

SAFETY DATA SHEET

Lambda DASH II BamH I Vector Kit, Part Number 247211

Section 1. Identification

1.1 Product identifier

Product name : Lambda DASH II BamH I Vector Kit, Part Number 247211
Part no. (chemical kit) : 247211
Part no. : pBR322 Test Insert Digested With EcoR I 210200-52
 and Sal I
 XL1-Blue MRA E.coli Strain 200302-81
 XL1-Blue MRA (p2) E.coli Strain 200303-81
 Lambda DASH II Vector Double Digested 247211-51
 With BamH I And Xho I CIAP Treated

Validation date : 9/30/2021

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

Material uses : Analytical reagent.
 pBR322 Test Insert Digested With EcoR I and 10 µl (2.5 µg 0.25 µg/µl)
 Sal I
 XL1-Blue MRA E.coli Strain 500 µl
 XL1-Blue MRA (p2) E.coli Strain 500 µl
 Lambda DASH II Vector Double Digested With 10 µl (10 µg 1 µg/µl)
 BamH I And Xho I CIAP Treated

1.3 Details of the supplier of the safety data sheet

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

1.4 Emergency telephone number

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

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status : pBR322 Test Insert Digested With EcoR I and Sal I 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.

XL1-Blue MRA E.coli Strain This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

XL1-Blue MRA (p2) E.coli Strain This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture

Section 2. Hazards identification

XL1-Blue MRA E.coli Strain

H319 EYE IRRITATION - Category 2A

XL1-Blue MRA (p2) E.coli Strain

H319 EYE IRRITATION - Category 2A

2.2 GHS label elements

Hazard pictograms

: XL1-Blue MRA E.coli Strain



XL1-Blue MRA (p2) E.coli Strain



Signal word

: pBR322 Test Insert Digested With EcoR I and Sal I No signal word.
 XL1-Blue MRA E.coli Strain Warning
 XL1-Blue MRA (p2) E.coli Strain Warning
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated No signal word.

Hazard statements

: pBR322 Test Insert Digested With EcoR I and Sal I No known significant effects or critical hazards.
 XL1-Blue MRA E.coli Strain H319 - Causes serious eye irritation.
 XL1-Blue MRA (p2) E.coli Strain H319 - Causes serious eye irritation.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated No known significant effects or critical hazards.

Precautionary statements

Prevention

: pBR322 Test Insert Digested With EcoR I and Sal I Not applicable.
 XL1-Blue MRA E.coli Strain P280 - Wear eye or face protection.
 XL1-Blue MRA (p2) E.coli Strain P280 - Wear eye or face protection.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not applicable.

Response

: pBR322 Test Insert Digested With EcoR I and Sal I Not applicable.
 XL1-Blue MRA E.coli Strain P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337 + P313 - If eye irritation persists: Get medical advice or attention.
 XL1-Blue MRA (p2) E.coli Strain P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337 + P313 - If eye irritation persists: Get medical advice or attention.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not applicable.

Section 2. Hazards identification

Storage : pBR322 Test Insert Digested With EcoR I and Sal I Not applicable.
 XL1-Blue MRA E.coli Strain Not applicable.
 XL1-Blue MRA (p2) E.coli Strain Not applicable.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not applicable.

Disposal : pBR322 Test Insert Digested With EcoR I and Sal I Not applicable.
 XL1-Blue MRA E.coli Strain Not applicable.
 XL1-Blue MRA (p2) E.coli Strain Not applicable.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not applicable.

Supplemental label elements : pBR322 Test Insert Digested With EcoR I and Sal I None known.
 XL1-Blue MRA E.coli Strain None known.
 XL1-Blue MRA (p2) E.coli Strain None known.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated None known.

2.3 Other hazards

Hazards not otherwise classified : pBR322 Test Insert Digested With EcoR I and Sal I None known.
 XL1-Blue MRA E.coli Strain None known.
 XL1-Blue MRA (p2) E.coli Strain None known.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated None known.

