

SAFETY DATA SHEET



CRISPR Library Cloning Kit Early Access, Part Number G7556P

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

1.1 Product identifier

Product name	: CRISPR Library Cloning Kit Early Access, Part Number G7556P
Part No. (Kit)	: G7556P
Part No.	: SureSolution 5190-9381 SureGuide Agarose 5190-9382 Cloning Mix 5190-9379 10X Cloning Buffer 5190-9380 dNTP Mix 200518-56 ElectroTen-Blue 200159-41 Competent Cells pUC 18 DNA Control 200231-42 Plasmid StrataClean Resin 200480-52

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

Identified uses	
Analytical reagent.	
SureSolution	0.5 ml
SureGuide Agarose	12 g
Cloning Mix	0.03 ml
10X Cloning Buffer	0.2 ml
dNTP Mix	0.03 ml
ElectroTen-Blue Competent Cells	5 x 0.1 ml
pUC 18 DNA Control Plasmid	0.015 ml (0.1 ng/μl)
StrataClean Resin	0.1 ml

1.3 Details of the supplier of the safety data sheet

Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str. 8
76337 Waldbronn
Germany
0800 603 1000

e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation) : CHEMTREC®: +(44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition	: SureSolution	Mono-constituent substance
	SureGuide Agarose	Mono-constituent substance
	Cloning Mix	Mixture
	10X Cloning Buffer	Mixture
	dNTP Mix	Mixture
	ElectroTen-Blue	Mixture
	Competent Cells	

Date of issue/Date of revision : 22/01/2018

SECTION 2: Hazards identification

pUC 18 DNA Control Plasmid	Mixture
StrataClean Resin	Mixture

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

10X Cloning Buffer

H319 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2

Ingredients of unknown toxicity	: Cloning Mix	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 30 - 60%
	: 10X Cloning Buffer	Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10%
Ingredients of unknown ecotoxicity	: ElectroTen-Blue	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10%
	: Competent Cells	Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 1 - 10%
	: 10X Cloning Buffer	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10%
		Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 3.2%

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms : 10X Cloning Buffer



Signal word	: SureSolution	No signal word.
	: SureGuide Agarose	No signal word.
	: Cloning Mix	No signal word.
	: 10X Cloning Buffer	Warning
	: dNTP Mix	No signal word.
	: ElectroTen-Blue	No signal word.
	: Competent Cells	No signal word.
	: pUC 18 DNA Control	No signal word.
	: Plasmid	No signal word.
	: StrataClean Resin	No signal word.

Hazard statements	: SureSolution	No known significant effects or critical hazards.
	: SureGuide Agarose	No known significant effects or critical hazards.
	: Cloning Mix	No known significant effects or critical hazards.
	: 10X Cloning Buffer	H319 - Causes serious eye irritation.
	: dNTP Mix	No known significant effects or critical hazards.
	: ElectroTen-Blue	No known significant effects or critical hazards.
	: Competent Cells	No known significant effects or critical hazards.
	: pUC 18 DNA Control	No known significant effects or critical hazards.
	: Plasmid	No known significant effects or critical hazards.
: StrataClean Resin	No known significant effects or critical hazards.	

Precautionary statements

Prevention	: SureSolution	Not applicable.
	: SureGuide Agarose	Not applicable.
	: Cloning Mix	Not applicable.
	: 10X Cloning Buffer	P280 - Wear eye or face protection. P264 - Wash hands thoroughly after handling.
	: dNTP Mix	Not applicable.
	: ElectroTen-Blue	Not applicable.
	: Competent Cells	Not applicable.
	: pUC 18 DNA Control	Not applicable.

SECTION 2: Hazards identification

	Plasmid	
	StrataClean Resin	Not applicable.
Response	: SureSolution	Not applicable.
	SureGuide Agarose	Not applicable.
	Cloning Mix	Not applicable.
	10X Cloning Buffer	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	dNTP Mix	Not applicable.
	ElectroTen-Blue	Not applicable.
	Competent Cells	
	pUC 18 DNA Control	Not applicable.
	Plasmid	
	StrataClean Resin	Not applicable.
Storage	: SureSolution	Not applicable.
	SureGuide Agarose	Not applicable.
	Cloning Mix	Not applicable.
	10X Cloning Buffer	Not applicable.
	dNTP Mix	Not applicable.
	ElectroTen-Blue	Not applicable.
	Competent Cells	
	pUC 18 DNA Control	Not applicable.
	Plasmid	
	StrataClean Resin	Not applicable.
Disposal	: SureSolution	Not applicable.
	SureGuide Agarose	Not applicable.
	Cloning Mix	Not applicable.
	10X Cloning Buffer	Not applicable.
	dNTP Mix	Not applicable.
	ElectroTen-Blue	Not applicable.
	Competent Cells	
	pUC 18 DNA Control	Not applicable.
	Plasmid	
	StrataClean Resin	Not applicable.
Hazardous ingredients	: Cloning Mix	Not applicable.
	10X Cloning Buffer	Not applicable.
Supplemental label elements	: SureSolution	Not applicable.
	SureGuide Agarose	Not applicable.
	Cloning Mix	Not applicable.
	10X Cloning Buffer	Not applicable.
	dNTP Mix	Not applicable.
	ElectroTen-Blue	Not applicable.
	Competent Cells	
	pUC 18 DNA Control	Not applicable.
	Plasmid	
	StrataClean Resin	Not applicable.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: SureSolution	Not applicable.
	SureGuide Agarose	Not applicable.
	Cloning Mix	Not applicable.
	10X Cloning Buffer	Not applicable.
	dNTP Mix	Not applicable.
	ElectroTen-Blue	Not applicable.
	Competent Cells	
	pUC 18 DNA Control	Not applicable.
	Plasmid	
	StrataClean Resin	Not applicable.
Special packaging requirements		

