

# SAFETY DATA SHEET



StrataClone Mammalian Expression C-Terminal FLAG Vector System, Part Number 240230

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

### 1.1 Product identifier

<b>Product name</b>	:	StrataClone Mammalian Expression C-Terminal FLAG Vector System, Part Number 240230
<b>Part No. (Kit)</b>	:	240230
<b>Part No.</b>	:	StrataClone C-Terminal FLAG® Vector Mix 240230-51 StrataClone Blunt Cloning Buffer 240207-54 StrataClone CAM Blunt Control Insert 240224-59 StrataClone SoloPack Competent Cells 200185-41 pUC 18 DNA Control Plasmid 200231-42

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

Identified uses	
Analytical reagent.	
StrataClone C-Terminal FLAG® Vector Mix	0.021 ml (1 µl)
StrataClone Blunt Cloning Buffer	0.063 ml (63 µl)
StrataClone CAM Blunt Control Insert	0.01 ml (50 ng 5 ng/µl)
StrataClone SoloPack Competent Cells	1.05 ml (21 x 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

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

<b>Product definition</b>	:	StrataClone C-Terminal FLAG® Vector Mix Mixture StrataClone Blunt Cloning Buffer Mixture StrataClone CAM Blunt Control Insert Mixture StrataClone SoloPack Competent Cells Mixture pUC 18 DNA Control Plasmid Mixture
---------------------------	---	---

**Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

**Date of issue/Date of revision** : 27/03/2017

**SECTION 2: Hazards identification**

Not classified.

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**

<b>Signal word</b>	: StrataClone C-Terminal FLAG® Vector Mix	No signal word.
	StrataClone Blunt Cloning Buffer	No signal word.
	StrataClone CAM Blunt Control Insert	No signal word.
	StrataClone SoloPack Competent Cells	No signal word.
	pUC 18 DNA Control Plasmid	No signal word.
<b>Hazard statements</b>	: StrataClone C-Terminal FLAG® Vector Mix	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	No known significant effects or critical hazards.
	StrataClone CAM Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone SoloPack Competent Cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
<b>Precautionary statements</b>		
<b>Prevention</b>	: StrataClone C-Terminal FLAG® Vector Mix	Not applicable.
	StrataClone Blunt Cloning Buffer	Not applicable.
	StrataClone CAM Blunt Control Insert	Not applicable.
	StrataClone SoloPack Competent Cells	Not applicable.
	pUC 18 DNA Control Plasmid	Not applicable.
<b>Response</b>	: StrataClone C-Terminal FLAG® Vector Mix	Not applicable.
	StrataClone Blunt Cloning Buffer	Not applicable.
	StrataClone CAM Blunt Control Insert	Not applicable.
	StrataClone SoloPack Competent Cells	Not applicable.
	pUC 18 DNA Control Plasmid	Not applicable.
<b>Storage</b>	: StrataClone C-Terminal FLAG® Vector Mix	Not applicable.
	StrataClone Blunt Cloning Buffer	Not applicable.
	StrataClone CAM Blunt Control Insert	Not applicable.
	StrataClone SoloPack Competent Cells	Not applicable.
	pUC 18 DNA Control Plasmid	Not applicable.

**SECTION 2: Hazards identification**

<b>Disposal</b>	:	StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
<b>Hazardous ingredients</b>	:	StrataClone Blunt Cloning Buffer StrataClone SoloPack Competent Cells	Not applicable. Not applicable.
<b>Supplemental label elements</b>	:	StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	Not applicable. Safety data sheet available on request. Not applicable. Safety data sheet available on request. Not applicable.
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	:	StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
<b><u>Special packaging requirements</u></b>			
<b>Tactile warning of danger</b>	:	StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
<b>2.3 Other hazards</b>			
<b>Other hazards which do not result in classification</b>	:	StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	None known. None known. None known. None known. None known.

