

SAFETY DATA SHEET

StrataClone Blunt PCR Cloning Kit, Part Number 240207

Section 1. Identification

1.1 Product identifier

Product name	: StrataClone Blunt PCR Cloning Kit, Part Number 240207
Part no. (chemical kit)	: 240207
Part no.	: StrataClone Blunt Vector Mix amp/kan 240207-51 StrataClone Blunt Control Insert 240207-53 StrataClone Blunt Cloning Buffer 240207-54 StrataClone SoloPack Competent Cells 200185-41 pUC 18 DNA Control Plasmid 200231-42

Validation date : 5/7/2020

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

Material uses	: Analytical reagent.
	StrataClone Blunt Vector Mix amp/kan 0.021 ml (1 µl)
	StrataClone Blunt Control Insert 0.01 ml (50 ng 5 ng/µl)
	StrataClone Blunt Cloning Buffer 0.063 ml
	StrataClone SoloPack Competent Cells 21 x 0.05 ml
	pUC 18 DNA Control Plasmid 0.01 ml (0.1 ng/µl)

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer : Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

1.4 Emergency telephone number

In case of emergency : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status	: StrataClone Blunt Vector Mix amp/kan StrataClone Blunt Control Insert	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
	StrataClone Blunt Cloning Buffer StrataClone SoloPack Competent Cells pUC 18 DNA Control Plasmid	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture

Section 2. Hazards identification

StrataClone Blunt Vector Mix

amp/kan

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

2.2 GHS label elements

Hazard pictograms

: StrataClone Blunt Cloning Buffer



StrataClone SoloPack Competent Cells



Signal word

: StrataClone Blunt Vector Mix amp/kan Warning

StrataClone Blunt Control Insert No signal word.

StrataClone Blunt Cloning Buffer Warning

StrataClone SoloPack Competent Cells Warning

pUC 18 DNA Control Plasmid No signal word.

Hazard statements

: StrataClone Blunt Vector Mix amp/kan H320 - Causes eye irritation.

StrataClone Blunt Control Insert No known significant effects or critical hazards.

StrataClone Blunt Cloning Buffer H319 - Causes serious eye irritation.

H335 - May cause respiratory irritation.

StrataClone SoloPack Competent Cells H319 - Causes serious eye irritation.

pUC 18 DNA Control Plasmid No known significant effects or critical hazards.

Precautionary statements

Prevention

: StrataClone Blunt Vector Mix amp/kan Not applicable.

StrataClone Blunt Control Insert Not applicable.

StrataClone Blunt Cloning Buffer P280 - Wear eye or face protection.

P261 - Avoid breathing vapor.

StrataClone SoloPack Competent Cells P280 - Wear eye or face protection.

Cells

pUC 18 DNA Control Plasmid Not applicable.

Response

: StrataClone Blunt Vector Mix amp/kan 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 advice or attention.

StrataClone Blunt Control Insert Not applicable.

StrataClone Blunt Cloning Buffer P312 - Call a POISON CENTER or doctor if you

Section 2. Hazards identification

		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.
	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 advice or attention.
Storage	pUC 18 DNA Control Plasmid	Not applicable.
	: StrataClone Blunt Vector Mix amp/kan	Not applicable.
	StrataClone Blunt Control Insert	Not applicable.
	StrataClone Blunt Cloning Buffer	P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
Disposal	StrataClone SoloPack Competent Cells	Not applicable.
	pUC 18 DNA Control Plasmid	Not applicable.
	: StrataClone Blunt Vector Mix amp/kan	Not applicable.
	StrataClone Blunt Control Insert	Not applicable.
Supplemental label elements	StrataClone Blunt Cloning Buffer	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	StrataClone SoloPack Competent Cells	Not applicable.
	pUC 18 DNA Control Plasmid	Not applicable.
	: StrataClone Blunt Vector Mix amp/kan	None known.
2.3 Other hazards	StrataClone Blunt Control Insert	None known.
	StrataClone Blunt Cloning Buffer	None known.
	StrataClone SoloPack Competent Cells	None known.
	pUC 18 DNA Control Plasmid	None known.
Hazards not otherwise classified	: StrataClone Blunt Vector Mix amp/kan	None known.
	StrataClone Blunt Control Insert	None known.
	StrataClone Blunt Cloning Buffer	None known.
	StrataClone SoloPack Competent Cells	None known.
	pUC 18 DNA Control Plasmid	None known.