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SECTION 2: Hazards identification

Tactile warning of danger	: SureSolution	Not applicable.
	SureGuide Agarose	Not applicable.
	Cloning Mix	Not applicable.
	10X Cloning Buffer	Not applicable.
	dNTP Mix	Not applicable.
	ElectroTen-Blue	Not applicable.
	Competent Cells	
	pUC 18 DNA Control Plasmid	Not applicable.
	StrataClean Resin	Not applicable.

2.3 Other hazards

Other hazards which do not result in classification	: SureSolution	None known.
	SureGuide Agarose	None known.
	Cloning Mix	None known.
	10X Cloning Buffer	None known.
	dNTP Mix	None known.
	ElectroTen-Blue	None known.
	Competent Cells	
	pUC 18 DNA Control Plasmid	None known.
	StrataClean Resin	None known.

SECTION 3: Composition/information on ingredients

3.1 Substances	: SureSolution	Mono-constituent substance
	SureGuide Agarose	Mono-constituent substance
	Cloning Mix	Mixture
	10X Cloning Buffer	Mixture
	dNTP Mix	Mixture
	ElectroTen-Blue Competent Cells	Mixture
	pUC 18 DNA Control Plasmid	Mixture
	StrataClean Resin	Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
SureSolution Dimethyl sulfoxide	EC: 200-664-3 CAS: 67-68-5	100	Not classified.	[A]
SureGuide Agarose Agarose	EC: 232-731-8 CAS: 9012-36-6	100	Not classified.	[A]
Cloning Mix Glycerol	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5 CAS: 9036-19-5	≥50 - ≤75	Not classified.	[2]
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	CAS: 9036-19-5	≤0.3	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411	[1] [5]
10X Cloning Buffer 2-Amino-2-(hydroxymethyl) propane-1,3-diol hydrochloride	EC: 214-684-5 CAS: 1185-53-1	≤5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	[1]
Polyoxyethylene octyl phenyl ether	CAS: 9002-93-1	≤2.3	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411	[1] [5]

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SECTION 3: Composition/information on ingredients

ElectroTen-Blue Competent Cells Glycerol	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≤10	Not classified. See Section 16 for the full text of the H statements declared above.	[2]
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There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern
- [6] Additional disclosure due to company policy
- [A] Constituent
- [B] Impurity
- [C] Stabilising additive

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	: SureSolution	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.
	SureGuide Agarose	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.
	Cloning Mix	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	10X 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.
	dNTP Mix	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	ElectroTen-Blue Competent Cells	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	pUC 18 DNA Control Plasmid	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	StrataClean Resin	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	: SureSolution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	SureGuide Agarose	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Cloning Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	10X Cloning Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is

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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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

dNTP Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
ElectroTen-Blue Competent Cells	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
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.
StrataClean Resin	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact

: SureSolution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
SureGuide Agarose	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Cloning Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
10X 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.
dNTP Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
ElectroTen-Blue Competent Cells	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
pUC 18 DNA Control Plasmid	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
StrataClean Resin	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion

: SureSolution	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.
SureGuide Agarose	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

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Cloning Mix	induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
10X 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.
dNTP Mix	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
ElectroTen-Blue Competent Cells	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
pUC 18 DNA Control Plasmid	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
StrataClean Resin	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.
Protection of first-aiders : SureSolution	No action shall be taken involving any personal risk or without suitable training.
SureGuide Agarose	No action shall be taken involving any personal risk or without suitable training.
Cloning Mix	No action shall be taken involving any personal risk or without suitable training.
10X Cloning Buffer	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.
dNTP Mix	No action shall be taken involving any personal risk or without suitable training.
ElectroTen-Blue Competent Cells	No action shall be taken involving any personal risk or without suitable training.
pUC 18 DNA Control Plasmid	No action shall be taken involving any personal risk or without suitable training.
StrataClean Resin	No action shall be taken involving any personal risk or