## SECTION 3: Composition/information on ingredients

<b>3.1 Substances</b>	: StrataClone C-Terminal FLAG® Vector Mix	Mixture
	StrataClone Blunt Cloning Buffer	Mixture
	StrataClone CAM Blunt Control Insert	Mixture
	StrataClone SoloPack Competent Cells	Mixture
	pUC 18 DNA Control Plasmid	Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
<b>StrataClone C-Terminal FLAG® Vector Mix</b>				
Glycerol	EC: 200-289-5 CAS: 56-81-5	≥25 - ≤50	Not classified.	[2]
Polyoxyethylene octyl phenyl ether	CAS: 9002-93-1	≤0.3	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411	[1] [5]
<b>StrataClone Blunt Cloning Buffer</b>				
Sodium chloride	EC: 231-598-3 CAS: 7647-14-5	<10	Eye Irrit. 2, H319	[1]
<b>StrataClone SoloPack Competent Cells</b>				
Glycerol	EC: 200-289-5 CAS: 56-81-5	≥10 - ≤25	Not classified.	[2]
Calcium chloride (CaCl <sub>2</sub> ), dihydrate	EC: 233-140-8 CAS: 10035-04-8 Index: 017-013-00-2	≤3	Eye Irrit. 2, H319	[1]
			<b>See Section 16 for the full text of the H statements declared above.</b>	

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

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### Eye contact

: StrataClone C-Terminal FLAG® Vector Mix	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.
StrataClone Blunt Cloning Buffer	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.
StrataClone CAM Blunt Control Insert	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.
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. Get medical attention if irritation occurs.
pUC 18 DNA Control Plasmid	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

**SECTION 4: First aid measures**

<b>Inhalation</b>	: StrataClone C-Terminal FLAG® Vector Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	StrataClone Blunt Cloning Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	StrataClone CAM Blunt Control Insert	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	StrataClone SoloPack Competent Cells	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	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.
<b>Skin contact</b>	: StrataClone C-Terminal FLAG® Vector Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	StrataClone Blunt Cloning Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	StrataClone CAM Blunt Control Insert	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	StrataClone SoloPack Competent Cells	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pUC 18 DNA Control Plasmid	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	: StrataClone C-Terminal FLAG® Vector Mix	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.
	StrataClone Blunt Cloning Buffer	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.
	StrataClone CAM Blunt Control Insert	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.
	StrataClone SoloPack Competent Cells	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.
	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**

<b>Protection of first-aiders</b>	: StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training.
-----------------------------------	---	--

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

<b>Eye contact</b>	: StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Inhalation</b>	: StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Skin contact</b>	: StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Ingestion</b>	: StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

<b>Eye contact</b>	: StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells	No specific data. No specific data. No specific data. No specific data.
--------------------	---	--



**SECTION 4: First aid measures**

	pUC 18 DNA Control Plasmid	No specific data.
<b>Inhalation</b>	: StrataClone C-Terminal FLAG® Vector Mix	No specific data.
	StrataClone Blunt Cloning Buffer	No specific data.
	StrataClone CAM Blunt Control Insert	No specific data.
	StrataClone SoloPack Competent Cells	No specific data.
	pUC 18 DNA Control Plasmid	No specific data.
<b>Skin contact</b>	: StrataClone C-Terminal FLAG® Vector Mix	No specific data.
	StrataClone Blunt Cloning Buffer	No specific data.
	StrataClone CAM Blunt Control Insert	No specific data.
	StrataClone SoloPack Competent Cells	No specific data.
	pUC 18 DNA Control Plasmid	No specific data.
<b>Ingestion</b>	: StrataClone C-Terminal FLAG® Vector Mix	No specific data.
	StrataClone Blunt Cloning Buffer	No specific data.
	StrataClone CAM Blunt Control Insert	No specific data.
	StrataClone SoloPack Competent Cells	No specific data.
	pUC 18 DNA Control Plasmid	No specific data.