Section 3. Composition/information on ingredients

Substance/mixture	: StrataClone Blunt Vector Mix amp/kan	Mixture
	StrataClone Blunt Control Insert	Mixture
	StrataClone Blunt Cloning Buffer	Mixture
	StrataClone SoloPack Competent Cells	Mixture
	pUC 18 DNA Control Plasmid	Mixture

Section 3. Composition/information on ingredients

Ingredient name	%	CAS number
StrataClone Blunt Vector Mix amp/kan 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

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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

4.1 Description of necessary first aid measures

Eye contact

- : StrataClone Blunt 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. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
- StrataClone 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 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 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 Blunt Vector Mix amp/kan
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 Control Insert
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical

Section 4. First aid measures

Skin contact	StrataClone Blunt Cloning Buffer	attention if symptoms occur. 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 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.
	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.
	: StrataClone Blunt Vector Mix amp/kan	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 Control Insert	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	StrataClone Blunt Cloning Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	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.

Section 4. First aid measures

Ingestion

: StrataClone Blunt Vector Mix amp/
kan

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.

StrataClone Blunt Control Insert

Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

StrataClone Blunt Cloning Buffer

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.

StrataClone SoloPack Competent
Cells

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.

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

Section 4. First aid measures

quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: StrataClone Blunt Vector Mix amp/kan	Causes eye irritation.
	StrataClone Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	Causes serious eye irritation.
	StrataClone SoloPack Competent Cells	Causes serious eye irritation.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
Inhalation	: StrataClone Blunt Vector Mix amp/kan	No known significant effects or critical hazards.
	StrataClone Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	May cause respiratory irritation.
	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 Blunt Vector Mix amp/kan	No known significant effects or critical hazards.
	StrataClone Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	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 Blunt Vector Mix amp/kan	No known significant effects or critical hazards.
	StrataClone Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	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 Blunt Vector Mix amp/kan	Adverse symptoms may include the following: irritation watering redness
	StrataClone Blunt Control Insert	No specific data.
	StrataClone Blunt Cloning Buffer	Adverse symptoms may include the following: pain or irritation watering redness
	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 Blunt Vector Mix amp/kan	No specific data.
	StrataClone Blunt Control Insert	No specific data.
	StrataClone Blunt Cloning Buffer	Adverse symptoms may include the following: respiratory tract irritation coughing
	StrataClone SoloPack Competent Cells	No specific data.
	pUC 18 DNA Control Plasmid	No specific data.
Skin contact	: StrataClone Blunt Vector Mix amp/kan	No specific data.
	StrataClone Blunt Control Insert	No specific data.
	StrataClone Blunt Cloning Buffer	No specific data.
	StrataClone SoloPack Competent Cells	No specific data.
	pUC 18 DNA Control Plasmid	No specific data.
Ingestion	: StrataClone Blunt Vector Mix amp/kan	No specific data.
	StrataClone Blunt Control Insert	No specific data.
	StrataClone Blunt Cloning Buffer	No specific data.
	StrataClone SoloPack Competent Cells	No specific data.
	pUC 18 DNA Control Plasmid	No specific data.

