

SAFETY DATA SHEET



StrataClone PCR Cloning Kit, Part Number 240205

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

1.1 Product identifier

Product name	: StrataClone PCR Cloning Kit, Part Number 240205
Part No. (Kit)	: 240205
Part No.	: StrataClone Vector Mix amp/kan 240205-51
	StrataClone Cloning Buffer 240205-54
	StrataClone Control Insert 240205-53
	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 Vector Mix amp/kan	0.021 ml (Use 1 µl)
StrataClone Cloning Buffer	0.063 ml
StrataClone 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

Product definition	: StrataClone Vector Mix amp/kan Mixture
	StrataClone Cloning Buffer Mixture
	StrataClone Control Insert Mixture
	StrataClone SoloPack Competent Cells Mixture
	pUC 18 DNA Control Plasmid Mixture

Date of issue/Date of revision : 31/12/2017

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SECTION 2: Hazards identification

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

Not classified.

Ingredients of unknown toxicity	: StrataClone Vector Mix amp/kan	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 30 - 60%
	StrataClone Cloning Buffer	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 10 - 30%
	StrataClone SoloPack Competent Cells	Percentage of the mixture consisting of ingredient(s) of unknown 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	: StrataClone Vector Mix amp/kan	No signal word.
	StrataClone Cloning Buffer	No signal word.
	StrataClone Control Insert	No signal word.
	StrataClone SoloPack Competent Cells	No signal word.
	pUC 18 DNA Control Plasmid	No signal word.

Hazard statements	: StrataClone Vector Mix amp/kan	No known significant effects or critical hazards.
	StrataClone Cloning Buffer	No known significant effects or critical hazards.
	StrataClone 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.

Precautionary statements

Prevention	: StrataClone Vector Mix amp/kan	Not applicable.
	StrataClone Cloning Buffer	Not applicable.
	StrataClone Control Insert	Not applicable.
	StrataClone SoloPack Competent Cells	Not applicable.
	pUC 18 DNA Control Plasmid	Not applicable.

Response	: StrataClone Vector Mix amp/kan	Not applicable.
	StrataClone Cloning Buffer	Not applicable.
	StrataClone Control Insert	Not applicable.
	StrataClone SoloPack Competent Cells	Not applicable.
	pUC 18 DNA Control Plasmid	Not applicable.

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Storage	:	StrataClone Vector Mix amp/kan	Not applicable.
		StrataClone Cloning Buffer	Not applicable.
		StrataClone Control Insert	Not applicable.
		StrataClone SoloPack Competent Cells	Not applicable.
		pUC 18 DNA Control Plasmid	Not applicable.
Disposal	:	StrataClone Vector Mix amp/kan	Not applicable.
		StrataClone Cloning Buffer	Not applicable.
		StrataClone Control Insert	Not applicable.
		StrataClone SoloPack Competent Cells	Not applicable.
		pUC 18 DNA Control Plasmid	Not applicable.
Hazardous ingredients	:	StrataClone Vector Mix amp/kan	Not applicable.
		StrataClone Cloning Buffer	Not applicable.
		StrataClone SoloPack Competent Cells	Not applicable.
Supplemental label elements	:	StrataClone Vector Mix amp/kan	Not applicable.
		StrataClone Cloning Buffer	Safety data sheet available on request.
		StrataClone Control Insert	Not applicable.
		StrataClone SoloPack Competent Cells	Safety data sheet available on request.
		pUC 18 DNA Control Plasmid	Not applicable.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	:	StrataClone Vector Mix amp/kan	Not applicable.
		StrataClone Cloning Buffer	Not applicable.
		StrataClone Control Insert	Not applicable.
		StrataClone SoloPack Competent Cells	Not applicable.
		pUC 18 DNA Control Plasmid	Not applicable.
Special packaging requirements			
Tactile warning of danger	:	StrataClone Vector Mix amp/kan	Not applicable.
		StrataClone Cloning Buffer	Not applicable.
		StrataClone Control Insert	Not applicable.
		StrataClone SoloPack Competent Cells	Not applicable.
		pUC 18 DNA Control Plasmid	Not applicable.