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

<b>Notes to physician</b>	: StrataClone C-Terminal FLAG® Vector Mix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	StrataClone Blunt Cloning Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	StrataClone CAM Blunt Control Insert	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	StrataClone SoloPack Competent Cells	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	pUC 18 DNA Control Plasmid	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	: StrataClone C-Terminal FLAG® Vector Mix	No specific treatment.
	StrataClone Blunt Cloning Buffer	No specific treatment.
	StrataClone CAM Blunt Control Insert	No specific treatment.
	StrataClone SoloPack Competent Cells	No specific treatment.
	pUC 18 DNA Control Plasmid	No specific treatment.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

<b>Suitable extinguishing media</b>	: StrataClone C-Terminal FLAG® Vector Mix	Use an extinguishing agent suitable for the surrounding fire.
	StrataClone Blunt Cloning Buffer	Use an extinguishing agent suitable for the surrounding fire.
	StrataClone CAM Blunt Control Insert	Use an extinguishing agent suitable for the surrounding fire.
	StrataClone SoloPack Competent Cells	Use an extinguishing agent suitable for the surrounding fire.
	pUC 18 DNA Control Plasmid	Use an extinguishing agent suitable for the surrounding fire.
	<b>Unsuitable extinguishing media</b>	: StrataClone C-Terminal FLAG® Vector Mix
StrataClone Blunt Cloning Buffer		None known.
StrataClone CAM Blunt Control Insert		None known.
StrataClone SoloPack Competent Cells		None known.
pUC 18 DNA Control Plasmid		None known.

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

<b>Hazards from the substance or mixture</b>	: StrataClone C-Terminal FLAG® Vector Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
	StrataClone Blunt Cloning Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	StrataClone CAM Blunt Control Insert	In a fire or if heated, a pressure increase will occur and the container may burst.
	StrataClone SoloPack Competent Cells	In a fire or if heated, a pressure increase will occur and the container may burst.
	pUC 18 DNA Control Plasmid	In a fire or if heated, a pressure increase will occur and the container may burst.
	<b>Hazardous combustion products</b>	: StrataClone C-Terminal FLAG® Vector Mix
StrataClone Blunt Cloning Buffer		Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
StrataClone CAM Blunt Control Insert		No specific data.
StrataClone SoloPack Competent Cells		Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
pUC 18 DNA Control Plasmid		No specific data.

**5.3 Advice for firefighters**



**SECTION 5: Firefighting measures**

<b>Special precautions for fire-fighters</b>	: StrataClone C-Terminal FLAG® Vector Mix	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.
	StrataClone Blunt Cloning Buffer	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.
	StrataClone CAM Blunt Control Insert	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.
	StrataClone SoloPack Competent Cells	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	pUC 18 DNA Control Plasmid	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
<b>Special protective equipment for fire-fighters</b>	: StrataClone C-Terminal FLAG® Vector Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	StrataClone Blunt Cloning Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	StrataClone CAM Blunt Control Insert	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	StrataClone SoloPack Competent Cells	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	pUC 18 DNA Control Plasmid	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

<b>For non-emergency personnel</b>	: StrataClone C-Terminal FLAG® Vector Mix	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
	StrataClone Blunt Cloning Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
	StrataClone CAM Blunt Control Insert	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

**SECTION 6: Accidental release measures**

	StrataClone SoloPack Competent Cells	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
	pUC 18 DNA Control Plasmid	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	: StrataClone C-Terminal FLAG® Vector Mix	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".
	StrataClone Blunt Cloning Buffer	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".
	StrataClone CAM Blunt Control Insert	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".
	StrataClone SoloPack Competent Cells	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	pUC 18 DNA Control Plasmid	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
<b>6.2 Environmental precautions</b>	: StrataClone C-Terminal FLAG® Vector Mix	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).
	StrataClone Blunt Cloning Buffer	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).
	StrataClone CAM Blunt Control Insert	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).
	StrataClone SoloPack Competent Cells	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).
	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).
<b>6.3 Methods and material for containment and cleaning up</b>		
<b>Methods for cleaning up</b>	: StrataClone C-Terminal FLAG® Vector Mix	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.
	StrataClone Blunt Cloning Buffer	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.