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

Notes to physician	: StrataClone Blunt Vector Mix amp/kan	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	StrataClone Blunt Control Insert	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 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 Blunt Vector Mix amp/kan	No specific treatment.
	StrataClone Blunt Control Insert	No specific treatment.
	StrataClone Blunt Cloning Buffer	No specific treatment.
	StrataClone SoloPack Competent Cells	No specific treatment.
	pUC 18 DNA Control Plasmid	No specific treatment.
Protection of first-aiders	: StrataClone Blunt Vector Mix amp/kan	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 Control Insert	No action shall be taken involving any personal risk or without suitable training.
	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

Section 4. First aid measures

StrataClone SoloPack Competent Cells

pUC 18 DNA Control Plasmid

apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. 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. No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical

StrataClone Blunt Vector Mix amp/kan	In a fire or if heated, a pressure increase will occur and the container may burst.
StrataClone Blunt Control Insert	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 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 Blunt Vector Mix amp/kan	Decomposition products may include the following materials: carbon dioxide carbon monoxide
StrataClone Blunt Control Insert	No specific data.
StrataClone Blunt Cloning Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
StrataClone SoloPack Competent Cells	Decomposition products may include the following materials: carbon dioxide

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carbon monoxide
halogenated compounds
metal oxide/oxides
No specific data.

pUC 18 DNA Control Plasmid

5.3 Advice for firefighters

Special protective actions for fire-fighters

: StrataClone Blunt 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 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 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 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 Blunt 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 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 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 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

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: StrataClone Blunt 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 spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate

Section 6. Accidental release measures

StrataClone Blunt Control Insert	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 spilled material. Put on appropriate personal protective equipment.
StrataClone Blunt Cloning Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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 Blunt Vector Mix amp/kan	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 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 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 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 spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

6.2 Environmental precautions

StrataClone Blunt Vector Mix amp/kan	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 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 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 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).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up

StrataClone Blunt 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 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 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 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

7.1 Precautions for safe handling

Protective measures	StrataClone Blunt Vector Mix amp/kan	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 Control Insert	Put on appropriate personal protective equipment (see Section 8).
	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 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 Blunt 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 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 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 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

Section 7. Handling and storage

7.2 Conditions for safe storage, including any incompatibilities

pUC 18 DNA Control Plasmid	eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
StrataClone Blunt 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
StrataClone Blunt Control Insert	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
StrataClone Blunt Cloning Buffer	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. 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.
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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
pUC 18 DNA Control Plasmid	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from

Section 7. Handling and storage

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.

7.3 Specific end use(s)

Recommendations

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

Industrial sector specific solutions

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

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
StrataClone Blunt Vector Mix amp/kan Glycerol	OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 10 mg/m ³ 8 hours. Form: Total dust OSHA PEL (United States, 5/2018). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 15 mg/m ³ 8 hours. Form: Total dust
StrataClone Blunt Cloning Buffer Polyethylene glycol Sodium chloride	AIHA WEEL (United States, 7/2018). TWA: 10 mg/m ³ 8 hours. None.
StrataClone SoloPack Competent Cells Glycerol	OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 10 mg/m ³ 8 hours. Form: Total dust OSHA PEL (United States, 5/2018). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 15 mg/m ³ 8 hours. Form: Total dust
Calcium chloride (CaCl ₂), dihydrate	None.

Section 8. Exposure controls/personal protection

8.2 Exposure controls

- 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

9.1 Information on basic physical and chemical properties

Appearance

- | | | |
|-----------------------|--|------------------|
| Physical state | : StrataClone Blunt Vector Mix amp/kan | : Liquid. |
| | StrataClone Blunt Control Insert | : Liquid. |
| | StrataClone Blunt Cloning Buffer | : Liquid. |
| | StrataClone SoloPack Competent Cells | : Liquid. |
| | pUC 18 DNA Control Plasmid | : Liquid. |
| Color | : StrataClone Blunt Vector Mix amp/kan | : Not available. |
| | StrataClone Blunt Control Insert | : Not available. |
| | StrataClone Blunt Cloning Buffer | : Not available. |
| | StrataClone SoloPack Competent Cells | : Not available. |
| | pUC 18 DNA Control Plasmid | : Not available. |

