

SAFETY DATA SHEET

StrataClone Mammalian Expression Untagged Vector System, Part Number 240228

Section 1. Identification

Product identifier	: StrataClone Mammalian Expression Untagged Vector System, Part Number 240228	
Part no. (chemical kit)	: 240228	
Part no.	: StrataClone pCMV-SC Vector Mix	240228-51
	: StrataClone Blunt Cloning Buffer	240207-54
	: StrataClone CAM Blunt Control Insert	240224-59
	: StrataClone SoloPack Competent Cells	200185-41
	: pUC 18 DNA Control Plasmid	200231-42
Material uses	: Analytical reagent.	
	: StrataClone pCMV-SC Vector Mix	0.021 ml (Use 1 µl)
	: StrataClone Blunt Cloning Buffer	0.063 ml
	: StrataClone CAM Blunt Control Insert	1 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)
Supplier/Manufacturer	: Agilent Technologies, Inc. 5301 Stevens Creek Blvd Santa Clara, CA 95051, USA 800-227-9770	
Emergency telephone number (with hours of operation)	: CHEMTREC®: 1-800-424-9300	

Section 2. Hazard identification

Classification of the substance or mixture

StrataClone pCMV-SC

Vector Mix

H320 EYE IRRITATION - Category 2B

StrataClone Blunt Cloning Buffer

H319 EYE IRRITATION - Category 2A
H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

StrataClone SoloPack Competent Cells

H319 EYE IRRITATION - Category 2A

GHS label elements

Hazard pictograms

: StrataClone Blunt Cloning Buffer



StrataClone SoloPack Competent Cells



Section 2. Hazard identification

Signal word	: <input checked="" type="checkbox"/> StrataClone pCMV-SC Vector Mix	Warning
	StrataClone Blunt Cloning Buffer	Warning
	StrataClone CAM Blunt Control Insert	No signal word.
	StrataClone SoloPack Competent Cells	Warning
	pUC 18 DNA Control Plasmid	No signal word.
Hazard statements	: <input checked="" type="checkbox"/> StrataClone pCMV-SC Vector Mix	H320 - Causes eye irritation.
	StrataClone Blunt Cloning Buffer	H319 - Causes serious eye irritation.
	StrataClone CAM Blunt Control Insert	H335 - May cause respiratory irritation.
	StrataClone SoloPack Competent Cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	H319 - Causes serious eye irritation.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
<u>Precautionary statements</u>		
Prevention	: <input checked="" type="checkbox"/> StrataClone pCMV-SC Vector Mix	P264 - Wash hands thoroughly after handling.
	StrataClone Blunt Cloning Buffer	P280 - Wear eye or face protection.
	StrataClone CAM Blunt Control Insert	P271 - Use only outdoors or in a well-ventilated area. P261 - Avoid breathing vapor.
	StrataClone SoloPack Competent Cells	P264 - Wash hands thoroughly after handling. Not applicable.
	pUC 18 DNA Control Plasmid	P280 - Wear eye or face protection.
	pUC 18 DNA Control Plasmid	P264 - Wash hands thoroughly after handling. Not applicable.
Response	: <input checked="" type="checkbox"/> StrataClone pCMV-SC Vector Mix	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
	StrataClone Blunt Cloning Buffer	P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
	StrataClone CAM Blunt Control Insert	Not applicable.
	StrataClone SoloPack Competent Cells	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
	pUC 18 DNA Control Plasmid	Not applicable.

Section 2. Hazard identification

Storage	: StrataClone pCMV-SC Vector Mix	Not applicable.
	StrataClone Blunt Cloning Buffer	P405 - Store locked up.
	StrataClone CAM Blunt Control Insert	Not applicable.
	StrataClone SoloPack Competent Cells	Not applicable.
	pUC 18 DNA Control Plasmid	Not applicable.
Disposal	: StrataClone pCMV-SC Vector Mix	Not applicable.
	StrataClone Blunt Cloning Buffer	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	StrataClone CAM Blunt Control Insert	Not applicable.
	StrataClone SoloPack Competent Cells	Not applicable.
	pUC 18 DNA Control Plasmid	Not applicable.
Supplemental label elements	: StrataClone pCMV-SC Vector Mix	None known.
	StrataClone Blunt Cloning Buffer	None known.
	StrataClone CAM Blunt Control Insert	None known.
	StrataClone SoloPack Competent Cells	None known.
	pUC 18 DNA Control Plasmid	None known.
	StrataClone pCMV-SC Vector Mix	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%
	StrataClone Blunt Cloning Buffer	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 30 - 60%
	StrataClone SoloPack Competent Cells	Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 1 - 10%
		Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%
		Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 1 - 10%
Other hazards which do not result in classification	: StrataClone pCMV-SC Vector Mix	None known.
	StrataClone Blunt Cloning Buffer	None known.
	StrataClone CAM Blunt Control Insert	None known.
	StrataClone SoloPack Competent Cells	None known.
	pUC 18 DNA Control Plasmid	None known.