Section 3. Composition/information on ingredients

Substance/mixture : pBR322 Test Insert Digested With EcoR I and Sal I Mixture
 XL1-Blue MRA E.coli Strain Mixture
 XL1-Blue MRA (p2) E.coli Strain Mixture
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Mixture

Ingredient name	%	CAS number
XL1-Blue MRA E.coli Strain		
Glycerol	≥10 - ≤25	56-81-5
Sodium chloride	≤3	7647-14-5
XL1-Blue MRA (p2) E.coli Strain		
Glycerol	≥10 - ≤25	56-81-5
Sodium chloride	≤3	7647-14-5

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

Eye contact	: pBR322 Test Insert Digested With EcoR I and Sal I	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 MRA E.coli Strain	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.
	XL1-Blue MRA (p2) E.coli Strain	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.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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	: pBR322 Test Insert Digested With EcoR I and Sal I	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	XL1-Blue MRA E.coli Strain	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	XL1-Blue MRA (p2) E.coli Strain	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	: pBR322 Test Insert Digested With EcoR I and Sal I	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	XL1-Blue MRA E.coli Strain	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.
	XL1-Blue MRA (p2) E.coli Strain	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get

Section 4. First aid measures

Ingestion

Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated

: pBR322 Test Insert Digested With EcoR I and Sal I

XL1-Blue MRA E.coli Strain

XL1-Blue MRA (p2) E.coli Strain

Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated

medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. 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.

Wash out mouth with water. Remove dentures if any. 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.

Wash out mouth with water. Remove dentures if any. 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.

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. 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.

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

: pBR322 Test Insert Digested With EcoR I and Sal I

XL1-Blue MRA E.coli Strain

XL1-Blue MRA (p2) E.coli Strain

Lambda DASH II Vector Double Digested With BamH I And Xho I

CIAP Treated

No known significant effects or critical hazards.

Causes serious eye irritation.

Causes serious eye irritation.

No known significant effects or critical hazards.

Section 4. First aid measures

Inhalation	: pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.
	XL1-Blue MRA E.coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRA (p2) E.coli Strain	No known significant effects or critical hazards.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No known significant effects or critical hazards.
Skin contact	: pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.
	XL1-Blue MRA E.coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRA (p2) E.coli Strain	No known significant effects or critical hazards.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No known significant effects or critical hazards.
Ingestion	: pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.
	XL1-Blue MRA E.coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRA (p2) E.coli Strain	No known significant effects or critical hazards.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.
	XL1-Blue MRA E.coli Strain	Adverse symptoms may include the following: pain or irritation watering redness
	XL1-Blue MRA (p2) E.coli Strain	Adverse symptoms may include the following: pain or irritation watering redness
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data.
Inhalation	: pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.
	XL1-Blue MRA E.coli Strain	No specific data.
	XL1-Blue MRA (p2) E.coli Strain	No specific data.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data.
Skin contact	: pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.
	XL1-Blue MRA E.coli Strain	No specific data.
	XL1-Blue MRA (p2) E.coli Strain	No specific data.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data.
Ingestion	: pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.
	XL1-Blue MRA E.coli Strain	No specific data.
	XL1-Blue MRA (p2) E.coli Strain	No specific data.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data.

Section 4. First aid measures

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

Notes to physician	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific treatment. No specific treatment. No specific treatment. No specific treatment.
Protection of first-aiders	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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. Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	None known. None known. None known. None known.

5.2 Special hazards arising from the substance or mixture

Section 5. Fire-fighting measures

Specific hazards arising from the chemical	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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. In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data. Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides No specific data.
5.3 Advice for firefighters		
Special protective actions for fire-fighters	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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. 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	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 5. Fire-fighting measures

pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: pBR322 Test Insert Digested With EcoR I and Sal I	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.
	XL1-Blue MRA E.coli Strain	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	XL1-Blue MRA (p2) E.coli Strain	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
For emergency responders	: pBR322 Test Insert Digested With EcoR I and Sal I	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".
	XL1-Blue MRA E.coli Strain	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".
	XL1-Blue MRA (p2) E.coli Strain	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".
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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".
6.2 Environmental precautions	: pBR322 Test Insert Digested With EcoR I and Sal I	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).
	XL1-Blue MRA E.coli Strain	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 6. Accidental release measures

XL1-Blue MRA (p2) E.coli Strain

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

Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up

: pBR322 Test Insert Digested With EcoR I and Sal I

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 MRA E.coli Strain

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 MRA (p2) E.coli Strain

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.

Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures

: pBR322 Test Insert Digested With EcoR I and Sal I

Put on appropriate personal protective equipment (see Section 8).

XL1-Blue MRA E.coli Strain

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

XL1-Blue MRA (p2) E.coli Strain

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers

Section 7. Handling and storage

	<p>Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated</p>	<p>retain product residue and can be hazardous. Do not reuse container. Put on appropriate personal protective equipment (see Section 8).</p>
<p>Advice on general occupational hygiene</p>	<p>: pBR322 Test Insert Digested With EcoR I and Sal I</p>	<p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p>
	<p>XL1-Blue MRA E.coli Strain</p>	<p>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.</p>
	<p>XL1-Blue MRA (p2) E.coli Strain</p>	<p>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.</p>
	<p>Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated</p>	<p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p>
<p>7.2 Conditions for safe storage, including any incompatibilities</p>	<p>: pBR322 Test Insert Digested With EcoR I and Sal I</p>	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
	<p>XL1-Blue MRA E.coli Strain</p>	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
	<p>XL1-Blue MRA (p2) E.coli Strain</p>	<p>Store in accordance with local regulations. Store in</p>

Section 7. Handling and storage

Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated

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. 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.

7.3 Specific end use(s)

Recommendations

- : pBR322 Test Insert Digested With EcoR I and Sal I Industrial applications, Professional applications.
- XL1-Blue MRA E.coli Strain Industrial applications, Professional applications.
- XL1-Blue MRA (p2) E.coli Strain Industrial applications, Professional applications.
- Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Industrial applications, Professional applications.

Industrial sector specific solutions

- : pBR322 Test Insert Digested With EcoR I and Sal I Not available.
- XL1-Blue MRA E.coli Strain Not available.
- XL1-Blue MRA (p2) E.coli Strain Not available.
- Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not available.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
<p>XL1-Blue MRA E.coli Strain Glycerol</p> <p>Sodium chloride</p>	<p>OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust</p> <p>OSHA PEL (United States, 5/2018). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust</p> <p>None.</p>
<p>XL1-Blue MRA (p2) E.coli Strain Glycerol</p>	<p>OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction</p>

Section 8. Exposure controls/personal protection

Sodium chloride	<p>TWA: 10 mg/m³ 8 hours. Form: Total dust OSHA PEL (United States, 5/2018). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust None.</p>
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8.2 Exposure controls

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

Individual protection measures

- Hygiene measures** : Handle as biohazard material (Biosafety level 1). Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

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

Appearance

- Physical state** :

pBR322 Test Insert Digested With EcoR I and Sal I	Liquid.
XL1-Blue MRA E.coli Strain	Liquid.
XL1-Blue MRA (p2) E.coli Strain	Liquid.
Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Liquid.

Section 9. Physical and chemical properties and safety characteristics

Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated						
Edetic acid	>100	>212	DIN 51758			

Evaporation rate : pBR322 Test Insert Digested With EcoR I and Sal I Not available.
 XL1-Blue MRA E.coli Strain Not available.
 XL1-Blue MRA (p2) E.coli Strain Not available.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not available.

Flammability : pBR322 Test Insert Digested With EcoR I and Sal I Not applicable.
 XL1-Blue MRA E.coli Strain Not applicable.
 XL1-Blue MRA (p2) E.coli Strain Not applicable.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not applicable.

Lower and upper explosion limit/flammability limit : pBR322 Test Insert Digested With EcoR I and Sal I Not available.
 XL1-Blue MRA E.coli Strain Not available.
 XL1-Blue MRA (p2) E.coli Strain Not available.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not available.

Vapor pressure :

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
pBR322 Test Insert Digested With EcoR I and Sal I						
Water	23.8	3.2				
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0	0		0.000007501	0.000001	
XL1-Blue MRA E.coli Strain						
Water	23.8	3.2				
Glycerol	0	0		0	0	
XL1-Blue MRA (p2) E. coli Strain						
Water	23.8	3.2				
Glycerol	0	0		0	0	
Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated						
Water	23.8	3.2				
2-Amino-2-	0	0		0.000007501	0.000001	

Section 9. Physical and chemical properties and safety characteristics

(hydroxymethyl)propane-1,3-diol hydrochloride						
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Relative vapor density : pBR322 Test Insert Digested With EcoR I and Sal I Not available.
 XL1-Blue MRA E.coli Strain Not available.
 XL1-Blue MRA (p2) E.coli Strain Not available.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not available.

