

# SAFETY DATA SHEET

ElectroTen-Blue Electroporation-Competent Cells

## Section 1. Identification

### 1.1 Product identifier

Product name	: <input checked="" type="checkbox"/> ElectroTen-Blue Electroporation-Competent Cells		
Part no. (chemical kit)	: 200159		
Part no.	ElectroTen-Blue Competent Cells	200159-41	
	StrataClean Resin	200480-52	
	pUC 18 DNA Control Plasmid	200231-42	

Validation date : 9/24/2024

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

Identified uses	: <input checked="" type="checkbox"/> Analytical reagent. For research use only.		
	<input checked="" type="checkbox"/> ElectroTen-Blue Competent Cells	0.5 ml (5 x 0.1 ml)	
	StrataClean Resin	0.1 ml	
	pUC 18 DNA Control Plasmid	0.01 ml (0.1 ng/μl)	

Uses advised against :  Not for use in diagnostic procedures.

### 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
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### 1.4 Emergency telephone number

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

## Section 2. Hazards identification

### 2.1 Classification of the substance or mixture

OSHA/HCS status	<input checked="" type="checkbox"/> ElectroTen-Blue Competent Cells	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.
	StrataClean Resin	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.
	pUC 18 DNA Control Plasmid	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

 Not classified.

### 2.2 GHS label elements

## Section 2. Hazards identification

<b>Signal word</b>	:	ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No signal word. No signal word. No signal word.
<b>Hazard statements</b>	:	ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Precautionary statements</b>			
<b>Prevention</b>	:	ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	Not applicable. Not applicable. Not applicable.
<b>Response</b>	:	ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	Not applicable. Not applicable. Not applicable.
<b>Storage</b>	:	ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	Not applicable. Not applicable. Not applicable.
<b>Disposal</b>	:	ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	Not applicable. Not applicable. Not applicable.
<b>Supplemental label elements</b>	:	ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	None known. None known. None known.
<b>2.3 Other hazards</b>			
<b>Hazards not otherwise classified</b>	:	ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	None known. None known. None known.

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	:	ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	Mixture Mixture Mixture
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Ingredient name	%	CAS number
ElectroTen-Blue Competent Cells		
Glycerol	<10	56-81-5

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 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

<b>Eye contact</b>	:	ElectroTen-Blue Competent Cells StrataClean Resin 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. 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. Immediately flush eyes with plenty of water,
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## Section 4. First aid measures

### Inhalation

: ElectroTen-Blue Competent Cells

occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

### Skin contact

: 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.

StrataClean Resin

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

pUC 18 DNA Control Plasmid

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

### Ingestion

: ElectroTen-Blue Competent Cells

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.

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

Wash out mouth with water. 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. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Wash out mouth with water. 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.

### 4.2 Most important symptoms/effects, acute and delayed

#### Potential acute health effects

##### **Eye contact**

: ElectroTen-Blue Competent Cells

No known significant effects or critical hazards.

StrataClean Resin

No known significant effects or critical hazards.

pUC 18 DNA Control Plasmid

No known significant effects or critical hazards.

##### **Inhalation**

: ElectroTen-Blue Competent Cells

No known significant effects or critical hazards.

StrataClean Resin

No known significant effects or critical hazards.

pUC 18 DNA Control Plasmid

No known significant effects or critical hazards.

##### **Skin contact**

: ElectroTen-Blue Competent Cells

No known significant effects or critical hazards.

StrataClean Resin

No known significant effects or critical hazards.

pUC 18 DNA Control Plasmid

No known significant effects or critical hazards.

## Section 4. First aid measures

<b>Ingestion</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Over-exposure signs/symptoms</b>		
<b>Eye contact</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No specific data. No specific data. No specific data.
<b>Inhalation</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No specific data. No specific data. No specific data.
<b>Skin contact</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No specific data. No specific data. No specific data.
<b>Ingestion</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No specific data. No specific data. No specific data.