SECTION 4: First aid measures

without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact	: SureSolution SureGuide Agarose Cloning Mix 10X Cloning Buffer dNTP Mix ElectroTen-Blue Competent Cells pUC 18 DNA Control Plasmid StrataClean Resin	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. Causes serious eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Inhalation	: SureSolution SureGuide Agarose Cloning Mix 10X Cloning Buffer dNTP Mix ElectroTen-Blue Competent Cells pUC 18 DNA Control Plasmid StrataClean Resin	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: SureSolution SureGuide Agarose Cloning Mix 10X Cloning Buffer dNTP Mix ElectroTen-Blue Competent Cells pUC 18 DNA Control Plasmid StrataClean Resin	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: SureSolution SureGuide Agarose Cloning Mix 10X Cloning Buffer dNTP Mix ElectroTen-Blue Competent Cells pUC 18 DNA Control Plasmid StrataClean Resin	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: SureSolution SureGuide Agarose Cloning Mix 10X Cloning Buffer	No specific data. No specific data. No specific data. Adverse symptoms may include the following: pain or irritation watering redness
	dNTP Mix ElectroTen-Blue Competent Cells pUC 18 DNA Control Plasmid StrataClean Resin	No specific data. No specific data. No specific data. No specific data. No specific data.

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Inhalation	:	SureSolution SureGuide Agarose Cloning Mix 10X Cloning Buffer dNTP Mix ElectroTen-Blue Competent Cells pUC 18 DNA Control Plasmid StrataClean Resin	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Skin contact	:	SureSolution SureGuide Agarose Cloning Mix 10X Cloning Buffer dNTP Mix ElectroTen-Blue Competent Cells pUC 18 DNA Control Plasmid StrataClean Resin	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Ingestion	:	SureSolution SureGuide Agarose Cloning Mix 10X Cloning Buffer dNTP Mix ElectroTen-Blue Competent Cells pUC 18 DNA Control Plasmid StrataClean Resin	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	:	SureSolution SureGuide Agarose Cloning Mix 10X Cloning Buffer dNTP Mix ElectroTen-Blue Competent Cells pUC 18 DNA Control Plasmid StrataClean Resin	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	:	SureSolution SureGuide Agarose Cloning Mix 10X Cloning Buffer dNTP Mix ElectroTen-Blue Competent Cells pUC 18 DNA Control Plasmid StrataClean Resin	No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	: SureSolution	Use an extinguishing agent suitable for the surrounding fire.
	SureGuide Agarose	Use an extinguishing agent suitable for the surrounding fire.
	Cloning Mix	Use an extinguishing agent suitable for the surrounding fire.
	10X Cloning Buffer	Use an extinguishing agent suitable for the surrounding fire.
	dNTP Mix	Use an extinguishing agent suitable for the surrounding fire.
	ElectroTen-Blue	Use an extinguishing agent suitable for the surrounding fire.
	Competent Cells	
	pUC 18 DNA Control	Use an extinguishing agent suitable for the surrounding fire.
	Plasmid	
	StrataClean Resin	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: SureSolution	None known.
	SureGuide Agarose	None known.
	Cloning Mix	None known.
	10X Cloning Buffer	None known.
	dNTP Mix	None known.
	ElectroTen-Blue	None known.
	Competent Cells	
	pUC 18 DNA Control	None known.
	Plasmid	
	StrataClean Resin	None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: SureSolution	In a fire or if heated, a pressure increase will occur and the container may burst.
	SureGuide Agarose	In a fire or if heated, a pressure increase will occur and the container may burst.
	Cloning Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
	10X Cloning Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	dNTP Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
	ElectroTen-Blue	In a fire or if heated, a pressure increase will occur and the container may burst.
	Competent Cells	In a fire or if heated, a pressure increase will occur and the container may burst.
	pUC 18 DNA Control	In a fire or if heated, a pressure increase will occur and the container may burst.
	Plasmid	In a fire or if heated, a pressure increase will occur and the container may burst.
	StrataClean Resin	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous combustion products	: SureSolution	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides
	SureGuide Agarose	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	Cloning Mix	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	10X Cloning Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides halogenated compounds metal oxide/oxides
	dNTP Mix	No specific data.
	ElectroTen-Blue Competent Cells	Decomposition products may include the following materials: carbon dioxide

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carbon monoxide
 nitrogen oxides
 sulfur oxides
 phosphorus oxides
 No specific data.

pUC 18 DNA Control Plasmid
 StrataClean Resin

Decomposition products may include the following materials:
 carbon dioxide
 carbon monoxide
 metal oxide/oxides

5.3 Advice for firefighters

Special precautions for fire-fighters

: SureSolution	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.
SureGuide Agarose	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.
Cloning 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.
10X 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.
dNTP 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.
ElectroTen-Blue 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.
StrataClean Resin	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

: SureSolution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
SureGuide Agarose	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Cloning Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
10X Cloning Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
dNTP Mix	Fire-fighters should wear appropriate protective equipment

SECTION 5: Firefighting measures

ElectroTen-Blue Competent Cells	and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
pUC 18 DNA Control Plasmid	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
StrataClean Resin	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: SureSolution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	SureGuide Agarose	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	Cloning 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 spilt material. Put on appropriate personal protective equipment.
	10X Cloning Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	dNTP 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 spilt material. Put on appropriate personal protective equipment.
	ElectroTen-Blue Competent Cells	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	pUC 18 DNA Control Plasmid	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering.