Section 9. Physical and chemical properties

Odor	:	StrataClone Blunt Vector Mix amp/kan	Not available.
		StrataClone Blunt Control Insert	Not available.
		StrataClone Blunt Cloning Buffer	Not available.
		StrataClone SoloPack Competent Cells	Not available.
		pUC 18 DNA Control Plasmid	Not available.
Odor threshold	:	StrataClone Blunt Vector Mix amp/kan	Not available.
		StrataClone Blunt Control Insert	Not available.
		StrataClone Blunt Cloning Buffer	Not available.
		StrataClone SoloPack Competent Cells	Not available.
		pUC 18 DNA Control Plasmid	Not available.
pH	:	StrataClone Blunt Vector Mix amp/kan	Not available.
		StrataClone Blunt Control Insert	7.5
		StrataClone Blunt Cloning Buffer	Not available.
		StrataClone SoloPack Competent Cells	Not available.
		pUC 18 DNA Control Plasmid	7.5
Melting point	:	StrataClone Blunt Vector Mix amp/kan	Not available.
		StrataClone Blunt Control Insert	0°C (32°F)
		StrataClone Blunt Cloning Buffer	Not available.
		StrataClone SoloPack Competent Cells	Not available.
		pUC 18 DNA Control Plasmid	0°C (32°F)
Boiling point	:	StrataClone Blunt Vector Mix amp/kan	Not available.
		StrataClone Blunt Control Insert	100°C (212°F)
		StrataClone Blunt Cloning Buffer	Not available.
		StrataClone SoloPack Competent Cells	Not available.
		pUC 18 DNA Control Plasmid	100°C (212°F)
Flash point	:	StrataClone Blunt Vector Mix amp/kan	Not available.
		StrataClone Blunt Control Insert	Not available.
		StrataClone Blunt Cloning Buffer	Not available.
		StrataClone SoloPack Competent Cells	Not available.
		pUC 18 DNA Control Plasmid	Not available.
Evaporation rate	:	StrataClone Blunt Vector Mix amp/kan	Not available.
		StrataClone Blunt Control Insert	Not available.
		StrataClone Blunt Cloning Buffer	Not available.
		StrataClone SoloPack Competent Cells	Not available.
		pUC 18 DNA Control Plasmid	Not available.
Flammability (solid, gas)	:	StrataClone Blunt Vector Mix amp/kan	Not applicable.
		StrataClone Blunt Control Insert	Not applicable.
		StrataClone Blunt Cloning Buffer	Not applicable.
		StrataClone SoloPack Competent Cells	Not applicable.
		pUC 18 DNA Control Plasmid	Not applicable.

Section 9. Physical and chemical properties

Lower and upper explosive (flammable) limits	StrataClone Blunt Vector Mix amp/kan	Not available.
	StrataClone Blunt Control Insert	Not available.
	StrataClone Blunt Cloning Buffer	Not available.
	StrataClone SoloPack Competent Cells	Not available.
	pUC 18 DNA Control Plasmid	Not available.
Vapor pressure	StrataClone Blunt Vector Mix amp/kan	Not available.
	StrataClone Blunt Control Insert	Not available.
	StrataClone Blunt Cloning Buffer	Not available.
	StrataClone SoloPack Competent Cells	Not available.
	pUC 18 DNA Control Plasmid	Not available.
Vapor density	StrataClone Blunt Vector Mix amp/kan	Not available.
	StrataClone Blunt Control Insert	Not available.
	StrataClone Blunt Cloning Buffer	Not available.
	StrataClone SoloPack Competent Cells	Not available.
	pUC 18 DNA Control Plasmid	Not available.
Relative density	StrataClone Blunt Vector Mix amp/kan	Not available.
	StrataClone Blunt Control Insert	Not available.
	StrataClone Blunt Cloning Buffer	Not available.
	StrataClone SoloPack Competent Cells	Not available.
	pUC 18 DNA Control Plasmid	Not available.
Solubility	StrataClone Blunt Vector Mix amp/kan	Soluble in the following materials: cold water and hot water.
	StrataClone Blunt Control Insert	Easily 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 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 Blunt Vector Mix amp/kan	Not available.
	StrataClone Blunt Control Insert	Not available.
	StrataClone Blunt Cloning Buffer	Not available.
	StrataClone SoloPack Competent Cells	Not available.
	pUC 18 DNA Control Plasmid	Not available.
Auto-ignition temperature	StrataClone Blunt Vector Mix amp/kan	Not available.
	StrataClone Blunt Control Insert	Not available.
	StrataClone Blunt Cloning Buffer	Not available.
	StrataClone SoloPack Competent Cells	Not available.
	pUC 18 DNA Control Plasmid	Not available.

