

# SAFETY DATA SHEET

XL1-Blue Electroporation-Competent Cells, Part Number 200228

## Section 1. Identification

**Product identifier** : XL1-Blue Electroporation-Competent Cells, Part Number 200228  
**Part no. (chemical kit)** : 200228  
**Part no.** : pUC 18 DNA Control Plasmid 200231-42  
 XL1-Blue electroporation competent cells 200228-41

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

**Identified uses** :  Analytical reagent.  
 pUC 18 DNA Control Plasmid 0.01 ml (0.1 ng / µl)  
 XL1-Blue electroporation competent cells 5 x 0.1 ml

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

**Emergency telephone number (with hours of operation)** : CHEMTREC®: 1-800-424-9300

## Section 2. Hazard identification

### Classification of the substance or mixture

Not classified.

### GHS label elements

**Signal word** : pUC 18 DNA Control Plasmid No signal word.  
 XL1-Blue electroporation No signal word.  
 competent cells

**Hazard statements** : pUC 18 DNA Control Plasmid No known significant effects or critical hazards.  
 XL1-Blue electroporation No known significant effects or critical hazards.  
 competent cells

### Precautionary statements

**Prevention** : pUC 18 DNA Control Plasmid Not applicable.  
 XL1-Blue electroporation Not applicable.  
 competent cells

**Response** : pUC 18 DNA Control Plasmid Not applicable.  
 XL1-Blue electroporation Not applicable.  
 competent cells

**Storage** : pUC 18 DNA Control Plasmid Not applicable.  
 XL1-Blue electroporation Not applicable.  
 competent cells

**Disposal** : pUC 18 DNA Control Plasmid Not applicable.  
 XL1-Blue electroporation Not applicable.  
 competent cells

**Supplemental label elements** : pUC 18 DNA Control Plasmid None known.  
 XL1-Blue electroporation None known.  
 competent cells  
 XL1-Blue electroporation Percentage of the mixture consisting of ingredient(s)  
 competent cells of unknown hazards to the aquatic environment: 2.3%

## Section 2. Hazard identification

**Other hazards which do not result in classification** : pUC 18 DNA Control Plasmid None known.  
 XL1-Blue electroporation None known.  
 competent cells

## Section 3. Composition/information on ingredients

**Substance/mixture** : pUC 18 DNA Control Plasmid Mixture  
 XL1-Blue electroporation Mixture  
 competent cells

Ingredient name	Synonyms	% (w/w)	CAS number
XL1-Blue electroporation competent cells			
Glycerol	Glycerol	≥5 - ≤10	56-81-5

Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

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

### Description of necessary first aid measures

<b>Eye contact</b>	: 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.
	XL1-Blue electroporation 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.
<b>Inhalation</b>	: 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.
	XL1-Blue electroporation competent cells	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
<b>Skin contact</b>	: pUC 18 DNA Control Plasmid	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	XL1-Blue electroporation competent cells	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	: 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.
	XL1-Blue electroporation competent cells	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.

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

## Section 4. First-aid measures

### Potential acute health effects

<b>Eye contact</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Inhalation</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Skin contact</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Ingestion</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	No known significant effects or critical hazards. No known significant effects or critical hazards.

### Over-exposure signs/symptoms

<b>Eye contact</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	No specific data. No specific data.
<b>Inhalation</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	No specific data. No specific data.
<b>Skin contact</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	No specific data. No specific data.
<b>Ingestion</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	No specific data. No specific data.

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

<b>Notes to physician</b>	: pUC 18 DNA Control Plasmid  XL1-Blue electroporation competent cells	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.
<b>Specific treatments</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	No specific treatment. No specific treatment.
<b>Protection of first-aiders</b>	: pUC 18 DNA Control Plasmid  XL1-Blue electroporation competent cells	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

### Extinguishing media

<b>Suitable extinguishing media</b>	: pUC 18 DNA Control Plasmid  XL1-Blue electroporation competent cells	Use an extinguishing agent suitable for the surrounding fire.  Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	None known. None known.

## Section 5. Fire-fighting measures

<b>Specific hazards arising from the chemical</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	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>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	No specific data. Decomposition products may include the following materials: carbon dioxide carbon monoxide
<b>Special protective actions for fire-fighters</b>	: pUC 18 DNA Control Plasmid  XL1-Blue electroporation 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.  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>	: pUC 18 DNA Control Plasmid  XL1-Blue electroporation competent cells	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.  Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	: pUC 18 DNA Control Plasmid  XL1-Blue electroporation competent cells	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. 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>	: pUC 18 DNA Control Plasmid  XL1-Blue electroporation 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".  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>Environmental precautions</b>	: pUC 18 DNA Control Plasmid  XL1-Blue electroporation 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).  Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 6. Accidental release measures

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

### Methods and materials for containment and cleaning up

<b>Methods for cleaning up</b>	: 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.
	XL1-Blue electroporation 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.