SECTION 6: Accidental release measures

		Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	StrataClean Resin	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
For emergency responders	: SureSolution	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	SureGuide Agarose	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Cloning Mix	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	10X Cloning Buffer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	dNTP Mix	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	ElectroTen-Blue Competent Cells	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	pUC 18 DNA Control Plasmid	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	StrataClean Resin	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
6.2 Environmental precautions	: SureSolution	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	SureGuide Agarose	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Cloning Mix	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	10X Cloning Buffer	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	dNTP Mix	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	ElectroTen-Blue	Avoid dispersal of spilt material and runoff and contact with

SECTION 6: Accidental release measures

Competent Cells	soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
pUC 18 DNA Control Plasmid	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
StrataClean Resin	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	SureSolution	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.
	SureGuide Agarose	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.
	Cloning 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.
	10X 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.
	dNTP 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.
	ElectroTen-Blue 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.
	StrataClean Resin	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

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

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures	: SureSolution	Put on appropriate personal protective equipment (see Section 8).
	SureGuide Agarose	Put on appropriate personal protective equipment (see Section 8).
	Cloning Mix	Put on appropriate personal protective equipment (see Section 8).
	10X Cloning Buffer	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour 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.
	dNTP Mix	Put on appropriate personal protective equipment (see Section 8).
	ElectroTen-Blue Competent Cells	Put on appropriate personal protective equipment (see Section 8).
	pUC 18 DNA Control Plasmid	Put on appropriate personal protective equipment (see Section 8).
	StrataClean Resin	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	: SureSolution	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.
	SureGuide Agarose	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.
	Cloning 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.
	10X 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.
	dNTP 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.
	ElectroTen-Blue Competent Cells	Potentially biohazardous material. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	pUC 18 DNA Control Plasmid	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

SECTION 7: Handling and storage

StrataClean Resin

Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Storage

: SureSolution

Storage temperature: -20°C (-4°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

SureGuide Agarose

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

Cloning Mix

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

10X Cloning Buffer

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

dNTP Mix

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

SECTION 7: Handling and storage

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

7.3 Specific end use(s)

Recommendations

: SureSolution SureGuide Agarose Cloning Mix 10X Cloning Buffer dNTP Mix ElectroTen-Blue Competent Cells pUC 18 DNA Control Plasmid StrataClean Resin	Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications.
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Industrial sector specific solutions

: SureSolution SureGuide Agarose Cloning Mix 10X Cloning Buffer dNTP Mix ElectroTen-Blue Competent Cells pUC 18 DNA Control Plasmid StrataClean Resin	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Cloning Mix Glycerol	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 10 mg/m ³ 8 hours. Form: Mist
ElectroTen-Blue Competent Cells Glycerol	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 10 mg/m ³ 8 hours. Form: Mist

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

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available

8.2 Exposure controls

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

Individual protection measures

Hygiene measures : Handle as biohazard material (Biosafety level 1). Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: 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.

SECTION 8: Exposure controls/personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	SureSolution	Liquid. [Clear.]
	SureGuide Agarose	Liquid.
	Cloning Mix	Liquid.
	10X Cloning Buffer	Liquid.
	dNTP Mix	Liquid.
	ElectroTen-Blue	Liquid.
	Competent Cells	
	pUC 18 DNA Control Plasmid	Liquid.
	StrataClean Resin	Liquid.
	Colour	SureSolution
SureGuide Agarose		Not available.
Cloning Mix		Not available.
10X Cloning Buffer		Not available.
dNTP Mix		Not available.
ElectroTen-Blue		Not available.
Competent Cells		
pUC 18 DNA Control Plasmid		Not available.
StrataClean Resin		Not available.
Odour		SureSolution
	SureGuide Agarose	Not available.
	Cloning Mix	Not available.
	10X Cloning Buffer	Not available.
	dNTP Mix	Not available.
	ElectroTen-Blue	Not available.
	Competent Cells	
	pUC 18 DNA Control Plasmid	Not available.
	StrataClean Resin	Not available.
	Odour threshold	SureSolution
SureGuide Agarose		Not available.
Cloning Mix		Not available.
10X Cloning Buffer		Not available.
dNTP Mix		Not available.
ElectroTen-Blue		Not available.
Competent Cells		
pUC 18 DNA Control Plasmid		Not available.
StrataClean Resin		Not available.

