coli Strain**

No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

**Suitable extinguishing media**

- **pMC1neo Vector**
- **pMC1neo Poly A**
- **AG1 E. coli Strain**

Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media**

- **pMC1neo Vector**
- **pMC1neo Poly A**
- **AG1 E. coli Strain**

None known.

Date of issue/Date of revision: 23/05/2019
SECTION 5: Firefighting measures

5.2 Special hazards arising from the substance or mixture

<table>
<thead>
<tr>
<th>Substance/Strain</th>
<th>pMC1neo Vector</th>
<th>pMC1neo Poly A</th>
<th>AG1 E. coli Strain</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hazardous combustion products</strong></td>
<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>In a fire or if heated, a pressure increase will occur and the container may burst.</td>
</tr>
<tr>
<td><strong>pMC1neo Vector</strong></td>
<td>No specific data.</td>
<td>No specific data.</td>
<td>Decomposition products may include the following materials: carbon dioxide, carbon monoxide, halogenated compounds, metal oxide/oxides.</td>
</tr>
<tr>
<td><strong>pMC1neo Poly A</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>AG1 E. coli Strain</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.3 Advice for firefighters

<table>
<thead>
<tr>
<th>Substances/Strains</th>
<th>pMC1neo Vector</th>
<th>pMC1neo Poly A</th>
<th>AG1 E. coli Strain</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Special precautions for fire-fighters</strong></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>
<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>
<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>
<tr>
<td><strong>pMC1neo Vector</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>pMC1neo Poly A</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>AG1 E. coli Strain</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Special protective equipment for fire-fighters</strong></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>
<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>
<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>
<tr>
<td><strong>pMC1neo Vector</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>pMC1neo Poly A</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>AG1 E. coli Strain</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

<table>
<thead>
<tr>
<th>Substances/Strains</th>
<th>pMC1neo Vector</th>
<th>pMC1neo Poly A</th>
<th>AG1 E. coli Strain</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>For non-emergency personnel</strong></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 touch or walk through spilt material. Put on appropriate personal protective equipment.</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 touch or walk through spilt material. Put on appropriate personal protective equipment.</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 touch or walk through spilt material. Put on appropriate personal protective equipment.</td>
</tr>
<tr>
<td><strong>pMC1neo Vector</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>pMC1neo Poly A</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>AG1 E. coli Strain</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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SECTION 6: Accidental release measures

For emergency responders:
- **pMC1neo Vector**: Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- **pMC1neo Poly A**: 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".
- **AG1 E. coli Strain**: 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:
- **pMC1neo Vector**: 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).
- **pMC1neo Poly A**: 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).
- **AG1 E. coli Strain**: 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:

**Methods for cleaning up**
- **pMC1neo Vector**: 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.
- **pMC1neo Poly A**: 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.
- **AG1 E. coli Strain**: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections:
- See Section 1 for emergency contact information.
- See Section 8 for information on appropriate personal protective equipment.
- See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:

**Protective measures**
- **pMC1neo Vector**: Put on appropriate personal protective equipment (see Section 8).
- **pMC1neo Poly A**: Put on appropriate personal protective equipment (see Section 8).
- **AG1 E. coli Strain**: Put on appropriate personal protective equipment (see Section 8).

Date of issue/Date of revision: 23/05/2019
### SECTION 7: Handling and storage

#### Advice on general occupational hygiene

<table>
<thead>
<tr>
<th>Material</th>
<th>Advice</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>pMC1neo Vector</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>
<tr>
<td>pMC1neo Poly A</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>
<tr>
<td>AG1 E. coli Strain</td>
<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></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Storage</th>
<th>pMC1neo Vector</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>pMC1neo Poly A</td>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>AG1 E. coli Strain</td>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>

#### 7.3 Specific end use(s)

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>pMC1neo Vector</th>
<th>Industrial applications, Professional applications.</th>
</tr>
</thead>
<tbody>
<tr>
<td>pMC1neo Poly A</td>
<td>Industrial applications, Professional applications.</td>
<td></td>
</tr>
<tr>
<td>AG1 E. coli Strain</td>
<td>Industrial applications, Professional applications.</td>
<td></td>
</tr>
<tr>
<td>Industrial sector specific solutions</td>
<td>pMC1neo Vector</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>pMC1neo Poly A</td>
<td>Not applicable.</td>
<td></td>
</tr>
<tr>
<td>AG1 E. coli Strain</td>
<td>Not applicable.</td>
<td></td>
</tr>
</tbody>
</table>

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Exposure limit values</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG1 E. coli Strain</td>
<td>EH40/2005 WELs (United Kingdom (UK), 12/2011).</td>
</tr>
<tr>
<td>Glycerol</td>
<td>TWA: 10 mg/m³ 8 hours. Form: Mist</td>
</tr>
</tbody>
</table>