Section 3. Composition/information on ingredients

Substance/mixture	: StrataClone pCMV-SC Vector Mix	Mixture	
	StrataClone Blunt Cloning Buffer	Mixture	
	StrataClone CAM Blunt Control Insert	Mixture	
	StrataClone SoloPack Competent Cells	Mixture	

Section 3. Composition/information on ingredients

pUC 18 DNA Control Plasmid Mixture

Ingredient name	% (w/w)	CAS number
StrataClone pCMV-SC Vector Mix Glycerol	≥25 - ≤50	56-81-5
StrataClone Blunt Cloning Buffer Polyethylene glycol Sodium chloride	≥25 - ≤50 ≤10	25322-68-3 7647-14-5
StrataClone SoloPack Competent Cells Glycerol Calcium chloride (CaCl ₂), dihydrate	≥10 - ≤25 ≤3	56-81-5 10035-04-8

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 pCMV-SC Vector Mix	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
	StrataClone Blunt Cloning Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
	StrataClone CAM Blunt Control Insert	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	StrataClone SoloPack Competent Cells	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
	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 pCMV-SC Vector Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	StrataClone Blunt Cloning Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing

Section 4. First-aid measures

		<p>apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
	StrataClone CAM Blunt Control Insert	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	StrataClone SoloPack Competent Cells	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	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 pCMV-SC Vector Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	StrataClone Blunt Cloning Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	StrataClone CAM Blunt Control Insert	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	StrataClone SoloPack Competent Cells	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	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 pCMV-SC Vector Mix	Wash out mouth with water. Remove dentures if any. 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. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open

Section 4. First-aid measures

StrataClone Blunt Cloning Buffer	<p>airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p> <p>Wash out mouth with water. Remove dentures if any. 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. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
StrataClone CAM Blunt Control Insert	<p>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>
StrataClone SoloPack Competent Cells	<p>Wash out mouth with water. Remove dentures if any. 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. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
pUC 18 DNA Control Plasmid	<p>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>

Most important symptoms/effects, acute and delayed

Potential acute health effects

Section 4. First-aid measures

Eye contact	: StrataClone pCMV-SC Vector Mix	Causes eye irritation.
	StrataClone Blunt Cloning Buffer	Causes serious eye irritation.
	StrataClone CAM Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone SoloPack Competent Cells	Causes serious eye irritation.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
Inhalation	: StrataClone pCMV-SC Vector Mix	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	May cause respiratory irritation.
	StrataClone CAM Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone SoloPack Competent Cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
Skin contact	: StrataClone pCMV-SC Vector Mix	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	No known significant effects or critical hazards.
	StrataClone CAM Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone SoloPack Competent Cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
Ingestion	: StrataClone pCMV-SC Vector Mix	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	No known significant effects or critical hazards.
	StrataClone CAM Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone SoloPack Competent Cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: StrataClone pCMV-SC Vector Mix	Adverse symptoms may include the following: irritation watering redness
	StrataClone Blunt Cloning Buffer	Adverse symptoms may include the following: pain or irritation watering redness
	StrataClone CAM Blunt Control Insert	No specific data.
	StrataClone SoloPack Competent Cells	Adverse symptoms may include the following: pain or irritation watering redness
	pUC 18 DNA Control Plasmid	No specific data.

