

SAFETY DATA SHEET



StrataClone PCR Cloning Kit - 5 reactions, Part Number 5500-0122

Section 1. Identification

Product identifier : StrataClone PCR Cloning Kit - 5 reactions, Part Number 5500-0122
Part No. (Chemical Kit) : 5190-7280
Part No. : StrataClone Vector Mix amp/kan 5190-7280
 StrataClone Cloning Buffer 240205-54
 StrataClone Control Insert 240205-53
 StrataClone SoloPack competent cells 200185-41
 pUC 18 DNA Control Plasmid 200231-42

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

Analytical reagent.

StrataClone Vector Mix amp/kan 0.001 mL (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 0.05 mL)
 pUC 18 DNA Control Plasmid 0.01 mL (0.1 ng/µl)

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
 679 Springvale Road
 Mulgrave
 Victoria 3170, Australia
 1800 802 402

Emergency telephone number (with hours of operation) : CHEMTREC®: (61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture

Not classified.

StrataClone Vector Mix amp/kan Not applicable.
 StrataClone Cloning Buffer Not applicable.
 StrataClone Control Insert Not applicable.
 StrataClone SoloPack competent cells Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 1.1%
 pUC 18 DNA Control Plasmid Not applicable.

GHS 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

Section 2. Hazard(s) identification

Prevention	: <input checked="" type="checkbox"/> StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack competent cells pUC 18 DNA Control Plasmid	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Response	: <input checked="" type="checkbox"/> StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack competent cells pUC 18 DNA Control Plasmid	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Storage	: <input checked="" type="checkbox"/> StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack competent cells pUC 18 DNA Control Plasmid	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Disposal	: <input checked="" type="checkbox"/> StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack competent cells pUC 18 DNA Control Plasmid	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Supplemental label elements	: <input checked="" type="checkbox"/> StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack competent cells pUC 18 DNA Control Plasmid	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Other hazards which do not result in classification	: <input checked="" type="checkbox"/> 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. None known.

Section 3. Composition and ingredient information

Substance/mixture	: <input checked="" type="checkbox"/> StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack competent cells pUC 18 DNA Control Plasmid	Mixture Mixture Mixture Mixture Mixture Mixture
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CAS number/other identifiers

Section 3. Composition and ingredient information

Ingredient name	% (w/w)	CAS number
StrataClone Vector Mix amp/kan Glycerol	≥30 - ≤60	56-81-5
StrataClone Cloning Buffer Polyethylene glycol	≥10 - ≤30	25322-68-3
StrataClone SoloPack competent cells Glycerol	≥10 - ≤30	56-81-5

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

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary 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.

Section 4. First aid measures

Ingestion	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.
	: 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 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

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.
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.

Section 4. First aid measures

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.
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.

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

Notes to physician	: StrataClone Vector Mix amp/kan	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	StrataClone Cloning Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	StrataClone 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.

Section 4. First aid measures

Specific treatments	:	StrataClone Vector Mix amp/kan	No specific treatment.
		StrataClone Cloning Buffer	No specific treatment.
		StrataClone Control Insert	No specific treatment.
		StrataClone SoloPack competent cells	No specific treatment.
		pUC 18 DNA Control Plasmid	No specific treatment.
Protection of first-aiders	:	StrataClone Vector Mix amp/kan	No action shall be taken involving any personal risk or without suitable training.
		StrataClone Cloning Buffer	No action shall be taken involving any personal risk or without suitable training.
		StrataClone Control Insert	No action shall be taken involving any personal risk or without suitable training.
		StrataClone SoloPack competent cells	No action shall be taken involving any personal risk or without suitable training.
		pUC 18 DNA Control Plasmid	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media	:	StrataClone Vector Mix amp/kan	Use an extinguishing agent suitable for the surrounding fire.
		StrataClone Cloning Buffer	Use an extinguishing agent suitable for the surrounding fire.
		StrataClone 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.
Unsuitable extinguishing media	:	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.
Specific hazards arising from the chemical	:	StrataClone Vector Mix amp/kan	In a fire or if heated, a pressure increase will occur and the container may burst.
		StrataClone Cloning Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
		StrataClone 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.
Hazardous thermal decomposition 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

Section 5. Firefighting measures

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.