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

DNELs/DMELs

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Type</th>
<th>Exposure</th>
<th>Value</th>
<th>Population</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG1 E. coli Strain</td>
<td>DNEL</td>
<td>Short term Oral</td>
<td>126.65 mg/kg bw/day</td>
<td>General population</td>
<td>Systemic</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>DNEL</td>
<td>Long term Oral</td>
<td>126.65 mg/kg bw/day</td>
<td>General population</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Short term Dermal</td>
<td>126.65 mg/kg bw/day</td>
<td>General population</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Long term Dermal</td>
<td>126.65 mg/kg bw/day</td>
<td>General population</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Short term Dermal</td>
<td>295.52 mg/kg bw/day</td>
<td>Workers</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Long term Dermal</td>
<td>295.52 mg/kg bw/day</td>
<td>Workers</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Short term Inhalation</td>
<td>443.28 mg/m³</td>
<td>General population</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Long term Inhalation</td>
<td>443.28 mg/m³</td>
<td>General population</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Short term Inhalation</td>
<td>2068.62 mg/m³</td>
<td>Workers</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Long term Inhalation</td>
<td>2068.62 mg/m³</td>
<td>Workers</td>
<td>Systemic</td>
</tr>
</tbody>
</table>

PNECs

No PNECs available

8.2 Exposure controls

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

Individual protection measures

Hygiene measures: Handle as biohazard material (Biosafety level 1). Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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SECTION 8: Exposure controls/personal protection

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
- pMC1neo Vector: Liquid.
- pMC1neo Poly A: Liquid.
- AG1 E. coli Strain: Liquid.

Colour
- pMC1neo Vector: Not available.
- pMC1neo Poly A: Not available.
- AG1 E. coli Strain: Not available.

Odour
- pMC1neo Vector: Not available.
- pMC1neo Poly A: Not available.
- AG1 E. coli Strain: Not available.

Odour threshold
- pMC1neo Vector: Not available.
- pMC1neo Poly A: Not available.
- AG1 E. coli Strain: Not available.

pH
- pMC1neo Vector: 7.5
- pMC1neo Poly A: 7.5
- AG1 E. coli Strain: 7.5

Melting point/freezing point
- pMC1neo Vector: 0°C
- pMC1neo Poly A: 0°C
- AG1 E. coli Strain: Not available.

Initial boiling point and boiling range
- pMC1neo Vector: 100°C
- pMC1neo Poly A: 100°C
- AG1 E. coli Strain: Not available.

Flash point
- pMC1neo Vector: Not available.
- pMC1neo Poly A: Not available.
- AG1 E. coli Strain: Not available.

Evaporation rate
- pMC1neo Vector: Not available.
- pMC1neo Poly A: Not available.
- AG1 E. coli Strain: Not available.

Flammability (solid, gas)
- pMC1neo Vector: Not applicable.
- pMC1neo Poly A: Not applicable.
- AG1 E. coli Strain: Not applicable.
### SECTION 9: Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>pMC1neo Vector</th>
<th>pMC1neo Poly A</th>
<th>AG1 E. coli Strain</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Upper/lower flammability or explosive limits</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Vapour pressure</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Vapour density</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Solubility(ies)</strong></td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
<td>Soluble in the following materials: cold water and hot water.</td>
</tr>
<tr>
<td><strong>Partition coefficient: n-octanol/water</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Explosive properties</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Oxidising properties</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

### 9.2 Other information

No additional information.

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

- **pMC1neo Vector**
  - No specific test data related to reactivity available for this product or its ingredients.
- **pMC1neo Poly A**
  - No specific test data related to reactivity available for this product or its ingredients.
- **AG1 E. coli Strain**
  - No specific test data related to reactivity available for this product or its ingredients.

#### 10.2 Chemical stability

- **pMC1neo Vector**
  - The product is stable.
- **pMC1neo Poly A**
  - The product is stable.
- **AG1 E. coli Strain**
  - The product is stable.

**Date of issue/Date of revision**: 23/05/2019
**SECTION 10: Stability and reactivity**

10.3 Possibility of hazardous reactions
- **pMC1neo Vector**: Under normal conditions of storage and use, hazardous reactions will not occur.
- **pMC1neo Poly A**: Under normal conditions of storage and use, hazardous reactions will not occur.
- **AG1 E. coli Strain**: Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid
- **pMC1neo Vector**: No specific data.
- **pMC1neo Poly A**: No specific data.
- **AG1 E. coli Strain**: No specific data.

10.5 Incompatible materials
- **pMC1neo Vector**: May react or be incompatible with oxidising materials.
- **pMC1neo Poly A**: May react or be incompatible with oxidising materials.
- **AG1 E. coli Strain**: May react or be incompatible with oxidising materials.