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

<b>Notes to physician</b>	: ElectroTen-Blue Competent Cells	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.
	StrataClean Resin	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.
<b>Specific treatments</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No specific treatment. No specific treatment. No specific treatment.
<b>Protection of first-aiders</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. 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

<b>Suitable extinguishing media</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	None known. None known. None known.

### 5.2 Special hazards arising from the substance or mixture

## Section 5. Fire-fighting measures

<b>Specific hazards arising from the chemical</b>	: ElectroTen-Blue Competent Cells  StrataClean Resin  pUC 18 DNA Control Plasmid	In a fire or if heated, a pressure increase will occur and the container may burst.  In a fire or if heated, a pressure increase will occur and the container may burst.  In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous thermal decomposition products</b>	: ElectroTen-Blue Competent Cells  StrataClean Resin  pUC 18 DNA Control Plasmid	Decomposition products may include the following materials:  carbon dioxide carbon monoxide nitrogen oxides sulfur oxides phosphorus oxides  Decomposition products may include the following materials:  carbon dioxide carbon monoxide metal oxide/oxides No specific data.
<b><u>5.3 Advice for firefighters</u></b>		
<b>Special protective actions for fire-fighters</b>	: ElectroTen-Blue Competent Cells  StrataClean Resin  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.  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.  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.
<b>Special protective equipment for fire-fighters</b>	: ElectroTen-Blue Competent Cells  StrataClean Resin  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.  Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.  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

<b>For non-emergency personnel</b>	: ElectroTen-Blue Competent Cells  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 spilled material. Put on appropriate personal protective equipment.  No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not
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## Section 6. Accidental release measures

	pUC 18 DNA Control Plasmid	touch or walk through spilled material. Put on appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	: ElectroTen-Blue 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".
	StrataClean Resin	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".
<b>6.2 Environmental precautions</b>	: ElectroTen-Blue 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).
	StrataClean Resin	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).
<b>6.3 Methods and materials for containment and cleaning up</b>		
<b>Methods for cleaning up</b>	: 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.
	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.
	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

<b>Protective measures</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	Potentially biohazardous material. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. 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

: ElectroTen-Blue 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.
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 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 incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 7. Handling and storage

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)

<b>Recommendations</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications.
<b>Industrial sector specific solutions</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	Not available. Not available. Not available.

## Section 8. Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
<b>ElectroTen-Blue Competent Cells</b> Glycerol	<b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>OSHA PEL (United States, 5/2018).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 15 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>CAL OSHA PEL (United States, 5/2018).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: respirable fraction TWA: 10 mg/m <sup>3</sup> 8 hours. Form: total dust

#### Biological exposure indices

No exposure indices known.

### 8.2 Exposure controls

<b>Appropriate engineering controls</b>	: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
<b>Environmental exposure controls</b>	: 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

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



## Section 9. Physical and chemical properties and safety characteristics

Lower and upper explosion limit/flammability limit	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	Not available. Not available. Not available.																																																							
Vapor pressure	: <table border="1"> <thead> <tr> <th rowspan="2">Ingredient name</th> <th colspan="3">Vapor Pressure at 20°C</th> <th colspan="3">Vapor pressure at 50°C</th> </tr> <tr> <th>mm Hg</th> <th>kPa</th> <th>Method</th> <th>mm Hg</th> <th>kPa</th> <th>Method</th> </tr> </thead> <tbody> <tr> <td>ElectroTen-Blue Competent Cells</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>water</td><td>17.5</td><td>2.3</td><td>-</td><td>92.258</td><td>12.3</td><td>-</td></tr> <tr> <td>StrataClean Resin</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>water</td><td>17.5</td><td>2.3</td><td>-</td><td>92.258</td><td>12.3</td><td>-</td></tr> <tr> <td>pUC 18 DNA Control Plasmid</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>water</td><td>17.5</td><td>2.3</td><td>-</td><td>92.258</td><td>12.3</td><td>-</td></tr> </tbody> </table>	Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C			mm Hg	kPa	Method	mm Hg	kPa	Method	ElectroTen-Blue Competent Cells							water	17.5	2.3	-	92.258	12.3	-	StrataClean Resin							water	17.5	2.3	-	92.258	12.3	-	pUC 18 DNA Control Plasmid							water	17.5	2.3	-	92.258	12.3	-	
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Partition coefficient: n-octanol/water	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	Not applicable. Not applicable. Not applicable.																																																							
Auto-ignition temperature	: <table border="1"> <thead> <tr> <th>Ingredient name</th> <th>°C</th> <th>°F</th> <th>Method</th> </tr> </thead> <tbody> <tr> <td>ElectroTen-Blue Competent Cells</td><td></td><td></td><td></td></tr> <tr> <td>Glycerol</td><td>370</td><td>698</td><td>-</td></tr> </tbody> </table>	Ingredient name	°C	°F	Method	ElectroTen-Blue Competent Cells				Glycerol	370	698	-																																												
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Viscosity	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	Not available. Not available. Not available.																																																							
<u>Particle characteristics</u>																																																									
Median particle size	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	Not applicable. Not applicable. Not applicable.																																																							