2.3 Other hazards

Date of issue/Date of revision : 31/12/2017

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SECTION 2: Hazards identification

Other hazards which do not result in classification :

StrataClone Vector Mix amp/kan	None known.
StrataClone Cloning Buffer	None known.
StrataClone Control Insert	None known.
StrataClone SoloPack Competent Cells	None known.
pUC 18 DNA Control Plasmid	None known.

SECTION 3: Composition/information on ingredients

3.1 Substances :

StrataClone Vector Mix amp/kan	Mixture
StrataClone Cloning Buffer	Mixture
StrataClone 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
StrataClone Vector Mix amp/kan Glycerol	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥50 - ≤75	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]
StrataClone Cloning Buffer Sodium chloride	EC: 231-598-3 CAS: 7647-14-5	≤3	Eye Irrit. 2, H319	[1]
StrataClone SoloPack Competent Cells Glycerol	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥10 - ≤25	Not classified.	[2]
Calcium chloride (CaCl ₂), dihydrate	EC: 233-140-8 CAS: 10035-04-8 Index: 017-013-00-2	≤3	Eye Irrit. 2, H319	[1]
			See Section 16 for the full text of the H statements declared above.	

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
- [6] Additional disclosure due to company policy

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	: StrataClone Vector Mix amp/kan	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 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 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.
Inhalation	: StrataClone Vector Mix amp/kan	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	StrataClone Cloning Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	StrataClone 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.
Skin contact	: StrataClone Vector Mix amp/kan	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	StrataClone Cloning Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	StrataClone 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.
Ingestion	: StrataClone Vector Mix amp/kan	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 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 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

SECTION 4: First aid measures

<p>StrataClone SoloPack Competent Cells</p> <p>pUC 18 DNA Control Plasmid</p> <p>Protection of first-aiders :</p> <p>StrataClone Vector Mix amp/kan</p> <p>StrataClone Cloning Buffer</p> <p>StrataClone Control Insert</p> <p>StrataClone SoloPack Competent Cells</p> <p>pUC 18 DNA Control Plasmid</p>	<p>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. 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. 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.</p> <p>No action shall be taken involving any personal risk or without suitable training.</p> <p>No action shall be taken involving any personal risk or without suitable training.</p> <p>No action shall be taken involving any personal risk or without suitable training.</p> <p>No action shall be taken involving any personal risk or without suitable training.</p> <p>No action shall be taken involving any personal risk or without suitable training.</p>
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4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

<p>Eye contact :</p> <p>StrataClone Vector Mix amp/kan</p> <p>StrataClone Cloning Buffer</p> <p>StrataClone Control Insert</p> <p>StrataClone SoloPack Competent Cells</p> <p>pUC 18 DNA Control Plasmid</p>	<p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p>
<p>Inhalation :</p> <p>StrataClone Vector Mix amp/kan</p> <p>StrataClone Cloning Buffer</p> <p>StrataClone Control Insert</p> <p>StrataClone SoloPack Competent Cells</p> <p>pUC 18 DNA Control Plasmid</p>	<p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p>
<p>Skin contact :</p> <p>StrataClone Vector Mix amp/kan</p> <p>StrataClone Cloning Buffer</p> <p>StrataClone Control Insert</p> <p>StrataClone SoloPack Competent Cells</p> <p>pUC 18 DNA Control Plasmid</p>	<p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p>

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Ingestion	:	StrataClone Vector Mix amp/kan	No known significant effects or critical hazards.
		StrataClone Cloning Buffer	No known significant effects or critical hazards.
		StrataClone 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.

Over-exposure signs/symptoms

Eye contact	:	StrataClone Vector Mix amp/kan	No specific data.
		StrataClone Cloning Buffer	No specific data.
		StrataClone Control Insert	No specific data.
		StrataClone SoloPack Competent Cells	No specific data.
		pUC 18 DNA Control Plasmid	No specific data.

Inhalation	:	StrataClone Vector Mix amp/kan	No specific data.
		StrataClone Cloning Buffer	No specific data.
		StrataClone Control Insert	No specific data.
		StrataClone SoloPack Competent Cells	No specific data.
		pUC 18 DNA Control Plasmid	No specific data.