Relative density : pBR322 Test Insert Digested With EcoR I and Sal I Not available.
 XL1-Blue MRA E.coli Strain Not available.
 XL1-Blue MRA (p2) E.coli Strain Not available.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not available.

Solubility : pBR322 Test Insert Digested With EcoR I and Sal I Easily soluble in the following materials: cold water and hot water.
 XL1-Blue MRA E.coli Strain Soluble in the following materials: cold water and hot water.
 XL1-Blue MRA (p2) E.coli Strain Soluble in the following materials: cold water and hot water.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Easily soluble in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water : pBR322 Test Insert Digested With EcoR I and Sal I Not applicable.
 XL1-Blue MRA E.coli Strain Not applicable.
 XL1-Blue MRA (p2) E.coli Strain Not applicable.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not applicable.

Auto-ignition temperature :

Ingredient name	°C	°F	Method
pBR322 Test Insert Digested With EcoR I and Sal I			
Edetic acid	>400	>752	VDI 2263
XL1-Blue MRA E.coli Strain			
Glycerol	370	698	
XL1-Blue MRA (p2) E.coli Strain			
Glycerol	370	698	
Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated			
Edetic acid	>400	>752	VDI 2263

Decomposition temperature : pBR322 Test Insert Digested With EcoR I and Sal I Not available.
 XL1-Blue MRA E.coli Strain Not available.
 XL1-Blue MRA (p2) E.coli Strain Not available.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not available.

Section 9. Physical and chemical properties and safety characteristics

Viscosity	: pBR322 Test Insert Digested With EcoR I and Sal I	Not available.
	XL1-Blue MRA E.coli Strain	Not available.
	XL1-Blue MRA (p2) E.coli Strain	Not available.
	Lambda DASH II Vector Double Digested With BamH I And Xho I	Not available.
	CIAP Treated	

Particle characteristics

Median particle size	: pBR322 Test Insert Digested With EcoR I and Sal I	Not applicable.
	XL1-Blue MRA E.coli Strain	Not applicable.
	XL1-Blue MRA (p2) E.coli Strain	Not applicable.
	Lambda DASH II Vector Double Digested With BamH I And Xho I	Not applicable.
	CIAP Treated	

Section 10. Stability and reactivity

10.1 Reactivity	: pBR322 Test Insert Digested With EcoR I and Sal I	No specific test data related to reactivity available for this product or its ingredients.
	XL1-Blue MRA E.coli Strain	No specific test data related to reactivity available for this product or its ingredients.
	XL1-Blue MRA (p2) E.coli Strain	No specific test data related to reactivity available for this product or its ingredients.
	Lambda DASH II Vector Double Digested With BamH I And Xho I	No specific test data related to reactivity available for this product or its ingredients.
	CIAP Treated	

10.2 Chemical stability	: pBR322 Test Insert Digested With EcoR I and Sal I	The product is stable.
	XL1-Blue MRA E.coli Strain	The product is stable.
	XL1-Blue MRA (p2) E.coli Strain	The product is stable.
	Lambda DASH II Vector Double Digested With BamH I And Xho I	The product is stable.
	CIAP Treated	

10.3 Possibility of hazardous reactions	: pBR322 Test Insert Digested With EcoR I and Sal I	Under normal conditions of storage and use, hazardous reactions will not occur.
	XL1-Blue MRA E.coli Strain	Under normal conditions of storage and use, hazardous reactions will not occur.
	XL1-Blue MRA (p2) E.coli Strain	Under normal conditions of storage and use, hazardous reactions will not occur.
	Lambda DASH II Vector Double Digested With BamH I And Xho I	Under normal conditions of storage and use, hazardous reactions will not occur.
	CIAP Treated	

10.4 Conditions to avoid	: pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.
	XL1-Blue MRA E.coli Strain	No specific data.
	XL1-Blue MRA (p2) E.coli Strain	No specific data.
	Lambda DASH II Vector Double Digested With BamH I And Xho I	No specific data.
	CIAP Treated	