Section 4. First-aid measures

Inhalation	:	StrataClone pCMV-SC Vector Mix	No specific data.
		StrataClone Blunt Cloning Buffer	Adverse symptoms may include the following: respiratory tract irritation coughing
	:	StrataClone CAM Blunt Control Insert	No specific data.
		StrataClone SoloPack Competent Cells	No specific data.
		pUC 18 DNA Control Plasmid	No specific data.
Skin contact	:	StrataClone pCMV-SC Vector Mix	No specific data.
		StrataClone Blunt Cloning Buffer	No specific data.
	:	StrataClone CAM Blunt Control Insert	No specific data.
		StrataClone SoloPack Competent Cells	No specific data.
		pUC 18 DNA Control Plasmid	No specific data.
Ingestion	:	StrataClone pCMV-SC Vector Mix	No specific data.
		StrataClone Blunt Cloning Buffer	No specific data.
	:	StrataClone CAM Blunt Control Insert	No specific data.
		StrataClone SoloPack Competent Cells	No specific data.
		pUC 18 DNA Control Plasmid	No specific data.

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

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

Section 4. First-aid measures

Protection of first-aiders	: StrataClone pCMV-SC Vector Mix	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	StrataClone Blunt Cloning Buffer	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	StrataClone CAM Blunt 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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	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. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	: StrataClone pCMV-SC Vector Mix	Use an extinguishing agent suitable for the surrounding fire.
	StrataClone Blunt Cloning Buffer	Use an extinguishing agent suitable for the surrounding fire.
	StrataClone CAM Blunt Control Insert	Use an extinguishing agent suitable for the surrounding fire.
	StrataClone SoloPack Competent Cells	Use an extinguishing agent suitable for the surrounding fire.
	pUC 18 DNA Control Plasmid	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: StrataClone pCMV-SC Vector Mix	None known.
	StrataClone Blunt Cloning Buffer	None known.
	StrataClone CAM Blunt Control Insert	None known.
	StrataClone SoloPack Competent Cells	None known.
	pUC 18 DNA Control Plasmid	None known.

Specific hazards arising from the chemical

: StrataClone pCMV-SC Vector Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
StrataClone Blunt Cloning Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
StrataClone CAM Blunt Control Insert	In a fire or if heated, a pressure increase will occur and the container may burst.
StrataClone SoloPack Competent Cells	In a fire or if heated, a pressure increase will occur and the container may burst.
pUC 18 DNA Control Plasmid	In a fire or if heated, a pressure increase will occur and the container may burst.

Section 5. Fire-fighting measures

Hazardous thermal decomposition products	: StrataClone pCMV-SC Vector Mix	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	StrataClone Blunt Cloning Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
	StrataClone CAM Blunt Control Insert	No specific data.
	StrataClone SoloPack Competent Cells	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
	pUC 18 DNA Control Plasmid	No specific data.
Special protective actions for fire-fighters	: StrataClone pCMV-SC Vector Mix	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	StrataClone Blunt Cloning Buffer	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	StrataClone CAM Blunt Control Insert	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	StrataClone SoloPack Competent Cells	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	pUC 18 DNA Control Plasmid	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	: StrataClone pCMV-SC Vector Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	StrataClone Blunt Cloning Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	StrataClone CAM Blunt Control Insert	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	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

Section 5. Fire-fighting measures

(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

: StrataClone pCMV-SC
Vector Mix

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

StrataClone Blunt Cloning
Buffer

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

StrataClone CAM Blunt
Control Insert

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

StrataClone SoloPack
Competent Cells

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

pUC 18 DNA Control Plasmid

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders

: StrataClone pCMV-SC
Vector Mix

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

StrataClone Blunt Cloning
Buffer

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

StrataClone CAM Blunt
Control Insert

If specialized 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 specialized 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 specialized clothing is required to deal with the

Section 6. Accidental release measures

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 pCMV-SC Vector Mix	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	StrataClone Blunt Cloning Buffer	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	StrataClone CAM Blunt Control Insert	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	StrataClone SoloPack Competent Cells	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	pUC 18 DNA Control Plasmid	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Methods for cleaning up	: StrataClone pCMV-SC Vector Mix	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	StrataClone Blunt Cloning Buffer	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	StrataClone CAM Blunt Control Insert	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	StrataClone SoloPack Competent Cells	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	pUC 18 DNA Control Plasmid	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an

Section 6. Accidental release measures

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 pCMV-SC Vector Mix	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
StrataClone Blunt Cloning Buffer	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
StrataClone CAM Blunt Control Insert	Put on appropriate personal protective equipment (see Section 8).
StrataClone SoloPack Competent Cells	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
pUC 18 DNA Control Plasmid	Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene

: StrataClone pCMV-SC Vector Mix	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 Blunt 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 additional information on hygiene measures.
StrataClone CAM Blunt Control Insert	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	Potentially biohazardous material. Eating, drinking

Section 7. Handling and storage

	Competent Cells	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.
<p>Conditions for safe storage, including any incompatibilities</p>	<p>StrataClone pCMV-SC Vector Mix</p>	<p>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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
	StrataClone Blunt Cloning Buffer	<p>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. Store locked up. 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
	StrataClone CAM Blunt Control Insert	<p>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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
	StrataClone SoloPack Competent Cells	<p>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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>

Section 7. Handling and storage

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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

[Control parameters](#)

[Occupational exposure limits](#)

Ingredient name	Exposure limits
StrataClone pCMV-SC Vector Mix Glycerol	CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 10 mg/m ³ 8 hours. Form: Mist CA British Columbia Provincial (Canada, 6/2017). TWA: 10 mg/m ³ 8 hours. Form: Mist TWA: 3 mg/m ³ 8 hours. Form: respirable mist CA Quebec Provincial (Canada, 1/2014). TWAEV: 10 mg/m ³ 8 hours. Form: mist CA Saskatchewan Provincial (Canada, 7/2013). STEL: 20 mg/m ³ 15 minutes. Form: mist TWA: 10 mg/m ³ 8 hours. Form: mist CA Ontario Provincial (Canada, 1/2018). TWA: 10 mg/m ³ 8 hours. Form: mist
StrataClone Blunt Cloning Buffer Polyethylene glycol	AIHA WEEL (United States, 5/2018). TWA: 10 mg/m ³ 8 hours.
StrataClone SoloPack Competent Cells Glycerol	CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 10 mg/m ³ 8 hours. Form: Mist CA British Columbia Provincial (Canada, 6/2017). TWA: 10 mg/m ³ 8 hours. Form: Mist TWA: 3 mg/m ³ 8 hours. Form: respirable mist CA Quebec Provincial (Canada, 1/2014). TWAEV: 10 mg/m ³ 8 hours. Form: mist CA Saskatchewan Provincial (Canada, 7/2013). STEL: 20 mg/m ³ 15 minutes. Form: mist TWA: 10 mg/m ³ 8 hours. Form: mist CA Ontario Provincial (Canada, 1/2018). TWA: 10 mg/m ³ 8 hours. Form: mist

Section 8. Exposure controls/personal protection

- 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: chemical splash goggles.
- 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

- Physical state** :
- | | |
|--------------------------------------|---------|
| StrataClone pCMV-SC Vector Mix | Liquid. |
| StrataClone Blunt Cloning Buffer | Liquid. |
| StrataClone CAM Blunt Control Insert | Liquid. |
| StrataClone SoloPack Competent Cells | Liquid. |
| pUC 18 DNA Control Plasmid | Liquid. |