Section 9. Physical and chemical properties

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

Section 10. Stability and reactivity

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

Section 10. Stability and reactivity

10.5 Incompatible materials	StrataClone Blunt Vector Mix amp/kan	May react or be incompatible with oxidizing materials.
	StrataClone Blunt Control Insert	May react or be incompatible with oxidizing materials.
	StrataClone Blunt Cloning Buffer	May react or be incompatible with oxidizing materials.
	StrataClone SoloPack Competent Cells	May react or be incompatible with oxidizing materials.
	pUC 18 DNA Control Plasmid	May react or be incompatible with oxidizing materials.
10.6 Hazardous decomposition products	StrataClone Blunt Vector Mix amp/kan	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	StrataClone Blunt Control Insert	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 SoloPack Competent Cells	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pUC 18 DNA Control Plasmid	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

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

Section 11. Toxicological information

Sodium chloride	Eyes - Mild irritant	Rabbit	-	mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
				24 hours 500	-
	Skin - Mild irritant	Rabbit	-	mg	-
	Eyes - Moderate irritant	Rabbit	-	500 mg	-
				24 hours 100	-
StrataClone SoloPack Competent Cells Glycerol	Eyes - Moderate irritant	Rabbit	-	mg	-
	Skin - Mild irritant	Rabbit	-	10 mg	-
				24 hours 500	-
				mg	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500	-
	Skin - Mild irritant	Rabbit	-	mg	-
				24 hours 500	-
				mg	-

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	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

: StrataClone Blunt Vector Mix amp/kan
StrataClone Blunt Control Insert
StrataClone Blunt Cloning Buffer

StrataClone SoloPack Competent Cells
pUC 18 DNA Control Plasmid

Routes of entry anticipated: Oral, Dermal, Inhalation.
Not available.
Routes of entry anticipated: Oral, Dermal, Inhalation.
Routes of entry anticipated: Oral, Dermal, Inhalation.
Not available.

Potential acute health effects

Section 11. Toxicological information

Eye contact	: StrataClone Blunt Vector Mix amp/kan	Causes eye irritation.
	StrataClone Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	Causes serious eye irritation.
	StrataClone SoloPack Competent Cells	Causes serious eye irritation.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
Inhalation	: StrataClone Blunt Vector Mix amp/kan	No known significant effects or critical hazards.
	StrataClone Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	May cause respiratory irritation.
	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 Blunt Vector Mix amp/kan	No known significant effects or critical hazards.
	StrataClone Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	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 Blunt Vector Mix amp/kan	No known significant effects or critical hazards.
	StrataClone Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	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 Blunt Vector Mix amp/kan	Adverse symptoms may include the following: irritation watering redness
	StrataClone Blunt Control Insert	No specific data.
	StrataClone Blunt Cloning Buffer	Adverse symptoms may include the following: pain or irritation watering redness
	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 Blunt Vector Mix amp/kan	No specific data.
	StrataClone Blunt Control Insert	No specific data.
	StrataClone Blunt Cloning Buffer	Adverse symptoms may include the following: respiratory tract irritation coughing
	StrataClone SoloPack Competent Cells	No specific data.
	pUC 18 DNA Control Plasmid	No specific data.