SECTION 9: Physical and chemical properties

pH	: SureSolution	Not available.
	SureGuide Agarose	Not available.
	Cloning Mix	8.2
	10X Cloning Buffer	8.8
	dNTP Mix	7.5
	ElectroTen-Blue	7.5
	Competent Cells	
	pUC 18 DNA Control Plasmid	7.5
	StrataClean Resin	7.5
	Melting point/freezing point	: SureSolution
SureGuide Agarose		Not available.
Cloning Mix		Not available.
10X Cloning Buffer		Not available.
dNTP Mix		0°C
ElectroTen-Blue		Not available.
Competent Cells		
pUC 18 DNA Control Plasmid		0°C
StrataClean Resin		Not available.
Initial boiling point and boiling range		: SureSolution
	SureGuide Agarose	Not available.
	Cloning Mix	Not available.
	10X Cloning Buffer	Not available.
	dNTP Mix	100°C
	ElectroTen-Blue	Not available.
	Competent Cells	
	pUC 18 DNA Control Plasmid	100°C
	StrataClean Resin	Not available.
	Flash point	: SureSolution
SureGuide Agarose		Not available.
Cloning Mix		Not available.
10X Cloning Buffer		Not available.
dNTP Mix		Not available.
ElectroTen-Blue		Not available.
Competent Cells		
pUC 18 DNA Control Plasmid		Not available.
StrataClean Resin		Not available.
Evaporation rate		: SureSolution
	SureGuide Agarose	Not available.
	Cloning Mix	Not available.
	10X Cloning Buffer	Not available.
	dNTP Mix	Not available.
	ElectroTen-Blue	Not available.
	Competent Cells	
	pUC 18 DNA Control Plasmid	Not available.
	StrataClean Resin	Not available.
	Flammability (solid, gas)	: SureSolution
SureGuide Agarose		Not applicable.
Cloning Mix		Not applicable.
10X Cloning Buffer		Not applicable.
dNTP Mix		Not applicable.
ElectroTen-Blue		Not applicable.
Competent Cells		
pUC 18 DNA Control Plasmid		Not applicable.
StrataClean Resin		Not applicable.

SECTION 9: Physical and chemical properties

Upper/lower flammability or explosive limits	: SureSolution	Lower: 2.6% Upper: 28.5%
	SureGuide Agarose	Not available.
	Cloning Mix	Not available.
	10X Cloning Buffer	Not available.
	dNTP Mix	Not available.
	ElectroTen-Blue	Not available.
	Competent Cells	
	pUC 18 DNA Control Plasmid	Not available.
	StrataClean Resin	Not available.
	Vapour pressure	: SureSolution
SureGuide Agarose		Not available.
Cloning Mix		Not available.
10X Cloning Buffer		Not available.
dNTP Mix		Not available.
ElectroTen-Blue		Not available.
Competent Cells		
pUC 18 DNA Control Plasmid		Not available.
StrataClean Resin		Not available.
Vapour density		: SureSolution
	SureGuide Agarose	Not available.
	Cloning Mix	Not available.
	10X Cloning Buffer	Not available.
	dNTP Mix	Not available.
	ElectroTen-Blue	Not available.
	Competent Cells	
	pUC 18 DNA Control Plasmid	Not available.
	StrataClean Resin	Not available.
	Relative density	: SureSolution
SureGuide Agarose		Not available.
Cloning Mix		Not available.
10X Cloning Buffer		Not available.
dNTP Mix		Not available.
ElectroTen-Blue		Not available.
Competent Cells		
pUC 18 DNA Control Plasmid		Not available.
StrataClean Resin		Not available.
Solubility(ies)		: SureSolution
	SureGuide Agarose	Not available.
	Cloning Mix	Soluble in the following materials: cold water and hot water.
	10X Cloning Buffer	Soluble in the following materials: cold water and hot water.
	dNTP Mix	Easily soluble in the following materials: cold water and hot water.
	ElectroTen-Blue	Soluble in the following materials: cold water and hot water.
	Competent Cells	
	pUC 18 DNA Control Plasmid	Easily soluble in the following materials: cold water and hot water.
	StrataClean Resin	Soluble in the following materials: cold water and hot water.