Skin contact	:	StrataClone Vector Mix amp/kan	No specific data.
		StrataClone Cloning Buffer	No specific data.
		StrataClone Control Insert	No specific data.
		StrataClone SoloPack Competent Cells	No specific data.
		pUC 18 DNA Control Plasmid	No specific data.

Ingestion	:	StrataClone Vector Mix amp/kan	No specific data.
		StrataClone Cloning Buffer	No specific data.
		StrataClone 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

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SECTION 4: First aid measures

Notes to physician	: StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	: StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	None known. None known. None known. None known. None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst.
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SECTION 5: Firefighting measures

Hazardous combustion products	: StrataClone Vector Mix amp/kan	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	StrataClone Cloning Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
	StrataClone 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

Special precautions for fire-fighters	: StrataClone Vector Mix amp/kan	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 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 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.
Special protective equipment for fire-fighters	: StrataClone Vector Mix amp/kan	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 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 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

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pUC 18 DNA Control Plasmid

basic level of protection for chemical incidents. 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

For non-emergency personnel

: StrataClone Vector Mix amp/kan

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.

StrataClone 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 spilt material. Put on appropriate personal protective equipment.

StrataClone 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 spilt material. Put on appropriate personal protective equipment.

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 spilt 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 spilt material. Put on appropriate personal protective equipment.

For emergency responders

: StrataClone Vector Mix amp/kan

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 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 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".

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SECTION 6: Accidental release measures

6.2 Environmental precautions	: StrataClone Vector Mix amp/kan	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).
	StrataClone Cloning Buffer	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).
	StrataClone Control Insert	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).
	StrataClone SoloPack Competent Cells	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).
	pUC 18 DNA Control Plasmid	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	: StrataClone Vector Mix amp/kan	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 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.
	StrataClone 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.
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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures	: StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone 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).
Advice on general occupational hygiene	: StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone 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.

7.2 Conditions for safe storage, including any incompatibilities

Storage	: StrataClone Vector Mix amp/kan StrataClone 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. See Section 10 for incompatible materials before handling or use. 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
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SECTION 7: Handling and storage

StrataClone Control Insert	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. 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.
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. See Section 10 for incompatible materials before handling or use.
pUC 18 DNA Control Plasmid	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations

: StrataClone Vector Mix amp/kan	Industrial applications, Professional applications.
StrataClone Cloning Buffer	Industrial applications, Professional applications.
StrataClone Control Insert	Industrial applications, Professional applications.
StrataClone SoloPack Competent Cells	Industrial applications, Professional applications.
pUC 18 DNA Control Plasmid	Industrial applications, Professional applications.

Industrial sector specific solutions

: StrataClone Vector Mix amp/kan	Not applicable.
StrataClone Cloning Buffer	Not applicable.
StrataClone Control Insert	Not applicable.
StrataClone SoloPack Competent Cells	Not applicable.
pUC 18 DNA Control Plasmid	Not applicable.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
StrataClone Vector Mix amp/kan Glycerol	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 10 mg/m ³ 8 hours. Form: Mist
StrataClone SoloPack Competent Cells Glycerol	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 10 mg/m ³ 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

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.

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SECTION 8: Exposure controls/personal protection

- 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 Vector Mix amp/kan Liquid.
StrataClone Cloning Buffer Liquid.
StrataClone Control Insert Liquid.
StrataClone SoloPack Competent Cells Liquid.
pUC 18 DNA Control Plasmid Liquid.
- Colour** : StrataClone Vector Mix amp/kan Not available.
StrataClone Cloning Buffer Not available.
StrataClone Control Insert Not available.
StrataClone SoloPack Competent Cells Not available.
pUC 18 DNA Control Plasmid Not available.
- Odour** : StrataClone Vector Mix amp/kan Not available.
StrataClone Cloning Buffer Not available.
StrataClone Control Insert Not available.
StrataClone SoloPack Competent Cells Not available.
pUC 18 DNA Control Plasmid Not available.
- Odour threshold** : StrataClone Vector Mix amp/kan Not available.
StrataClone Cloning Buffer Not available.
StrataClone Control Insert Not available.
StrataClone SoloPack Competent Cells Not available.
pUC 18 DNA Control Plasmid Not available.
- pH** : StrataClone Vector Mix amp/kan Not available.
StrataClone Cloning Buffer Not available.
StrataClone Control Insert Not available.
StrataClone SoloPack Competent Cells Not available.