10.6 Hazardous decomposition products
- **pMC1neo Vector**: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- **pMC1neo Poly A**: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- **AG1 E. coli Strain**: 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>AG1 E. coli Strain</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>3000 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

**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 (vapours) (mg/l)</th>
<th>Inhalation (dusts and mists) (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG1 E. coli Strain</td>
<td>3000</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</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>AG1 E. coli Strain</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 100 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10 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>

**Sensitiser**

**Conclusion/Summary**: Not available.

**Mutagenicity**

**Conclusion/Summary**: Not available.

**Carcinogenicity**

**Conclusion/Summary**: Not available.

**Reproductive toxicity**

**Conclusion/Summary**: Not available.

**Teratogenicity**

**Conclusion/Summary**: Not available.

Date of issue/Date of revision: 23/05/2019
**SECTION 11: Toxicological information**

**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 likely routes of exposure**

<table>
<thead>
<tr>
<th></th>
<th>pMC1neo Vector</th>
<th>pMC1neo Poly A</th>
<th>AG1 E. coli Strain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routes of entry anticipated: Oral, Dermal, Inhalation.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Potential acute health effects**

<table>
<thead>
<tr>
<th></th>
<th>pMC1neo Vector</th>
<th>pMC1neo Poly A</th>
<th>AG1 E. coli Strain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th>pMC1neo Vector</th>
<th>pMC1neo Poly A</th>
<th>AG1 E. coli Strain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>No specific data.</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No specific data.</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>No specific data.</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>No specific data.</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

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

**Short term exposure**

<table>
<thead>
<tr>
<th></th>
<th>pMC1neo Vector</th>
<th>pMC1neo Poly A</th>
<th>AG1 E. coli Strain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential immediate effects</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Potential delayed effects</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Long term exposure**

<table>
<thead>
<tr>
<th></th>
<th>pMC1neo Vector</th>
<th>pMC1neo Poly A</th>
<th>AG1 E. coli Strain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential immediate effects</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Potential delayed effects</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Potential chronic health effects**

<table>
<thead>
<tr>
<th></th>
<th>pMC1neo Vector</th>
<th>pMC1neo Poly A</th>
<th>AG1 E. coli Strain</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>
**SECTION 11: Toxicological information**

- **Carcinogenicity**
  - pMC1neo Vector: No known significant effects or critical hazards.
  - pMC1neo Poly A: No known significant effects or critical hazards.
  - AG1 E. coli Strain: No known significant effects or critical hazards.

- **Mutagenicity**
  - pMC1neo Vector: No known significant effects or critical hazards.
  - pMC1neo Poly A: No known significant effects or critical hazards.
  - AG1 E. coli Strain: No known significant effects or critical hazards.

- **Teratogenicity**
  - pMC1neo Vector: No known significant effects or critical hazards.
  - pMC1neo Poly A: No known significant effects or critical hazards.
  - AG1 E. coli Strain: No known significant effects or critical hazards.

- **Developmental effects**
  - pMC1neo Vector: No known significant effects or critical hazards.
  - pMC1neo Poly A: No known significant effects or critical hazards.
  - AG1 E. coli Strain: No known significant effects or critical hazards.

- **Fertility effects**
  - pMC1neo Vector: No known significant effects or critical hazards.
  - pMC1neo Poly A: No known significant effects or critical hazards.
  - AG1 E. coli Strain: No known significant effects or critical hazards.

**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>AG1 E. coli Strain</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>Acute EC50 4.74 g/L Fresh water</td>
<td>Algae - Chlamydomonas reinhardtii</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 519.6 mg/l Fresh water</td>
<td>Crustaceans - Cypris subglobosa</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 402.6 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute IC50 6.87 g/L Fresh water</td>
<td>Aquatic plants - Lemna minor</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 1000000 μg/l Fresh water</td>
<td>Fish - Morone saxatilis - Larvae</td>
<td>3 weeks</td>
</tr>
<tr>
<td></td>
<td>Chronic LC10 781 mg/l Fresh water</td>
<td>Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 6 g/L Fresh water</td>
<td>Aquatic plants - Lemna minor</td>
<td>21 days</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 0.314 g/L Fresh water</td>
<td>Daphnia - Daphnia pulex</td>
<td>8 weeks</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 100 mg/l Fresh water</td>
<td>Fish - Gambusia holbrooki - Adult</td>
<td></td>
</tr>
</tbody>
</table>

### 12.2 Persistence and degradability

Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

- **Soil/water partition coefficient (K<sub>OC</sub>)**: Not available.
- **Mobility**: Not available.

**12.5 Results of PBT and vPvB assessment**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**12.6 Other adverse effects**

No known significant effects or critical hazards.

---

**Date of issue/Date of revision**: 23/05/2019
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

<table>
<thead>
<tr>
<th>14.1 UN number</th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2 UN proper shipping name</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.3 Transport hazard class(es)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.4 Packing group</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.5 Environmental hazards</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
</tbody>
</table>

**Additional information**

**14.6 Special precautions for user**: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to 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.

Date of issue/Date of revision: 23/05/2019
SECTION 15: Regulatory information

| Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles | pMC1neo Vector | Not applicable. |
| AG1 E. coli Strain | pMC1neo Poly A | 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**

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

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

**Date of issue/Date of revision**: 23/05/2019
SECTION 16: Other information

Indicates information that has changed from previously issued version.

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

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

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

Full text of abbreviated H statements

AG1 E. coli Strain H319
Causes serious eye irritation.

Full text of classifications [CLP/GHS]

AG1 E. coli Strain Eye Irrit. 2, H319
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2

Date of issue/Date of revision: 23/05/2019
Date of previous issue: 29/03/2017
Version: 2

Notice to reader

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