Section 9. Physical and chemical properties

Color	: StrataClone pCMV-SC	Not available.
	Vector Mix	
	StrataClone Blunt Cloning Buffer	Not available.
	StrataClone CAM Blunt Control Insert	Not available.
	StrataClone SoloPack	Not available.
	Competent Cells	
	pUC 18 DNA Control Plasmid	Not available.
Odor	: StrataClone pCMV-SC	Not available.
	Vector Mix	
	StrataClone Blunt Cloning Buffer	Not available.
	StrataClone CAM Blunt Control Insert	Not available.
	StrataClone SoloPack	Not available.
	Competent Cells	
	pUC 18 DNA Control Plasmid	Not available.
Odor threshold	: StrataClone pCMV-SC	Not available.
	Vector Mix	
	StrataClone Blunt Cloning Buffer	Not available.
	StrataClone CAM Blunt Control Insert	Not available.
	StrataClone SoloPack	Not available.
	Competent Cells	
	pUC 18 DNA Control Plasmid	Not available.
pH	: StrataClone pCMV-SC	Not available.
	Vector Mix	
	StrataClone Blunt Cloning Buffer	Not available.
	StrataClone CAM Blunt Control Insert	7.5
	StrataClone SoloPack	Not available.
	Competent Cells	
	pUC 18 DNA Control Plasmid	7.5
Melting point	: StrataClone pCMV-SC	Not available.
	Vector Mix	
	StrataClone Blunt Cloning Buffer	Not available.
	StrataClone CAM Blunt Control Insert	0°C (32°F)
	StrataClone SoloPack	Not available.
	Competent Cells	
	pUC 18 DNA Control Plasmid	0°C (32°F)
Boiling point	: StrataClone pCMV-SC	Not available.
	Vector Mix	
	StrataClone Blunt Cloning Buffer	Not available.
	StrataClone CAM Blunt 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 pCMV-SC	Not available.
	Vector Mix	
	StrataClone Blunt Cloning	Not available.
	Buffer	
	StrataClone CAM Blunt	Not available.
	Control Insert	
	StrataClone SoloPack	Not available.
Evaporation rate	Competent Cells	
	pUC 18 DNA Control Plasmid	Not available.
	: StrataClone pCMV-SC	Not available.
	Vector Mix	
	StrataClone Blunt Cloning	Not available.
	Buffer	
	StrataClone CAM Blunt	Not available.
Flammability (solid, gas)	Control Insert	
	StrataClone SoloPack	Not available.
	Competent Cells	
	pUC 18 DNA Control Plasmid	Not available.
	: StrataClone pCMV-SC	Not applicable.
	Vector Mix	
	StrataClone Blunt Cloning	Not applicable.
Lower and upper explosive (flammable) limits	Buffer	
	StrataClone CAM Blunt	Not applicable.
	Control Insert	
	StrataClone SoloPack	Not applicable.
	Competent Cells	
	pUC 18 DNA Control Plasmid	Not applicable.
	: StrataClone pCMV-SC	Not available.
Vapor pressure	Vector Mix	
	StrataClone Blunt Cloning	Not available.
	Buffer	
	StrataClone CAM Blunt	Not available.
	Control Insert	
	StrataClone SoloPack	Not available.
	Competent Cells	
Vapor density	pUC 18 DNA Control Plasmid	Not available.
	: StrataClone pCMV-SC	Not available.
	Vector Mix	
	StrataClone Blunt Cloning	Not available.
	Buffer	
	StrataClone CAM Blunt	Not available.
	Control Insert	
StrataClone SoloPack	Not available.	
Competent Cells		
pUC 18 DNA Control Plasmid	Not available.	

Section 9. Physical and chemical properties

Relative density	:	StrataClone pCMV-SC Vector Mix	Not available.
		StrataClone Blunt Cloning Buffer	Not available.
		StrataClone CAM Blunt Control Insert	Not available.
		StrataClone SoloPack Competent Cells	Not available.
		pUC 18 DNA Control Plasmid	Not available.
Solubility	:	StrataClone pCMV-SC Vector Mix	Soluble in the following materials: cold water and hot water.
		StrataClone Blunt Cloning Buffer	Soluble in the following materials: cold water and hot water.
		StrataClone CAM Blunt Control Insert	Easily soluble in the following materials: cold water and hot water.
		StrataClone SoloPack Competent Cells	Soluble in the following materials: cold water and hot water.
		pUC 18 DNA Control Plasmid	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	:	StrataClone pCMV-SC Vector Mix	Not available.
		StrataClone Blunt Cloning Buffer	Not available.
		StrataClone CAM Blunt Control Insert	Not available.
		StrataClone SoloPack Competent Cells	Not available.
		pUC 18 DNA Control Plasmid	Not available.
Auto-ignition temperature	:	StrataClone pCMV-SC Vector Mix	Not available.
		StrataClone Blunt Cloning Buffer	Not available.
		StrataClone CAM Blunt Control Insert	Not available.
		StrataClone SoloPack Competent Cells	Not available.
		pUC 18 DNA Control Plasmid	Not available.
Decomposition temperature	:	StrataClone pCMV-SC Vector Mix	Not available.
		StrataClone Blunt Cloning Buffer	Not available.
		StrataClone CAM Blunt Control Insert	Not available.
		StrataClone SoloPack Competent Cells	Not available.
		pUC 18 DNA Control Plasmid	Not available.
Viscosity	:	StrataClone pCMV-SC Vector Mix	Not available.
		StrataClone Blunt Cloning Buffer	Not available.
		StrataClone CAM Blunt Control Insert	Not available.
		StrataClone SoloPack Competent Cells	Not available.
		pUC 18 DNA Control Plasmid	Not available.