**SECTION 6: Accidental release measures**

StrataClone CAM Blunt Control Insert	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.
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.
pUC 18 DNA Control Plasmid	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

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

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

<b>Protective measures</b>	: StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	: StrataClone C-Terminal FLAG® Vector Mix  StrataClone Blunt Cloning Buffer  StrataClone CAM Blunt Control Insert  StrataClone SoloPack Competent Cells  pUC 18 DNA Control Plasmid	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. 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. 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. 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. 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**

<b>Storage</b>	: StrataClone C-Terminal FLAG® Vector Mix	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.
	StrataClone Blunt Cloning Buffer	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.
	StrataClone CAM Blunt Control Insert	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.
	StrataClone SoloPack Competent Cells	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.
	pUC 18 DNA Control Plasmid	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

**7.3 Specific end use(s)**

<b>Recommendations</b>	: StrataClone C-Terminal FLAG® Vector Mix	Industrial applications, Professional applications.
	StrataClone Blunt Cloning Buffer	Industrial applications, Professional applications.
	StrataClone CAM Blunt Control Insert	Industrial applications, Professional applications.
	StrataClone SoloPack Competent Cells	Industrial applications, Professional applications.
	pUC 18 DNA Control Plasmid	Industrial applications, Professional applications.

## SECTION 7: Handling and storage

<b>Industrial sector specific solutions</b>	: StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
---	---	--

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
<b>StrataClone C-Terminal FLAG® Vector Mix</b> Glycerol	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist
<b>StrataClone SoloPack Competent Cells</b> Glycerol	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist

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

#### DNELs/DMELs

No DNELs/DMELs available.

#### PNECs

No PNECs available

### 8.2 Exposure controls

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

#### 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



**SECTION 8: Exposure controls/personal 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** : StrataClone C-Terminal FLAG® Vector Mix Liquid.  
StrataClone Blunt Cloning Buffer Liquid.  
StrataClone CAM Blunt Control Insert Liquid.  
StrataClone SoloPack Competent Cells Liquid.  
pUC 18 DNA Control Plasmid Liquid.
- Colour** : StrataClone C-Terminal FLAG® Vector Mix Not available.  
StrataClone Blunt Cloning Buffer Not available.  
StrataClone CAM Blunt Control Insert Not available.  
StrataClone SoloPack Competent Cells Not available.  
pUC 18 DNA Control Plasmid Not available.
- Odour** : StrataClone C-Terminal FLAG® Vector Mix Not available.  
StrataClone Blunt Cloning Buffer Not available.  
StrataClone CAM Blunt Control Insert Not available.  
StrataClone SoloPack Competent Cells Not available.  
pUC 18 DNA Control Plasmid Not available.
- Odour threshold** : StrataClone C-Terminal FLAG® Vector Mix Not available.  
StrataClone Blunt Cloning Buffer Not available.  
StrataClone CAM Blunt Control Insert Not available.  
StrataClone SoloPack Competent Cells Not available.  
pUC 18 DNA Control Plasmid Not available.



**SECTION 9: Physical and chemical properties**

<b>pH</b>	: StrataClone C-Terminal FLAG® Vector Mix	Not available.	
	StrataClone Blunt Cloning Buffer	Not available.	
	StrataClone CAM Blunt Control Insert	7.5	
	StrataClone SoloPack Competent Cells	Not available.	
	pUC 18 DNA Control Plasmid	7.5	
	<b>Melting point/freezing point</b>	: StrataClone C-Terminal FLAG® Vector Mix	Not available.
		StrataClone Blunt Cloning Buffer	Not available.
		StrataClone CAM Blunt Control Insert	0°C
		StrataClone SoloPack Competent Cells	Not available.
pUC 18 DNA Control Plasmid		0°C	
<b>Initial boiling point and boiling range</b>		: StrataClone C-Terminal FLAG® Vector Mix	Not available.
		StrataClone Blunt Cloning Buffer	Not available.
		StrataClone CAM Blunt Control Insert	100°C
		StrataClone SoloPack Competent Cells	Not available.
	pUC 18 DNA Control Plasmid	100°C	
	<b>Flash point</b>	: StrataClone C-Terminal FLAG® Vector Mix	Not available.
		StrataClone Blunt Cloning Buffer	Not available.
		StrataClone CAM Blunt Control Insert	Not available.
		StrataClone SoloPack Competent Cells	Not available.
pUC 18 DNA Control Plasmid		Not available.	
<b>Evaporation rate</b>		: StrataClone C-Terminal FLAG® Vector Mix	Not available.
		StrataClone Blunt Cloning Buffer	Not available.
		StrataClone CAM Blunt Control Insert	Not available.
		StrataClone SoloPack Competent Cells	Not available.
	pUC 18 DNA Control Plasmid	Not available.	
	<b>Flammability (solid, gas)</b>	: StrataClone C-Terminal FLAG® Vector Mix	Not applicable.
		StrataClone Blunt Cloning Buffer	Not applicable.
		StrataClone CAM Blunt Control Insert	Not applicable.
		StrataClone SoloPack Competent Cells	Not applicable.
pUC 18 DNA Control Plasmid		Not applicable.	

