Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

<table>
<thead>
<tr>
<th>Product Code</th>
<th>ST0214</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Name</td>
<td>pUC19 Vector</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Identified uses</th>
<th>For research use only. Not for use in diagnostic procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uses advised against</td>
<td>No information available</td>
</tr>
</tbody>
</table>

1.3. Details of the supplier of the safety data sheet

<table>
<thead>
<tr>
<th>Supplier</th>
<th>USA: Takara Bio USA, Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1290 Terra Bella Avenue</td>
</tr>
<tr>
<td></td>
<td>Mountain View, CA 94043</td>
</tr>
<tr>
<td></td>
<td>Phone: 800.662.2566/888.251.6618</td>
</tr>
<tr>
<td></td>
<td>Web: <a href="http://www.clontech.com">www.clontech.com</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Europe: Takara Bio Europe S.A.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2, avenue du president Kennedy</td>
</tr>
<tr>
<td></td>
<td>78100 Saint-Germain-en-Laye France</td>
</tr>
<tr>
<td></td>
<td>Phone: +33.(1).39.04.68.80</td>
</tr>
<tr>
<td></td>
<td>Web: <a href="http://www.takara-bio.eu">www.takara-bio.eu</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Europe: Takara Bio Europe AB</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Arvid Wallgrens backe 20</td>
</tr>
<tr>
<td></td>
<td>41346 Goteborg, Sweden</td>
</tr>
<tr>
<td></td>
<td>Phone: +46 (0) 31 758 0972</td>
</tr>
<tr>
<td></td>
<td>Web: <a href="http://www.takara-bio.eu">www.takara-bio.eu</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Supplier</th>
<th>India: DSS Takara Bio India Pvt. Ltd.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A-5 Mohan Co-op Industrial Estate</td>
</tr>
<tr>
<td></td>
<td>New Delhi 110044 India</td>
</tr>
<tr>
<td></td>
<td>Phone: +91.11.30886717</td>
</tr>
</tbody>
</table>

For further information, please contact:

Technical Support: +33.(1).39.04.68.80

1.4. Emergency telephone number

In case of emergency, call PERS (Professional Emergency Resource Services) 1-800-633-8253 (US) or 801-629-0667 (international).
Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

2.2. Label elements

Product Identifier
This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

Signal Word
None

2.3. Other hazards

No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances / 3.2 Mixtures

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice
In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Inhalation
Move to fresh air.

Skin contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Eye contact
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Ingestion
Never give anything by mouth to an unconscious person, If symptoms persist, call a physician, Not an expected route of exposure

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

Main Symptoms
No information available.

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

Notes to physician
Treat symptomatically.
Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media No information available

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas

6.3. Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice.

Hygiene measures Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Keep container tightly closed in a dry and well-ventilated place.

Incompatible products None known based on information supplied.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION
8.1. Control parameters

**Exposure limits**

Contains no substances with occupational exposure limit values.

**Derived No Effect Level (DNEL)**

No information available.

**Predicted No Effect Concentration (PNEC)**

No information available.

8.2. Exposure controls

**Engineering Measures**

Apply technical measures to comply with the occupational exposure limits. For rescue and maintenance work in storage tanks use self-contained breathing apparatus.

**Personal Protective Equipment**

- **Eye/Face Protection**
  If splashes are likely to occur, wear: Safety glasses with side-shields

- **Hand Protection**
  Protective gloves.

- **Skin and body protection**
  Wear suitable protective equipment, Boots

- **Respiratory protection**
  None under normal use conditions.

**Environmental Exposure Controls**

The product should not be allowed to enter drains, water courses or the soil.

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Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
<td>Odor</td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear, colorless solution</td>
<td>Odorless</td>
</tr>
<tr>
<td>Color</td>
<td>Clear</td>
<td>Odor Threshold</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td><strong>Property</strong></td>
<td><strong>Values</strong></td>
<td><strong>Remarks • Method</strong></td>
</tr>
<tr>
<td>pH VALUE</td>
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<td></td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
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<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
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</tr>
<tr>
<td>Flammability (solid, gas)</td>
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<td></td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
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<td></td>
</tr>
<tr>
<td>Upper flammability limit:</td>
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<td></td>
</tr>
<tr>
<td>Lower flammability limit:</td>
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<td></td>
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<tr>
<td>Vapor pressure</td>
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<td></td>
</tr>
<tr>
<td>Vapor density</td>
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<td></td>
</tr>
<tr>
<td>Relative density</td>
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</tr>
<tr>
<td>Water Solubility</td>
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</tr>
<tr>
<td>Solubility in other solvents</td>
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<tr>
<td>Partition coefficient</td>
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<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
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<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
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<tr>
<td>Viscosity, kinematic</td>
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<tr>
<td>Viscosity, dynamic</td>
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<tr>
<td>Explosive properties</td>
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<td></td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>

9.2. Other information

- **Softening point**
  No information available

- **Molecular Weight**
  No information available

- **VOC Content (%)**
  No information available
Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

Explosion Data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

None known based on information supplied.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

None under normal use conditions.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Product Information
Product does not present an acute toxicity hazard based on known or supplied information

Inhalation There is no data available for this product.
Eye contact There is no data available for this product.
Skin contact There is no data available for this product.
Ingestion There is no data available for this product.

Unknown acute toxicity

0.84599 % of the mixture consists of ingredient(s) of unknown toxicity.
0.84599 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
0.84599 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
0.84599 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
0.84599 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).
0.84599 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Skin corrosion/irritation No information available.

Serious Eye Damage/Eye Irritation No information available.
ST0214 - pUC19 Vector

Sensitization
mutagenic effects
Carcinogenic effects
Reproductive toxicity
STOT - Single Exposure
STOT - Repeated Exposure
Aspiration Hazard

No information available.

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**Section 12: ECOLOGICAL INFORMATION**

**12.1. Toxicity**

1 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

**12.2. Persistence and degradability**

No information available.

**12.3. Bioaccumulative potential**

No information available.

**12.4. Mobility in soil**

Mobility in soil
No information available.

Mobility
No information available.

**12.5. Results of PBT and vPvB assessment**

No information available.

**12.6. Other adverse effects**

No information available

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**Section 13: DISPOSAL CONSIDERATIONS**

**13.1. Waste treatment methods**

Waste from Residues / Unused Products
Dispose of in accordance with the European Directives on waste and hazardous waste.

Contaminated packaging
Dispose of in accordance with local regulations.

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**Section 14: TRANSPORT INFORMATION**
Section 15: REGULATORY INFORMATION

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

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:
This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants
Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable

International Inventories For research use only
TSCA -
15.2. Chemical safety assessment

Chemical Safety Assessment  
No information available

Section 16: OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend

SVHC: Substances of Very High Concern for Authorization:

Legend  Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA  Time weighted average
STEL Short term exposure limit
Ceiling Maximum limit value

Issuing Date  2016-07-21
Revision Date  2016-07-21
Reason for revision:  Not Applicable.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

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End of Safety Data Sheet