SECTION 9: Physical and chemical properties

Partition coefficient: n-octanol/water	:	SureSolution	-1.35
		SureGuide Agarose	Not available.
		Cloning Mix	Not available.
		10X Cloning Buffer	Not available.
		dNTP Mix	Not available.
		ElectroTen-Blue	Not available.
		Competent Cells	
		pUC 18 DNA Control	Not available.
		Plasmid	
		StrataClean Resin	Not available.
Auto-ignition temperature	:	SureSolution	300 to 302°C
		SureGuide Agarose	Not available.
		Cloning Mix	Not available.
		10X Cloning Buffer	Not available.
		dNTP Mix	Not available.
		ElectroTen-Blue	Not available.
		Competent Cells	
		pUC 18 DNA Control	Not available.
		Plasmid	
		StrataClean Resin	Not available.
Decomposition temperature	:	SureSolution	140 to 189°C
		SureGuide Agarose	Not available.
		Cloning Mix	Not available.
		10X Cloning Buffer	Not available.
		dNTP Mix	Not available.
		ElectroTen-Blue	Not available.
		Competent Cells	
		pUC 18 DNA Control	Not available.
		Plasmid	
		StrataClean Resin	Not available.
Viscosity	:	SureSolution	Dynamic (room temperature): 2.14 mPa·s
		SureGuide Agarose	Not available.
		Cloning Mix	Not available.
		10X Cloning Buffer	Not available.
		dNTP Mix	Not available.
		ElectroTen-Blue	Not available.
		Competent Cells	
		pUC 18 DNA Control	Not available.
		Plasmid	
		StrataClean Resin	Not available.
Explosive properties	:	SureSolution	Not available.
		SureGuide Agarose	Not available.
		Cloning Mix	Not available.
		10X Cloning Buffer	Not available.
		dNTP Mix	Not available.
		ElectroTen-Blue	Not available.
		Competent Cells	
		pUC 18 DNA Control	Not available.
		Plasmid	
		StrataClean Resin	Not available.
Oxidising properties	:	SureSolution	Not available.
		SureGuide Agarose	Not available.
		Cloning Mix	Not available.
		10X Cloning Buffer	Not available.
		dNTP Mix	Not available.
		ElectroTen-Blue	Not available.
		Competent Cells	
		pUC 18 DNA Control	Not available.
		Plasmid	
		StrataClean Resin	Not available.

SECTION 9: Physical and chemical properties

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: SureSolution	No specific test data related to reactivity available for this product or its ingredients.
	SureGuide Agarose	No specific test data related to reactivity available for this product or its ingredients.
	Cloning Mix	No specific test data related to reactivity available for this product or its ingredients.
	10X Cloning Buffer	No specific test data related to reactivity available for this product or its ingredients.
	dNTP Mix	No specific test data related to reactivity available for this product or its ingredients.
	ElectroTen-Blue 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.
	StrataClean Resin	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: SureSolution	The product is stable.
	SureGuide Agarose	The product is stable.
	Cloning Mix	The product is stable.
	10X Cloning Buffer	The product is stable.
	dNTP Mix	The product is stable.
	ElectroTen-Blue Competent Cells	The product is stable.
	pUC 18 DNA Control Plasmid	The product is stable.
	StrataClean Resin	The product is stable.
10.3 Possibility of hazardous reactions	: SureSolution	Under normal conditions of storage and use, hazardous reactions will not occur.
	SureGuide Agarose	Under normal conditions of storage and use, hazardous reactions will not occur.
	Cloning Mix	Under normal conditions of storage and use, hazardous reactions will not occur.
	10X Cloning Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
	dNTP Mix	Under normal conditions of storage and use, hazardous reactions will not occur.
	ElectroTen-Blue 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.
	StrataClean Resin	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: SureSolution	No specific data.
	SureGuide Agarose	No specific data.
	Cloning Mix	No specific data.
	10X Cloning Buffer	No specific data.
	dNTP Mix	No specific data.
	ElectroTen-Blue Competent Cells	No specific data.
	pUC 18 DNA Control Plasmid	No specific data.

SECTION 10: Stability and reactivity

StrataClean Resin No specific data.

10.5 Incompatible materials

: SureSolution May react or be incompatible with oxidising materials.
 SureGuide Agarose May react or be incompatible with oxidising materials.
 Cloning Mix May react or be incompatible with oxidising materials.
 10X Cloning Buffer May react or be incompatible with oxidising materials.
 dNTP Mix May react or be incompatible with oxidising materials.
 ElectroTen-Blue May react or be incompatible with oxidising materials.
 Competent Cells
 pUC 18 DNA Control May react or be incompatible with oxidising materials.
 Plasmid
 StrataClean Resin May react or be incompatible with oxidising materials.