**SECTION 9: Physical and chemical properties**

<b>Upper/lower flammability or explosive limits</b>	:	StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	Not available. Not available. Not available. Not available. Not available.
<b>Vapour pressure</b>	:	StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	Not available. Not available. Not available. Not available. Not available.
<b>Vapour density</b>	:	StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	Not available. Not available. Not available. Not available. Not available.
<b>Relative density</b>	:	StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	Not available. Not available. Not available. Not available. Not available.
<b>Solubility(ies)</b>	:	StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	Soluble in the following materials: cold water and hot water. Soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	:	StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	Not available. Not available. Not available. Not available. Not available.

**SECTION 9: Physical and chemical properties**

<b>Auto-ignition temperature</b>	: StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	Not available. Not available. Not available. Not available. Not available.
<b>Decomposition temperature</b>	: StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	Not available. Not available. Not available. Not available. Not available.
<b>Viscosity</b>	: StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	Not available. Not available. Not available. Not available. Not available.
<b>Explosive properties</b>	: StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	Not available. Not available. Not available. Not available. Not available.
<b>Oxidising properties</b>	: StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	Not available. Not available. Not available. Not available. Not available.

**9.2 Other information**

No additional information.

**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	: StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this
------------------------	---	--

**SECTION 10: Stability and reactivity**

Competent Cells	product or its ingredients.
pUC 18 DNA Control	No specific test data related to reactivity available for this
Plasmid	product or its ingredients.

**10.2 Chemical stability** : StrataClone C-Terminal FLAG® Vector Mix The product is stable.

StrataClone Blunt Cloning Buffer The product is stable.

StrataClone CAM Blunt Control Insert The product is stable.

StrataClone SoloPack Competent Cells The product is stable.

pUC 18 DNA Control Plasmid The product is stable.

**10.3 Possibility of hazardous reactions** : StrataClone C-Terminal FLAG® Vector Mix Under normal conditions of storage and use, hazardous reactions will not occur.

StrataClone Blunt Cloning Buffer Under normal conditions of storage and use, hazardous reactions will not occur.

StrataClone CAM Blunt Control Insert Under normal conditions of storage and use, hazardous reactions will not occur.

StrataClone SoloPack Competent Cells Under normal conditions of storage and use, hazardous reactions will not occur.

pUC 18 DNA Control Plasmid Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : StrataClone C-Terminal FLAG® Vector Mix No specific data.

StrataClone Blunt Cloning Buffer No specific data.

StrataClone CAM Blunt Control Insert No specific data.

StrataClone SoloPack Competent Cells No specific data.

pUC 18 DNA Control Plasmid No specific data.

**10.5 Incompatible materials** : StrataClone C-Terminal FLAG® Vector Mix May react or be incompatible with oxidising materials.

StrataClone Blunt Cloning Buffer May react or be incompatible with oxidising materials.

StrataClone CAM Blunt Control Insert May react or be incompatible with oxidising materials.

StrataClone SoloPack Competent Cells May react or be incompatible with oxidising materials.

pUC 18 DNA Control Plasmid May react or be incompatible with oxidising materials.

**10.6 Hazardous decomposition products** : StrataClone C-Terminal FLAG® Vector Mix Under normal conditions of storage and use, hazardous decomposition products should not be produced.