Special protective actions for fire-fighters

: <input checked="" type="checkbox"/> 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

: <input checked="" type="checkbox"/> 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.
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.
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.
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.
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.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: <input checked="" type="checkbox"/> 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


Section 6. Accidental release measures

	StrataClone Control Insert	through spilt material. Put on appropriate personal protective equipment. 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".
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.

Section 6. Accidental release measures



Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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.

Section 7. Handling and storage

Precautions for safe handling

Protective measures	:  StrataClone Vector Mix amp/kan	Put on appropriate personal protective equipment (see Section 8).
	StrataClone Cloning Buffer	Put on appropriate personal protective equipment (see Section 8).
	StrataClone Control Insert	Put on appropriate personal protective equipment (see Section 8).
	StrataClone SoloPack competent cells	Put on appropriate personal protective equipment (see Section 8).
	pUC 18 DNA Control Plasmid	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	:  StrataClone Vector Mix amp/kan	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.
	StrataClone Cloning Buffer	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

Section 7. Handling and storage

StrataClone Control Insert	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.
StrataClone SoloPack competent cells	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.
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.

Conditions for safe storage, including any incompatibilities

StrataClone Vector Mix amp/kan	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 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 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

Section 7. Handling and storage

pUC 18 DNA Control Plasmid environmental contamination. 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.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
StrataClone Vector Mix amp/kan Glycerol	Safe Work Australia (Australia, 1/2014). TWA: 10 mg/m ³ 8 hours.
StrataClone Cloning Buffer Polyethylene glycol	TRGS900 AGW (Germany, 11/2015). PEAK: 8000 mg/m ³ 15 minutes. Form: Inhalable fraction TWA: 1000 mg/m ³ 8 hours. Form: Inhalable fraction
StrataClone SoloPack competent cells Glycerol	Safe Work Australia (Australia, 1/2014). TWA: 10 mg/m ³ 8 hours.

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

- Hygiene measures** : Handle as biohazard material (Biosafety level 1). Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 8. Exposure controls and personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

- Physical state** : StrataClone Vector Mix amp/ kan Liquid.
StrataClone Cloning Buffer Liquid.
StrataClone Control Insert Liquid.
StrataClone SoloPack Liquid.
competent cells
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 Not available.
competent cells
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 Not available.
competent cells
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 Not available.
competent cells
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 Not available.
competent cells
pUC 18 DNA Control Plasmid 7.5
- Melting point** : StrataClone Vector Mix amp/ kan Not available.
StrataClone Cloning Buffer Not available.
StrataClone Control Insert 0°C (32°F)
StrataClone SoloPack Not available.
competent cells
pUC 18 DNA Control Plasmid 0°C (32°F)
- Boiling point** : StrataClone Vector Mix amp/ kan Not available.
StrataClone Cloning Buffer Not available.
StrataClone Control Insert 100°C (212°F)
StrataClone SoloPack Not available.
competent cells
pUC 18 DNA Control Plasmid 100°C (212°F)

Section 9. Physical and chemical properties

Flash point	: StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack competent cells pUC 18 DNA Control Plasmid	Not available. Not available. Not available. Not available. Not available.
Evaporation rate	: StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack competent cells pUC 18 DNA Control Plasmid	Not available. Not available. Not available. Not available. Not available.
Flammability (solid, gas)	: StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack competent cells pUC 18 DNA Control Plasmid	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Lower and upper explosive (flammable) limits	: StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack competent cells pUC 18 DNA Control Plasmid	Not available. Not available. Not available. Not available. Not available.
Vapour pressure	: StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack competent cells pUC 18 DNA Control Plasmid	Not available. Not available. Not available. Not available. Not available.
Vapour density	: StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack competent cells pUC 18 DNA Control Plasmid	Not available. Not available. Not available. Not available. Not available.
Relative density	: StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack competent cells pUC 18 DNA Control Plasmid	Not available. Not available. Not available. Not available. Not available.
Solubility	: StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone Control Insert StrataClone SoloPack competent cells pUC 18 DNA Control Plasmid	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. Soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water.

Section 9. Physical and chemical properties

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 Plasmid	Not available.
Auto-ignition temperature	: 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 Plasmid	Not available.
Decomposition temperature	: 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 Plasmid	Not available.
Viscosity	: 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 Plasmid	Not available.