10.6 Hazardous decomposition products

: SureSolution Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 SureGuide Agarose Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 Cloning Mix Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 10X Cloning Buffer Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 dNTP Mix Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 ElectroTen-Blue Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 Competent Cells Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 pUC 18 DNA Control Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 Plasmid Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 StrataClean Resin 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
SureSolution Dimethyl sulfoxide	LD50 Dermal LD50 Oral	Rat Rat	40000 mg/kg 14500 mg/kg	- -
Cloning Mix Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3, 3-tetramethylbutyl)phenyl]-. omega.-hydroxy-	LD50 Oral	Rat	2800 mg/kg	-
10X Cloning Buffer Polyoxyethylene octyl phenyl ether	LD50 Oral	Rat	1800 mg/kg	-

Acute toxicity estimates

Route	ATE value
10X Cloning Buffer Oral	180000 mg/kg

Irritation/Corrosion

CRISPR Library Cloning Kit Early Access, Part Number G7556P

SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
SureSolution Dimethyl sulfoxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	100 milligrams	-
Cloning Mix Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-. omega.-hydroxy-	Eyes - Severe irritant	Rabbit	-	1 Percent	-
10X Cloning Buffer Polyoxyethylene octyl phenyl ether	Eyes - Moderate irritant	Rabbit	-	24 hours 10 microliters	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 microliters	-

Sensitiser

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
10X Cloning Buffer 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure

SureSolution	Routes of entry anticipated: Oral, Dermal, Inhalation.
SureGuide Agarose	Not available.
Cloning Mix	Routes of entry anticipated: Oral, Dermal, Inhalation.
10X Cloning Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
dNTP Mix	Not available.
ElectroTen-Blue	Routes of entry anticipated: Oral, Dermal, Inhalation.
Competent Cells	
pUC 18 DNA Control	Not available.
Plasmid	
StrataClean Resin	Not available.

Potential acute health effects

Inhalation

SureSolution	No known significant effects or critical hazards.
SureGuide Agarose	No known significant effects or critical hazards.
Cloning Mix	No known significant effects or critical hazards.
10X Cloning Buffer	No known significant effects or critical hazards.
dNTP Mix	No known significant effects or critical hazards.
ElectroTen-Blue	No known significant effects or critical hazards.
Competent Cells	
pUC 18 DNA Control	No known significant effects or critical hazards.
Plasmid	
StrataClean Resin	No known significant effects or critical hazards.

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Ingestion	:	SureSolution SureGuide Agarose Cloning Mix 10X Cloning Buffer dNTP Mix ElectroTen-Blue Competent Cells pUC 18 DNA Control Plasmid StrataClean Resin	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	:	SureSolution SureGuide Agarose Cloning Mix 10X Cloning Buffer dNTP Mix ElectroTen-Blue Competent Cells pUC 18 DNA Control Plasmid StrataClean Resin	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Eye contact	:	SureSolution SureGuide Agarose Cloning Mix 10X Cloning Buffer dNTP Mix ElectroTen-Blue Competent Cells pUC 18 DNA Control Plasmid StrataClean Resin	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. Causes serious eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	:	SureSolution SureGuide Agarose Cloning Mix 10X Cloning Buffer dNTP Mix ElectroTen-Blue Competent Cells pUC 18 DNA Control Plasmid StrataClean Resin	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Ingestion	:	SureSolution SureGuide Agarose Cloning Mix 10X Cloning Buffer dNTP Mix ElectroTen-Blue Competent Cells pUC 18 DNA Control Plasmid StrataClean Resin	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Skin contact	:	SureSolution SureGuide Agarose Cloning Mix 10X Cloning Buffer dNTP Mix ElectroTen-Blue Competent Cells pUC 18 DNA Control Plasmid	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.

SECTION 11: Toxicological information

Eye contact	StrataClean Resin	No specific data.
	: SureSolution	No specific data.
	SureGuide Agarose	No specific data.
	Cloning Mix	No specific data.
	10X Cloning Buffer	Adverse symptoms may include the following: pain or irritation watering redness
	dNTP Mix	No specific data.
	ElectroTen-Blue	No specific data.
	Competent Cells	
	pUC 18 DNA Control	No specific data.
	Plasmid	
StrataClean Resin	No specific data.	

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	: SureSolution	No known significant effects or critical hazards.	
	SureGuide Agarose	No known significant effects or critical hazards.	
	Cloning Mix	No known significant effects or critical hazards.	
	10X Cloning Buffer	No known significant effects or critical hazards.	
	dNTP Mix	No known significant effects or critical hazards.	
	ElectroTen-Blue	No known significant effects or critical hazards.	
	Competent Cells		
	pUC 18 DNA Control	No known significant effects or critical hazards.	
	Plasmid		
	StrataClean Resin	No known significant effects or critical hazards.	
	Carcinogenicity	: SureSolution	No known significant effects or critical hazards.
		SureGuide Agarose	No known significant effects or critical hazards.
		Cloning Mix	No known significant effects or critical hazards.
10X Cloning Buffer		No known significant effects or critical hazards.	
dNTP Mix		No known significant effects or critical hazards.	
ElectroTen-Blue		No known significant effects or critical hazards.	
Competent Cells			
pUC 18 DNA Control		No known significant effects or critical hazards.	
Plasmid			
StrataClean Resin		No known significant effects or critical hazards.	
Mutagenicity		: SureSolution	No known significant effects or critical hazards.
		SureGuide Agarose	No known significant effects or critical hazards.
		Cloning Mix	No known significant effects or critical hazards.
	10X Cloning Buffer	No known significant effects or critical hazards.	
	dNTP Mix	No known significant effects or critical hazards.	
	ElectroTen-Blue	No known significant effects or critical hazards.	
	Competent Cells		
	pUC 18 DNA Control	No known significant effects or critical hazards.	
	Plasmid		
	StrataClean Resin	No known significant effects or critical hazards.	