StrataClone Blunt Cloning Buffer Under normal conditions of storage and use, hazardous decomposition products should not be produced.

StrataClone CAM Blunt Control Insert Under normal conditions of storage and use, hazardous decomposition products should not be produced.

StrataClone SoloPack Competent Cells Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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

Product/ingredient name	Result	Species	Dose	Exposure
<b>StrataClone C-Terminal FLAG® Vector Mix</b> Polyoxyethylene octyl phenyl ether	LD50 Oral	Rat	1800 mg/kg	-
<b>StrataClone Blunt Cloning Buffer</b> Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-

#### Acute toxicity estimates

Not available.

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>StrataClone C-Terminal FLAG® Vector Mix</b> Polyoxyethylene octyl phenyl ether	Eyes - Moderate irritant	Rabbit	-	24 hours 10 microliters	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 microliters	-
<b>StrataClone Blunt Cloning Buffer</b> Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

#### Sensitiser

**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

StrataClone C-Terminal FLAG® Vector Mix	Not available.
StrataClone Blunt Cloning Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
StrataClone CAM Blunt Control Insert	Not available.
StrataClone SoloPack Competent Cells	Routes of entry anticipated: Oral, Dermal, Inhalation.
pUC 18 DNA Control Plasmid	Not available.

#### Potential acute health effects

**SECTION 11: Toxicological information**

<b>Inhalation</b>	:	StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Ingestion</b>	:	StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Skin contact</b>	:	StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Eye contact</b>	:	StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

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

<b>Inhalation</b>	:	StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	No specific data. No specific data. No specific data. No specific data. No specific data.
<b>Ingestion</b>	:	StrataClone C-Terminal FLAG® Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	No specific data. No specific data. No specific data. No specific data. No specific data.



**SECTION 11: Toxicological information**

<b>Skin contact</b>	:	StrataClone C-Terminal FLAG® Vector Mix	No specific data.
		StrataClone Blunt Cloning Buffer	No specific data.
		StrataClone CAM Blunt Control Insert	No specific data.
		StrataClone SoloPack Competent Cells	No specific data.
		pUC 18 DNA Control Plasmid	No specific data.
<b>Eye contact</b>	:	StrataClone C-Terminal FLAG® Vector Mix	No specific data.
		StrataClone Blunt Cloning Buffer	No specific data.
		StrataClone CAM Blunt Control Insert	No specific data.
		StrataClone SoloPack Competent Cells	No specific data.
		pUC 18 DNA Control Plasmid	No specific data.

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

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Potential chronic health effects**

<b>General</b>	:	StrataClone C-Terminal FLAG® Vector Mix	No known significant effects or critical hazards.
		StrataClone Blunt Cloning Buffer	No known significant effects or critical hazards.
		StrataClone CAM Blunt Control Insert	No known significant effects or critical hazards.
		StrataClone SoloPack Competent Cells	No known significant effects or critical hazards.
		pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	:	StrataClone C-Terminal FLAG® Vector Mix	No known significant effects or critical hazards.
		StrataClone Blunt Cloning Buffer	No known significant effects or critical hazards.
		StrataClone CAM Blunt Control Insert	No known significant effects or critical hazards.
		StrataClone SoloPack Competent Cells	No known significant effects or critical hazards.
		pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
<b>Mutagenicity</b>	:	StrataClone C-Terminal FLAG® Vector Mix	No known significant effects or critical hazards.
		StrataClone Blunt Cloning Buffer	No known significant effects or critical hazards.
		StrataClone CAM Blunt Control Insert	No known significant effects or critical hazards.
		StrataClone SoloPack Competent Cells	No known significant effects or critical hazards.

**SECTION 11: Toxicological information**

	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
<b>Teratogenicity</b>	: StrataClone C-Terminal FLAG® Vector Mix	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	No known significant effects or critical hazards.
	StrataClone CAM Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone SoloPack Competent Cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
<b>Developmental effects</b>	: StrataClone C-Terminal FLAG® Vector Mix	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	No known significant effects or critical hazards.
	StrataClone CAM Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone SoloPack Competent Cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
<b>Fertility effects</b>	: StrataClone C-Terminal FLAG® Vector Mix	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	No known significant effects or critical hazards.
	StrataClone CAM Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone SoloPack Competent Cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.