## Section 10. Stability and reactivity

<b>10.1 Reactivity</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	The product is stable. The product is stable. The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No specific data. No specific data. No specific data.
<b>10.5 Incompatible materials</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials.
<b>10.6 Hazardous decomposition products</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
ElectroTen-Blue Competent Cells Glycerol	LD50 Oral	Rat	12600 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ElectroTen-Blue Competent Cells Glycerol	Eyes - Mild irritant Skin - Mild irritant	Rabbit	- -	24 hours 500 mg 24 hours 500 mg	- -

## Section 11. Toxicological information

### 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)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

<b>Information on the likely routes of exposure</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	Not available. Not available. Not available.
<b>Potential acute health effects</b>		
<b>Eye contact</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Inhalation</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Skin contact</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Ingestion</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Eye contact</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No specific data. No specific data. No specific data.
<b>Inhalation</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No specific data. No specific data. No specific data.
<b>Skin contact</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No specific data. No specific data. No specific data.
<b>Ingestion</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No specific data. No specific data. No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

## Section 11. Toxicological information

**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

<b>General</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Mutagenicity</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	: ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

### 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)
ElectroTen-Blue 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
ElectroTen-Blue Competent Cells Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
ElectroTen-Blue Competent Cells Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

### 12.3 Bioaccumulative potential

## Section 12. Ecological information

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
ElectroTen-Blue Competent Cells Glycerol	-1.76	-	Low

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : 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. 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 /** : Not regulated.

**IATA**

**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) CDR Exempt/Partial exemption:** Not determined

**Clean Water Act (CWA) 311:** EDTA

## Section 15. Regulatory information

**Clean Air Act Section 112** : Not listed

**(b) Hazardous Air Pollutants (HAPs)**

**Clean Air Act Section 602** : Not listed

**Class I Substances**

**Clean Air Act Section 602** : Not listed

**Class II Substances**

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**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

<b>Classification</b>	:  ElectroTen-Blue Competent Cells StrataClean Resin pUC 18 DNA Control Plasmid	Not applicable. Not applicable. Not applicable.
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#### Composition/information on ingredients

Name	%	Classification
 ElectroTen-Blue Competent Cells		
Dimethyl sulfoxide	≥10 - ≤25	FLAMMABLE LIQUIDS - Category 4
Glycerol	<10	EYE IRRITATION - Category 2B

### 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: DIMETHYL SULFOXIDE; METHANE, SULFINYLBIS-; GLYCERIN

**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.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

## Section 15. Regulatory information

Australia	: Not determined.
Canada	: Not determined.
China	: Not determined.
Japan	: Japan inventory (CSCL): Not determined. Japan inventory (ISHL): 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 active or exempted.
Viet Nam	: Not determined.

## Section 16. Other information

### Procedure used to derive the classification

Classification	Justification
Not classified.	

### History

Date of issue/Date of revision	: 09/24/2024
Date of previous issue	: 08/30/2021
Version	: 8
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

 Indicates information that has changed from previously issued version.

### Notice to reader

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