SECTION 11: Toxicological information

Teratogenicity	: SureSolution SureGuide Agarose Cloning Mix 10X Cloning Buffer dNTP Mix ElectroTen-Blue Competent Cells pUC 18 DNA Control Plasmid StrataClean Resin	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Developmental effects	: SureSolution SureGuide Agarose Cloning Mix 10X Cloning Buffer dNTP Mix ElectroTen-Blue Competent Cells pUC 18 DNA Control Plasmid StrataClean Resin	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Fertility effects	: SureSolution SureGuide Agarose Cloning Mix 10X Cloning Buffer dNTP Mix ElectroTen-Blue Competent Cells pUC 18 DNA Control Plasmid StrataClean Resin	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
SureSolution Dimethyl sulfoxide	Acute LC50 25000 ppm Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 34000000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 100 µl/L Marine water	Algae - Ulva lactuca	72 hours
Cloning Mix Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Acute EC50 210 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute LC50 10800 µg/l Marine water	Crustaceans - Pandalus montagui - Adult	48 hours
	Acute LC50 8600 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 7200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
10X Cloning Buffer Polyoxyethylene octyl phenyl ether	Acute LC50 5.85 mg/l Fresh water	Crustaceans - Ceriodaphnia rigaudi - Neonate	48 hours
	Acute LC50 11.2 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4500 µg/l Fresh water	Fish - Pimephales promelas	96 hours

12.2 Persistence and degradability

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SECTION 12: Ecological information

Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
10X Cloning Buffer Polyoxyethylene octyl phenyl ether	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
SureSolution Dimethyl sulfoxide	-1.35	3.16	low
Cloning Mix Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3, 3-tetramethylbutyl)phenyl]-. omega.-hydroxy-	3.77	78.67	low
10X Cloning Buffer Polyoxyethylene octyl phenyl ether	4.86	-	high

12.4 Mobility in soil

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

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

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

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

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

Special precautions : This material and its container must be disposed of in a safe way. 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

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SECTION 14: Transport information

ADR/RID / IMDG / IATA : Not regulated.

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

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

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
Cloning Mix Poly(oxy-1,2-ethanediyl), .alpha.-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Substance of equivalent concern for environment	Recommended	ED/169/2012	2/10/2014
10X Cloning Buffer Polyoxyethylene octyl phenyl ether	Substance of equivalent concern for environment	Recommended	ED/169/2012	2/10/2014

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : SureSolution Not applicable.
SureGuide Agarose Not applicable.
Cloning Mix Not applicable.
10X Cloning Buffer Not applicable.
dNTP Mix Not applicable.
ElectroTen-Blue Competent Cells Not applicable.
pUC 18 DNA Control Plasmid Not applicable.
StrataClean Resin Not applicable.

Other EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Listed

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

SECTION 15: Regulatory information

Montreal Protocol (Annexes A, B, C, E)

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	: Not determined.
Canada	: Not determined.
China	: Not determined.
Europe	: All components are listed or exempted.
Japan	: Japan inventory (ENCS) : Not determined. Japan inventory (ISHL) : Not determined.
Malaysia	: Not determined.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: All components are listed or exempted.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: All components are listed or exempted.
Viet Nam	: Not determined.

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

SECTION 16: Other information

✔ Indicates information that has changed from previously issued version.

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

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

Classification	Justification
10X Cloning Buffer Eye Irrit. 2, H319	Calculation method

Full text of abbreviated H statements

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SECTION 16: Other information

<p>Cloning Mix H315 H318 H411</p>	<p>Causes skin irritation. Causes serious eye damage. Toxic to aquatic life with long lasting effects.</p>
<p>10X Cloning Buffer H302 H315 H318 H319 H335 H411</p>	<p>Harmful if swallowed. Causes skin irritation. Causes serious eye damage. Causes serious eye irritation. May cause respiratory irritation. Toxic to aquatic life with long lasting effects.</p>

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

<p>Cloning Mix Aquatic Chronic 2, H411 Eye Dam. 1, H318 Skin Irrit. 2, H315</p>	<p>LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SKIN CORROSION/IRRITATION - Category 2</p>
<p>10X Cloning Buffer Acute Tox. 4, H302 Aquatic Chronic 2, H411 Eye Dam. 1, H318 Eye Irrit. 2, H319 Skin Irrit. 2, H315 STOT SE 3, H335</p>	<p>ACUTE TOXICITY (oral) - Category 4 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3</p>

Date of issue/ Date of revision : 22/01/2018

Date of previous issue : No previous validation.

Version : 1

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