## Section 7. Handling and storage

### Precautions for safe handling

<b>Protective measures</b>	: pUC 18 DNA Control Plasmid	Put on appropriate personal protective equipment (see Section 8).
	XL1-Blue electroporation competent cells	Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	: pUC 18 DNA Control Plasmid	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	XL1-Blue electroporation 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.

<b>Conditions for safe storage, including any incompatibilities</b>	: 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.
	XL1-Blue electroporation 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

## Section 7. Handling and storage

prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### [Control parameters](#)

### [Occupational exposure limits](#)

Ingredient name	Exposure limits
<b>XL1-Blue electroporation competent cells</b> Glycerol	<b>CA Alberta Provincial (Canada, 6/2018).</b> 8 hrs OEL: 10 mg/m <sup>3</sup> 8 hours. Form: Mist <b>CA Quebec Provincial (Canada, 6/2022).</b> TWAEV: 10 mg/m <sup>3</sup> 8 hours. Form: mist <b>CA Saskatchewan Provincial (Canada, 7/2013).</b> STEL: 20 mg/m <sup>3</sup> 15 minutes. Form: mist TWA: 10 mg/m <sup>3</sup> 8 hours. Form: mist <b>CA British Columbia Provincial (Canada, 6/2022).</b> TWA: 3 mg/m <sup>3</sup> 8 hours. Form: respirable mist TWA: 10 mg/m <sup>3</sup> 8 hours. Form: total mist

### [Biological exposure indices](#)

No exposure indices known.

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

### [Individual protection measures](#)

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

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

### [Skin protection](#)

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

## Section 8. Exposure controls/personal protection

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

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

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance

- Physical state** : pUC 18 DNA Control Plasmid Liquid.  
XL1-Blue electroporation Liquid.  
competent cells
- Color** : pUC 18 DNA Control Plasmid Not available.  
XL1-Blue electroporation Not available.  
competent cells
- Odor** : pUC 18 DNA Control Plasmid Not available.  
XL1-Blue electroporation Not available.  
competent cells
- Odor threshold** : pUC 18 DNA Control Plasmid Not available.  
XL1-Blue electroporation Not available.  
competent cells
- pH** : pUC 18 DNA Control Plasmid 7.5  
XL1-Blue electroporation Not available.  
competent cells
- Melting point/freezing point** : pUC 18 DNA Control Plasmid 0°C (32°F)  
XL1-Blue electroporation Not available.  
competent cells
- Boiling point, initial boiling point, and boiling range** : pUC 18 DNA Control Plasmid 100°C (212°F)  
XL1-Blue electroporation Not available.  
competent cells

### Flash point

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
<b>XL1-Blue electroporation competent cells</b>						
Glycerol	-	-	-	177	350.6	-
D-Glucitol	-	-	-	282.85	541.1	-

- Evaporation rate** : pUC 18 DNA Control Plasmid Not available.  
XL1-Blue electroporation Not available.  
competent cells
- Flammability** : pUC 18 DNA Control Plasmid Not applicable.  
XL1-Blue electroporation Not applicable.  
competent cells
- Lower and upper explosion limit/flammability limit** : pUC 18 DNA Control Plasmid Not available.  
XL1-Blue electroporation Not available.  
competent cells

### Vapor pressure

:

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

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
<input checked="" type="checkbox"/> pUC 18 DNA Control Plasmid						
water	17.5	2.3	-	92.258	12.3	-
<b>XL1-Blue electroporation competent cells</b>						
water	17.5	2.3	-	92.258	12.3	-
Glycerol	0.000075	0.00001	-	0.0025	0.00033	-

**Relative vapor density** : pUC 18 DNA Control Plasmid Not available.  
 XL1-Blue electroporation competent cells Not available.

**Relative density** : pUC 18 DNA Control Plasmid Not available.  
 XL1-Blue electroporation competent cells Not available.

**Solubility(ies)** :

Media	Result
<input checked="" type="checkbox"/> pUC 18 DNA Control Plasmid	
water	Soluble
<b>XL1-Blue electroporation competent cells</b>	
water	Soluble

**Partition coefficient: n-octanol/water** :  pUC 18 DNA Control Plasmid Not applicable.  
 XL1-Blue electroporation competent cells Not applicable.