Section 10. Stability and reactivity

Reactivity	: StrataClone pCMV-SC Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: StrataClone pCMV-SC Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt 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.
Possibility of hazardous reactions	: StrataClone pCMV-SC Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt 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.
Conditions to avoid	: StrataClone pCMV-SC Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	No specific data. No specific data. No specific data. No specific data. No specific data.
Incompatible materials	: StrataClone pCMV-SC Vector Mix StrataClone Blunt Cloning Buffer StrataClone CAM Blunt Control Insert StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials.

Section 10. Stability and reactivity

Hazardous decomposition products	: StrataClone pCMV-SC Vector Mix	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	StrataClone Blunt Cloning Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	StrataClone CAM Blunt Control Insert	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	StrataClone SoloPack Competent Cells	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pUC 18 DNA Control Plasmid	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
StrataClone pCMV-SC Vector Mix Glycerol	LD50 Oral	Rat	12600 mg/kg	-
StrataClone Blunt Cloning Buffer Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-
StrataClone SoloPack Competent Cells Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
StrataClone pCMV-SC Vector Mix Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
StrataClone Blunt 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 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Section 11. Toxicological information

StrataClone SoloPack Competent Cells Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
StrataClone Blunt Cloning Buffer Polyethylene glycol	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure :

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

Potential acute health effects

Eye contact :

StrataClone pCMV-SC Vector Mix	Causes eye irritation.
StrataClone Blunt Cloning Buffer	Causes serious eye irritation.
StrataClone CAM Blunt Control Insert	No known significant effects or critical hazards.
StrataClone SoloPack Competent Cells	Causes serious eye irritation.
pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.

Section 11. Toxicological information

Inhalation	: StrataClone pCMV-SC Vector Mix	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	May cause respiratory irritation.
	StrataClone CAM Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone SoloPack Competent Cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
Skin contact	: StrataClone pCMV-SC Vector Mix	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	No known significant effects or critical hazards.
	StrataClone CAM Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone SoloPack Competent Cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
Ingestion	: StrataClone pCMV-SC Vector Mix	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	No known significant effects or critical hazards.
	StrataClone CAM Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone SoloPack Competent Cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: StrataClone pCMV-SC Vector Mix	Adverse symptoms may include the following: irritation watering redness
	StrataClone Blunt Cloning Buffer	Adverse symptoms may include the following: pain or irritation watering redness
	StrataClone CAM Blunt Control Insert	No specific data.
	StrataClone SoloPack Competent Cells	Adverse symptoms may include the following: pain or irritation watering redness
	pUC 18 DNA Control Plasmid	No specific data.
Inhalation	: StrataClone pCMV-SC Vector Mix	No specific data.
	StrataClone Blunt Cloning Buffer	Adverse symptoms may include the following: respiratory tract irritation coughing
	StrataClone CAM Blunt Control Insert	No specific data.
	StrataClone SoloPack Competent Cells	No specific data.
	pUC 18 DNA Control Plasmid	No specific data.

Section 11. Toxicological information

Skin contact	: StrataClone pCMV-SC Vector Mix	No specific data.
	StrataClone Blunt Cloning Buffer	No specific data.
	StrataClone CAM Blunt Control Insert	No specific data.
	StrataClone SoloPack Competent Cells	No specific data.
	pUC 18 DNA Control Plasmid	No specific data.
Ingestion	: StrataClone pCMV-SC Vector Mix	No specific data.
	StrataClone Blunt Cloning Buffer	No specific data.
	StrataClone CAM Blunt Control Insert	No specific data.
	StrataClone SoloPack Competent Cells	No specific data.
	pUC 18 DNA Control Plasmid	No specific data.

Delayed and immediate effects and also 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 pCMV-SC Vector Mix No known significant effects or critical hazards.
 StrataClone Blunt Cloning Buffer No known significant effects or critical hazards.
 StrataClone CAM Blunt Control Insert No known significant effects or critical hazards.
 StrataClone SoloPack Competent Cells No known significant effects or critical hazards.
 pUC 18 DNA Control Plasmid No known significant effects or critical hazards.