**SECTION 12: Ecological information**

**12.1 Toxicity**

Product/ingredient name	Result	Species	Exposure
<b>StrataClone C-Terminal FLAG® Vector Mix</b> Polyoxyethylene octyl phenyl ether	Acute LC50 5.85 mg/l Fresh water	Crustaceans - Ceriodaphnia rigaudi - Neonate	48 hours
	Acute LC50 11.2 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4500 µg/l Fresh water	Fish - Pimephales promelas	96 hours
<b>StrataClone Blunt Cloning Buffer</b> Sodium chloride	Acute EC50 2430000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 28.85 mg/dm3 Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1.56 g/L Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
	Chronic LC10 781 mg/l Fresh water	Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	3 weeks
Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours	
Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days	
Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks	

## SECTION 12: Ecological information

StrataClone SoloPack Competent Cells Calcium chloride (CaCl <sub>2</sub> ), dihydrate	Acute EC50 2900 mg/l Fresh water	Algae	72 hours
	Acute NOEC 2000 mg/l Fresh water	Daphnia	48 hours

### 12.2 Persistence and degradability

Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
StrataClone C-Terminal FLAG® Vector Mix Polyoxyethylene octyl phenyl ether	-	-	Readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
StrataClone C-Terminal FLAG® Vector Mix Polyoxyethylene octyl phenyl ether	4.86	-	high

### 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

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

### Regulatory information

ADR/RID / IMDG / IATA : Not regulated.

**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

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
StrataClone C-Terminal FLAG® Vector Mix Polyoxyethylene octyl phenyl ether	Substance of equivalent concern for environment	Recommended	ED/169/2012	2/10/2014

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** :

StrataClone C-Terminal FLAG® Vector Mix	Not applicable.
StrataClone Blunt Cloning Buffer	Not applicable.
StrataClone CAM Blunt Control Insert	Not applicable.
StrataClone SoloPack Competent Cells	Not applicable.
pUC 18 DNA Control Plasmid	Not applicable.

#### Other EU regulations

**Europe inventory** : All components are listed or exempted.

#### 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)

**SECTION 15: Regulatory information**

Not listed.

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

[International lists](#)[National inventory](#)

<b>Australia</b>	: All components are listed or exempted.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Japan</b>	: <b>Japan inventory (ENCS)</b> : Not determined. <b>Japan inventory (ISHL)</b> : Not determined.
<b>Malaysia</b>	: Not determined.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are listed or exempted.

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

**SECTION 16: Other information**


 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
DNEL = Derived No Effect Level  
EUH statement = CLP-specific Hazard statement  
PNEC = Predicted No Effect Concentration  
RRN = REACH Registration Number

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

Classification	Justification
Not classified.	

[Full text of abbreviated H statements](#)

 <b>StrataClone C-Terminal FLAG® Vector Mix</b> H302 H315 H318 H411	Harmful if swallowed. Causes skin irritation. Causes serious eye damage. Toxic to aquatic life with long lasting effects.
<b>StrataClone Blunt Cloning Buffer</b> H319	Causes serious eye irritation.
<b>StrataClone SoloPack Competent Cells</b> H319	Causes serious eye irritation.

[Full text of classifications \[CLP/GHS\]](#)

**SECTION 16: Other information**

**StrataClone C-Terminal FLAG® Vector Mix**

Acute Tox. 4, H302  
 Aquatic Chronic 2, H411  
 Eye Dam. 1, H318  
 Skin Irrit. 2, H315

ACUTE TOXICITY (oral) - Category 4  
 LONG-TERM AQUATIC HAZARD - Category 2  
 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1  
 SKIN CORROSION/IRRITATION - Category 2

**StrataClone Blunt Cloning Buffer**

Eye Irrit. 2, H319

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2

**StrataClone SoloPack Competent Cells**

Eye Irrit. 2, H319

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2

**Date of issue/ Date of revision** : 27/03/2017

**Date of previous issue** : 31/08/2016.

**Version** : 2

**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.