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SECTION 9: Physical and chemical properties

	Competent Cells	
	pUC 18 DNA Control	7.5
	Plasmid	
Melting point/freezing point	: StrataClone Vector Mix	Not available.
	amp/kan	
	StrataClone Cloning	Not available.
	Buffer	
	StrataClone Control	0°C
	Insert	
	StrataClone SoloPack	Not available.
	Competent Cells	
	pUC 18 DNA Control	0°C
	Plasmid	
Initial boiling point and boiling range	: StrataClone Vector Mix	Not available.
	amp/kan	
	StrataClone Cloning	Not available.
	Buffer	
	StrataClone Control	100°C
	Insert	
	StrataClone SoloPack	Not available.
	Competent Cells	
	pUC 18 DNA Control	100°C
	Plasmid	
Flash point	: StrataClone Vector Mix	Not available.
	amp/kan	
	StrataClone Cloning	Not available.
	Buffer	
	StrataClone Control	Not available.
	Insert	
	StrataClone SoloPack	Not available.
	Competent Cells	
	pUC 18 DNA Control	Not available.
	Plasmid	
Evaporation rate	: StrataClone Vector Mix	Not available.
	amp/kan	
	StrataClone Cloning	Not available.
	Buffer	
	StrataClone Control	Not available.
	Insert	
	StrataClone SoloPack	Not available.
	Competent Cells	
	pUC 18 DNA Control	Not available.
	Plasmid	
Flammability (solid, gas)	: StrataClone Vector	Not applicable.
	Mix amp/kan	
	StrataClone Cloning	Not applicable.
	Buffer	
	StrataClone Control	Not applicable.
	Insert	
	StrataClone SoloPack	Not applicable.
	Competent Cells	
	pUC 18 DNA Control	Not applicable.
	Plasmid	
Upper/lower flammability or explosive limits	: StrataClone Vector Mix	Not available.
	amp/kan	
	StrataClone Cloning	Not available.
	Buffer	
	StrataClone Control	Not available.
	Insert	
	StrataClone SoloPack	Not available.

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SECTION 9: Physical and chemical properties

	Competent Cells	
	pUC 18 DNA Control	Not available.
	Plasmid	
Vapour pressure	: StrataClone Vector Mix amp/kan	Not available.
	StrataClone Cloning Buffer	Not available.
	StrataClone Control Insert	Not available.
	StrataClone SoloPack	Not available.
	Competent Cells	
	pUC 18 DNA Control	Not available.
	Plasmid	
Vapour density	: StrataClone Vector Mix amp/kan	Not available.
	StrataClone Cloning Buffer	Not available.
	StrataClone Control Insert	Not available.
	StrataClone SoloPack	Not available.
	Competent Cells	
	pUC 18 DNA Control	Not available.
	Plasmid	
Relative density	: StrataClone Vector Mix amp/kan	Not available.
	StrataClone Cloning Buffer	Not available.
	StrataClone Control Insert	Not available.
	StrataClone SoloPack	Not available.
	Competent Cells	
	pUC 18 DNA Control	Not available.
	Plasmid	
Solubility(ies)	: StrataClone Vector Mix amp/kan	Soluble in the following materials: cold water and hot water.
	StrataClone Cloning Buffer	Soluble in the following materials: cold water and hot water.
	StrataClone Control Insert	Easily soluble in the following materials: cold water and hot water.
	StrataClone SoloPack	Soluble in the following materials: cold water and hot water.
	Competent Cells	
	pUC 18 DNA Control	Easily soluble in the following materials: cold water and hot water.
	Plasmid	
Partition coefficient: n-octanol/water	: StrataClone Vector Mix amp/kan	Not available.
	StrataClone Cloning Buffer	Not available.
	StrataClone Control Insert	Not available.
	StrataClone SoloPack	Not available.
	Competent Cells	
	pUC 18 DNA Control	Not available.
	Plasmid	
Auto-ignition temperature	: StrataClone Vector Mix amp/kan	Not available.
	StrataClone Cloning Buffer	Not available.
	StrataClone Control Insert	Not available.
	StrataClone SoloPack	Not available.