**Auto-ignition temperature** :

Ingredient name	°C	°F	Method
<input checked="" type="checkbox"/> <b>XL1-Blue electroporation competent cells</b>			
Glycerol	370	698	-

**Decomposition temperature** : pUC 18 DNA Control Plasmid Not available.  
 XL1-Blue electroporation competent cells Not available.

**Viscosity** : pUC 18 DNA Control Plasmid Not available.  
 XL1-Blue electroporation competent cells Not available.

**Particle characteristics**

**Median particle size** :  pUC 18 DNA Control Plasmid Not applicable.  
 XL1-Blue electroporation competent cells Not applicable.



## Section 10. Stability and reactivity

<b>Reactivity</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	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>Chemical stability</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	The product is stable. The product is stable.
<b>Possibility of hazardous reactions</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	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>Conditions to avoid</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	No specific data. No specific data.
<b>Incompatible materials</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials.
<b>Hazardous decomposition products</b>	: pUC 18 DNA Control Plasmid XL1-Blue electroporation competent cells	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
XL1-Blue electroporation competent cells Glycerol	LD50 Oral	Rat	12600 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
XL1-Blue electroporation competent cells Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

#### Sensitization

Not available.

#### Mutagenicity

**Conclusion/Summary** : Not available.

#### Carcinogenicity

**Conclusion/Summary** : Not available.

#### Reproductive toxicity

## Section 11. Toxicological information

**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.

**Information on the likely routes of exposure** : pUC 18 DNA Control Plasmid Not available.  
XL1-Blue electroporation Not available.  
competent cells

### Potential acute health effects

**Eye contact** : pUC 18 DNA Control Plasmid No known significant effects or critical hazards.  
XL1-Blue electroporation No known significant effects or critical hazards.  
competent cells

**Inhalation** : pUC 18 DNA Control Plasmid No known significant effects or critical hazards.  
XL1-Blue electroporation No known significant effects or critical hazards.  
competent cells

**Skin contact** : pUC 18 DNA Control Plasmid No known significant effects or critical hazards.  
XL1-Blue electroporation No known significant effects or critical hazards.  
competent cells

**Ingestion** : pUC 18 DNA Control Plasmid No known significant effects or critical hazards.  
XL1-Blue electroporation No known significant effects or critical hazards.  
competent cells

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

**Eye contact** : pUC 18 DNA Control Plasmid No specific data.  
XL1-Blue electroporation No specific data.  
competent cells

**Inhalation** : pUC 18 DNA Control Plasmid No specific data.  
XL1-Blue electroporation No specific data.  
competent cells

**Skin contact** : pUC 18 DNA Control Plasmid No specific data.  
XL1-Blue electroporation No specific data.  
competent cells

**Ingestion** : pUC 18 DNA Control Plasmid No specific data.  
XL1-Blue electroporation No specific data.  
competent cells

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

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

## Section 11. Toxicological information

### Potential chronic health effects

<b>General</b>	: pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
	XL1-Blue electroporation competent cells	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
	XL1-Blue electroporation competent cells	No known significant effects or critical hazards.
<b>Mutagenicity</b>	: pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
	XL1-Blue electroporation competent cells	No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	: <input checked="" type="checkbox"/> pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
	XL1-Blue electroporation competent cells	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)
XL1-Blue electroporation competent cells Glycerol	12600	N/A	N/A	N/A	N/A

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
<input checked="" type="checkbox"/> XL1-Blue electroporation competent cells Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours

### Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
XL1-Blue electroporation competent cells Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
XL1-Blue electroporation competent cells Glycerol	-1.76	-	Low

### Mobility in soil

<b>Soil/water partition coefficient (K<sub>oc</sub>)</b>	: Not available.
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## Section 12. Ecological information

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

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

**TDG / IMDG / IATA** : Not regulated.

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

**Transport in bulk according to IMO instruments** : Not available.

## Section 15. Regulatory information

### Canadian lists

**Canadian NPRI** : None of the components are listed.

**CEPA Toxic substances** : None of the components are listed.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### 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

**Canada** : All components are listed or exempted.

**United States** : All components are active or exempted.

## Section 16. Other information

### History

**Date of issue/Date of revision** : 06/30/2023

**Date of previous issue** : 03/23/2020

**Version** : 7

**Key to abbreviations** :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- HPR = Hazardous Products Regulations
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- N/A = Not available
- UN = United Nations

### Procedure used to derive the classification

Classification	Justification
Not classified.	

✔ Indicates information that has changed from previously issued version.

### Notice to reader

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