Section 10. Stability and reactivity

Reactivity	: StrataClone Vector Mix amp/kan	No specific test data related to reactivity available for this product or its ingredients.
	StrataClone Cloning Buffer	No specific test data related to reactivity available for this product or its ingredients.
	StrataClone Control Insert	No specific test data related to reactivity available for this product or its ingredients.
	StrataClone SoloPack	No specific test data related to reactivity available for this product or its ingredients.
	competent cells	No specific test data related to reactivity available for this product or its ingredients.
	pUC 18 DNA Control Plasmid	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: StrataClone Vector Mix amp/kan	The product is stable.
	StrataClone Cloning Buffer	The product is stable.
	StrataClone Control Insert	The product is stable.
	StrataClone SoloPack	The product is stable.
	competent cells	
	pUC 18 DNA Control Plasmid	The product is stable.
Possibility of hazardous reactions	: StrataClone Vector Mix amp/kan	Under normal conditions of storage and use, hazardous reactions will not occur.
	StrataClone Cloning Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
	StrataClone Control Insert	Under normal conditions of storage and use, hazardous reactions will not occur.
	StrataClone SoloPack	Under normal conditions of storage and use, hazardous reactions will not occur.
	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.

Section 10. Stability and reactivity

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.
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.
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.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
StrataClone Vector Mix amp/kan Glycerol	LD50 Oral	Rat	12600 mg/kg	-
StrataClone SoloPack competent cells Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
StrataClone Vector Mix amp/kan Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
StrataClone Cloning Buffer Polyethylene glycol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500	-

Section 11. Toxicological information

StrataClone SoloPack competent cells Glycerol	Skin - Mild irritant	Rabbit	-	milligrams 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitisation

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

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

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.
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.

Section 11. Toxicological information

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.
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.

Symptoms related to the physical, chemical and toxicological characteristics

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.

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

Not available.

Section 11. Toxicological information

General	:  StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone 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.
Carcinogenicity	:  StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone 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.
Mutagenicity	:  StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone 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.
Teratogenicity	:  StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone 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.
Developmental effects	:  StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone 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.
Fertility effects	:  StrataClone Vector Mix amp/kan StrataClone Cloning Buffer StrataClone 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.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
StrataClone Vector Mix amp/kan Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
StrataClone Cloning Buffer Polyethylene glycol	Acute LC50 >1000000 µg/l Fresh water	Fish - Salmo salar - Parr	96 hours
StrataClone SoloPack competent cells Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
StrataClone Vector Mix amp/kan Glycerol	-1.76	-	low
StrataClone Cloning Buffer Polyethylene glycol	-	3.2	low
StrataClone SoloPack competent cells Glycerol	-1.76	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

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

Section 13. Disposal considerations

Disposal methods : 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

Regulatory information

ADG / IMDG / IATA : Not regulated as Dangerous Goods according to the ADG Code .

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.

Section 14. Transport information

Transport in bulk according to Annex II of Marpol and the IBC Code : Not available.

Section 15. Regulatory information

Standard Uniform Schedule of Medicine and Poisons

5

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

Australia inventory (AICS) : All components are listed or exempted.

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 Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

Canada	: All components are listed or exempted.
China	: <input checked="" type="checkbox"/> All components are listed or exempted.
Europe	: <input checked="" type="checkbox"/> All components are listed or exempted.
Japan	: <input checked="" type="checkbox"/> Japan inventory (ENCS): Not determined. <input checked="" type="checkbox"/> Japan inventory (ISHL): Not determined.
Malaysia	: <input checked="" type="checkbox"/> Not determined.
New Zealand	: <input checked="" type="checkbox"/> All components are listed or exempted.
Philippines	: <input checked="" type="checkbox"/> Not determined.
Republic of Korea	: <input checked="" type="checkbox"/> Not determined.
Taiwan	: <input checked="" type="checkbox"/> All components are listed or exempted.
Turkey	: <input checked="" type="checkbox"/> Not determined.
United States	: <input checked="" type="checkbox"/> All components are listed or exempted.

Section 16. Any other relevant information

History

Date of issue/Date of revision : 29/07/2016

Date of previous issue : 31/07/2013.

Version : 2

Key to abbreviations

: ADG = Australian Dangerous Goods
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods

Section 16. Any other relevant information

LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
NOHSC = National Occupational Health and Safety Commission
SUSMP = Standard Uniform Schedule of Medicine and Poisons
UN = United Nations

Procedure used to derive the classification

Classification	Justification
Not classified.	

References : Not available.

 Indicates information that has changed from previously issued version.

Notice to reader

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