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SECTION 9: Physical and chemical properties

	Competent Cells	
	pUC 18 DNA Control	Not available.
	Plasmid	
Decomposition temperature	: StrataClone Vector Mix	Not available.
	amp/kan	
	StrataClone Cloning	Not available.
	Buffer	
	StrataClone Control	Not available.
	Insert	
	StrataClone SoloPack	Not available.
	Competent Cells	
	pUC 18 DNA Control	Not available.
	Plasmid	
Viscosity	: StrataClone Vector Mix	Not available.
	amp/kan	
	StrataClone Cloning	Not available.
	Buffer	
	StrataClone Control	Not available.
	Insert	
	StrataClone SoloPack	Not available.
	Competent Cells	
	pUC 18 DNA Control	Not available.
	Plasmid	
Explosive properties	: StrataClone Vector Mix	Not available.
	amp/kan	
	StrataClone Cloning	Not available.
	Buffer	
	StrataClone Control	Not available.
	Insert	
	StrataClone SoloPack	Not available.
	Competent Cells	
	pUC 18 DNA Control	Not available.
	Plasmid	
Oxidising properties	: StrataClone Vector Mix	Not available.
	amp/kan	
	StrataClone Cloning	Not available.
	Buffer	
	StrataClone Control	Not available.
	Insert	
	StrataClone SoloPack	Not available.
	Competent Cells	
	pUC 18 DNA Control	Not available.
	Plasmid	

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: StrataClone Vector Mix	No specific test data related to reactivity available for this product or its ingredients.
	amp/kan	
	StrataClone Cloning	No specific test data related to reactivity available for this product or its ingredients.
	Buffer	
	StrataClone Control	No specific test data related to reactivity available for this product or its ingredients.
	Insert	
	StrataClone SoloPack	No specific test data related to reactivity available for this product or its ingredients.
	Competent Cells	
	pUC 18 DNA Control	No specific test data related to reactivity available for this product or its ingredients.
	Plasmid	

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SECTION 10: Stability and reactivity

10.2 Chemical stability	:	StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	The product is stable. The product is stable. The product is stable. The product is stable. The product is stable.
10.3 Possibility of hazardous reactions	:	StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	:	StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone 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.
10.5 Incompatible materials	:	StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
10.6 Hazardous decomposition products	:	StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
StrataClone Vector Mix amp/kan Polyoxyethylene octyl phenyl ether	LD50 Oral	Rat	1800 mg/kg	-
StrataClone Cloning Buffer Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-

Acute toxicity estimates

Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
StrataClone Vector Mix amp/kan Polyoxyethylene octyl phenyl ether	Eyes - Moderate irritant	Rabbit	-	24 hours 10 microliters	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 microliters	-
StrataClone Cloning Buffer 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 Vector Mix amp/kan	Routes of entry anticipated: Oral, Dermal, Inhalation.
StrataClone Cloning Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
StrataClone 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

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SECTION 11: Toxicological information

Inhalation	: StrataClone Vector Mix amp/kan	No known significant effects or critical hazards.
	StrataClone Cloning Buffer	No known significant effects or critical hazards.
	StrataClone 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.
Ingestion	: StrataClone Vector Mix amp/kan	No known significant effects or critical hazards.
	StrataClone Cloning Buffer	No known significant effects or critical hazards.
	StrataClone 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.
Skin contact	: StrataClone Vector Mix amp/kan	No known significant effects or critical hazards.
	StrataClone Cloning Buffer	No known significant effects or critical hazards.
	StrataClone 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.
Eye contact	: StrataClone Vector Mix amp/kan	No known significant effects or critical hazards.
	StrataClone Cloning Buffer	No known significant effects or critical hazards.
	StrataClone 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.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	: StrataClone Vector Mix amp/kan	No specific data.
	StrataClone Cloning Buffer	No specific data.
	StrataClone Control Insert	No specific data.
	StrataClone SoloPack Competent Cells	No specific data.
	pUC 18 DNA Control Plasmid	No specific data.
Ingestion	: StrataClone Vector Mix amp/kan	No specific data.
	StrataClone Cloning Buffer	No specific data.
	StrataClone Control Insert	No specific data.
	StrataClone SoloPack Competent Cells	No specific data.
	pUC 18 DNA Control Plasmid	No specific data.