Carcinogenicity : StrataClone pCMV-SC Vector Mix No known significant effects or critical hazards.
 StrataClone Blunt Cloning Buffer No known significant effects or critical hazards.
 StrataClone CAM Blunt Control Insert No known significant effects or critical hazards.
 StrataClone SoloPack Competent Cells No known significant effects or critical hazards.
 pUC 18 DNA Control Plasmid No known significant effects or critical hazards.

Mutagenicity : StrataClone pCMV-SC Vector Mix No known significant effects or critical hazards.
 StrataClone Blunt Cloning Buffer No known significant effects or critical hazards.
 StrataClone CAM Blunt Control Insert No known significant effects or critical hazards.
 StrataClone SoloPack Competent Cells No known significant effects or critical hazards.

Section 11. Toxicological information

Teratogenicity	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
	: StrataClone pCMV-SC Vector Mix	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	No known significant effects or critical hazards.
	StrataClone CAM Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone SoloPack Competent Cells	No known significant effects or critical hazards.
Developmental effects	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
	: StrataClone pCMV-SC Vector Mix	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	No known significant effects or critical hazards.
	StrataClone CAM Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone SoloPack Competent Cells	No known significant effects or critical hazards.
Fertility effects	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
	: StrataClone pCMV-SC Vector Mix	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	No known significant effects or critical hazards.
	StrataClone CAM Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone SoloPack Competent Cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
StrataClone pCMV-SC Vector Mix Glycerol	12600	N/A	N/A	N/A	N/A
StrataClone Blunt Cloning Buffer StrataClone Blunt Cloning Buffer	49180.3	N/A	N/A	N/A	N/A
Polyethylene glycol	28000	N/A	N/A	N/A	N/A
Sodium chloride	3000	N/A	N/A	N/A	N/A
StrataClone SoloPack Competent Cells Glycerol	12600	N/A	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
StrataClone pCMV-SC Vector Mix Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
StrataClone Blunt Cloning Buffer Polyethylene glycol Sodium chloride	Acute LC50 >1000000 µg/l Fresh water Acute EC50 4.74 g/L Fresh water Acute EC50 519.6 mg/l Fresh water Acute EC50 402.6 mg/l Fresh water Acute IC50 6.87 g/L Fresh water Acute LC50 1000000 µg/l Fresh water Chronic LC10 781 mg/l Fresh water Chronic NOEC 6 g/L Fresh water Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water	Fish - Salmo salar - Parr Algae - Chlamydomonas reinhardtii Crustaceans - Cypris subglobosa Daphnia - Daphnia magna Aquatic plants - Lemna minor Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling) Aquatic plants - Lemna minor Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult	96 hours 96 hours 48 hours 48 hours 96 hours 96 hours 3 weeks 96 hours 21 days 8 weeks
StrataClone SoloPack Competent Cells Glycerol Calcium chloride (CaCl ₂), dihydrate	Acute LC50 54000 mg/l Fresh water Acute EC50 2900 mg/l Fresh water Acute NOEC 2000 mg/l Fresh water	Fish - Oncorhynchus mykiss Algae Daphnia	96 hours 72 hours 48 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
StrataClone pCMV-SC Vector Mix Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
StrataClone SoloPack Competent Cells Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
StrataClone pCMV-SC Vector Mix Glycerol	-1.76	-	low
StrataClone Blunt 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 minimized 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. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

TDG / IMDG / IATA : Not regulated.

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.

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

Section 15. Regulatory information

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Section 15. Regulatory information

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia	: All components are listed or exempted.
Canada	: All components are listed or exempted.
China	: All components are listed or exempted.
Europe	: All components are listed or exempted.
Japan	: Japan inventory (ENCS): Not determined. Japan inventory (ISHL): 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.

Section 16. Other information

History

Date of issue/Date of revision : 04/03/2019

Date of previous issue : 03/29/2017

Version : 5

Key to abbreviations

: ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 HPR = Hazardous Products Regulations
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 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)
 N/A = Not available
 UN = United Nations

Procedure used to derive the classification

Section 16. Other information

Classification	Justification
StrataClone pCMV-SC Vector Mix EYE IRRITATION - Category 2B	Calculation method
StrataClone Blunt Cloning Buffer EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method Calculation method
StrataClone SoloPack Competent Cells EYE IRRITATION - Category 2A	Calculation method

References : Not available.

✔ Indicates information that has changed from previously issued version.

Notice to reader

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.