Section 11. Toxicological information

Skin contact	: StrataClone Blunt Vector Mix amp/kan	No specific data.
	StrataClone Blunt Control Insert	No specific data.
	StrataClone Blunt Cloning Buffer	No specific data.
	StrataClone SoloPack Competent Cells	No specific data.
	pUC 18 DNA Control Plasmid	No specific data.
Ingestion	: StrataClone Blunt Vector Mix amp/kan	No specific data.
	StrataClone Blunt Control Insert	No specific data.
	StrataClone Blunt Cloning Buffer	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 Blunt Vector Mix amp/kan	No known significant effects or critical hazards.
	StrataClone Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	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 Blunt Vector Mix amp/kan	No known significant effects or critical hazards.
	StrataClone Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	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 Blunt Vector Mix amp/kan	No known significant effects or critical hazards.
	StrataClone Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	No known significant effects or critical hazards.
	StrataClone SoloPack Competent Cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
Teratogenicity	: StrataClone Blunt Vector Mix amp/kan	No known significant effects or critical hazards.
	StrataClone Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	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

Developmental effects	StrataClone Blunt Vector Mix amp/kan	No known significant effects or critical hazards.
	StrataClone Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	No known significant effects or critical hazards.
	StrataClone SoloPack Competent Cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
Fertility effects	StrataClone Blunt Vector Mix amp/kan	No known significant effects or critical hazards.
	StrataClone Blunt Control Insert	No known significant effects or critical hazards.
	StrataClone Blunt Cloning Buffer	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 Blunt Vector Mix amp/kan 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

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
StrataClone Blunt Vector Mix amp/kan Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
StrataClone Blunt Cloning Buffer Polyethylene glycol	Acute LC50 >1000000 µg/l Fresh water	Fish - Salmo salar - Parr	96 hours
Sodium chloride	Acute EC50 4.74 g/L Fresh water	Algae - Chlamydomonas reinhardtii	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
	Chronic LC10 781 mg/l Fresh water	Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	3 weeks
	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days

Section 12. Ecological information

StrataClone SoloPack Competent Cells Glycerol Calcium chloride (CaCl ₂), dihydrate	Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks
	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute EC50 2900 mg/l Fresh water	Algae	72 hours
	Acute NOEC 2000 mg/l Fresh water	Daphnia	48 hours

12.2 Persistence and degradability

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

12.3 Bioaccumulative potential

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

12.4 Mobility in soil

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

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

Section 13. Disposal considerations

13.1 Waste treatment methods

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.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

DOT / TDG / Mexico / 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 IMO instruments : Not available.

Section 15. Regulatory information

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

U.S. Federal regulations : **TSCA 8(a) PAIR:** Polyoxyethylene octyl phenyl ether
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
Clean Water Act (CWA) 311: Edetic acid; Potassium hydroxide

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

Section 15. Regulatory information

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification :

StrataClone Blunt Vector Mix amp/kan	EYE IRRITATION - Category 2B
StrataClone Blunt Control Insert	Not applicable.
StrataClone Blunt Cloning Buffer	EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
StrataClone SoloPack Competent Cells	EYE IRRITATION - Category 2A
pUC 18 DNA Control Plasmid	Not applicable.

Composition/information on ingredients

Name	%	Classification
StrataClone Blunt Vector Mix amp/kan		
Glycerol	≥25 - ≤50	EYE IRRITATION - Category 2B
StrataClone Blunt Cloning Buffer		
Polyethylene glycol	≥25 - ≤50	EYE IRRITATION - Category 2B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Sodium chloride	≤10	EYE IRRITATION - Category 2A
StrataClone SoloPack Competent Cells		
Glycerol	≥10 - ≤25	EYE IRRITATION - Category 2B
Calcium chloride (CaCl ₂), dihydrate	≤3	EYE IRRITATION - Category 2A

State regulations

Massachusetts : The following components are listed: GLYCERINE MIST

New York : None of the components are listed.

New Jersey : The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL

Pennsylvania : The following components are listed: 1,2,3-PROPANETRIOL

California Prop. 65

 This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Section 15. Regulatory information

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	: <input checked="" type="checkbox"/> All components are active or exempted.
Viet Nam	: Not determined.

Section 16. Other information

History

Date of issue	: 05/07/2020
Date of previous issue	: 02/19/2018
Version	: 6

Key to abbreviations

: 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
: 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

Classification	Justification
StrataClone Blunt Vector Mix amp/kan 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

Section 16. Other information

Indicates information that has changed from previously issued version.

[Notice to reader](#)

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