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SECTION 11: Toxicological information

	Plasmid	
Skin contact	: StrataClone Vector Mix amp/kan	No specific data.
	StrataClone Cloning Buffer	No specific data.
	StrataClone Control Insert	No specific data.
	StrataClone SoloPack Competent Cells	No specific data.
	pUC 18 DNA Control Plasmid	No specific data.
Eye contact	: StrataClone Vector Mix amp/kan	No specific data.
	StrataClone Cloning Buffer	No specific data.
	StrataClone 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

General	: StrataClone Vector Mix amp/kan	No known significant effects or critical hazards.
	StrataClone Cloning Buffer	No known significant effects or critical hazards.
	StrataClone 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.
Carcinogenicity	: StrataClone Vector Mix amp/kan	No known significant effects or critical hazards.
	StrataClone Cloning Buffer	No known significant effects or critical hazards.
	StrataClone 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.

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SECTION 11: Toxicological information

Mutagenicity	:	StrataClone Vector Mix amp/kan	No known significant effects or critical hazards.
		StrataClone Cloning Buffer	No known significant effects or critical hazards.
		StrataClone 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.
Teratogenicity	:	StrataClone Vector Mix amp/kan	No known significant effects or critical hazards.
		StrataClone Cloning Buffer	No known significant effects or critical hazards.
		StrataClone 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.
Developmental effects	:	StrataClone Vector Mix amp/kan	No known significant effects or critical hazards.
		StrataClone Cloning Buffer	No known significant effects or critical hazards.
		StrataClone 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.
Fertility effects	:	StrataClone Vector Mix amp/kan	No known significant effects or critical hazards.
		StrataClone Cloning Buffer	No known significant effects or critical hazards.
		StrataClone 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
StrataClone Vector Mix amp/kan 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
StrataClone Cloning Buffer Sodium chloride	Acute EC50 4.74 g/L Fresh water	Algae - Chlamydomonas reinhardtii	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute EC50 402600 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours

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SECTION 12: Ecological information

StrataClone SoloPack Competent Cells Calcium chloride (CaCl ₂), dihydrate	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
	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 Vector Mix amp/kan Polyoxyethylene octyl phenyl ether	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
StrataClone Vector Mix amp/kan Polyoxyethylene octyl phenyl ether	4.86	-	high

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : 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

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SECTION 13: Disposal considerations

- 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

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 Vector Mix amp/kan 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 Vector Mix amp/kan Not applicable.
StrataClone Cloning Buffer Not applicable.
StrataClone Control Insert Not applicable.
StrataClone SoloPack Not applicable.
Competent Cells
pUC 18 DNA Control Plasmid 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.

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SECTION 15: Regulatory information

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) : Not determined. Japan inventory (ISHL) : Not determined.
Malaysia	: Not determined.
New Zealand	: All components are listed or exempted.
Philippines	: Not determined.
Republic of Korea	: Not determined.
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.

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

StrataClone Vector Mix amp/kan H302 H315 H318 H411	Harmful if swallowed. Causes skin irritation. Causes serious eye damage. Toxic to aquatic life with long lasting effects.
StrataClone Cloning Buffer H319	Causes serious eye irritation.
StrataClone SoloPack Competent Cells H319	Causes serious eye irritation.

Date of issue/Date of revision : 31/12/2017

26/27

StrataClone PCR Cloning Kit, Part Number 240205

SECTION 16: Other information

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

StrataClone Vector Mix amp/kan Acute Tox. 4, H302 Aquatic Chronic 2, H411 Eye Dam. 1, H318 Skin Irrit. 2, H315	ACUTE TOXICITY (oral) - Category 4 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SKIN CORROSION/IRRITATION - Category 2
StrataClone 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 : 31/12/2017

Date of previous issue : No previous validation.

Version : 1

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