Section 10. Stability and reactivity

10.5 Incompatible materials	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials.
10.6 Hazardous decomposition products	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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. 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
XL1-Blue MRA E.coli Strain Glycerol	LD50 Oral	Rat	12600 mg/kg	-
	Sodium chloride LD50 Oral	Rat	3000 mg/kg	-
XL1-Blue MRA (p2) E.coli Strain Glycerol	LD50 Oral	Rat	12600 mg/kg	-
	Sodium chloride LD50 Oral	Rat	3000 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation	
XL1-Blue MRA E.coli Strain Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-	
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-	
	Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
		Eyes - Moderate irritant Skin - Mild irritant	Rabbit Rabbit	- -	10 mg 24 hours 500 mg	- -
XL1-Blue MRA (p2) E.coli Strain Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-	
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-	
	Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-

Section 11. Toxicological information

	Eyes - Moderate irritant Skin - Mild irritant	Rabbit Rabbit	- -	10 mg 24 hours 500 mg	- -
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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.

Information on the likely routes of exposure	: pBR322 Test Insert Digested With EcoR I and Sal I	Not available.
	XL1-Blue MRA E.coli Strain	Routes of entry anticipated: Oral, Dermal, Inhalation.
	XL1-Blue MRA (p2) E.coli Strain	Routes of entry anticipated: Oral, Dermal, Inhalation.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Not available.

Potential acute health effects

Eye contact	: pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.
	XL1-Blue MRA E.coli Strain	Causes serious eye irritation.
	XL1-Blue MRA (p2) E.coli Strain	Causes serious eye irritation.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No known significant effects or critical hazards.
Inhalation	: pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.
	XL1-Blue MRA E.coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRA (p2) E.coli Strain	No known significant effects or critical hazards.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No known significant effects or critical hazards.
Skin contact	: pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.
	XL1-Blue MRA E.coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRA (p2) E.coli Strain	No known significant effects or critical hazards.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No known significant effects or critical hazards.

Section 11. Toxicological information

Ingestion	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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.
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Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data. Adverse symptoms may include the following: pain or irritation watering redness Adverse symptoms may include the following: pain or irritation watering redness No specific data.
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Inhalation	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data. No specific data. No specific data. No specific data.
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Skin contact	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data. No specific data. No specific data. No specific data.
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Ingestion	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data. No specific data. No specific data.
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Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Section 11. Toxicological information

General	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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.
Carcinogenicity	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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.
Mutagenicity	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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.
Reproductive toxicity	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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.

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 MRA E.coli Strain					
XL1-Blue MRA E.coli Strain	300000	N/A	N/A	N/A	N/A
Glycerol	12600	N/A	N/A	N/A	N/A
Sodium chloride	3000	N/A	N/A	N/A	N/A
XL1-Blue MRA (p2) E.coli Strain					
XL1-Blue MRA (p2) E.coli Strain	300000	N/A	N/A	N/A	N/A
Glycerol	12600	N/A	N/A	N/A	N/A
Sodium chloride	3000	N/A	N/A	N/A	N/A

Other information	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Not available. Not available. Not available. Not available.
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Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
XL1-Blue MRA E.coli Strain Glycerol Sodium chloride	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute EC50 4.74 g/L Fresh water	Algae - Chlamydomonas reinhardtii	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
	Chronic LC10 781 mg/l Fresh water	Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	3 weeks
	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days
	Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks
	XL1-Blue MRA (p2) E.coli Strain Glycerol Sodium chloride	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss
Acute EC50 4.74 g/L Fresh water		Algae - Chlamydomonas reinhardtii	96 hours
Acute EC50 519.6 mg/l Fresh water		Crustaceans - Cypris subglobosa	48 hours
Acute IC50 6.87 g/L Fresh water		Aquatic plants - Lemna minor	96 hours
Acute LC50 1000000 µg/l Fresh water		Fish - Morone saxatilis - Larvae	96 hours
Chronic LC10 781 mg/l Fresh water		Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	3 weeks
Chronic NOEC 6 g/L Fresh water		Aquatic plants - Lemna minor	96 hours
Chronic NOEC 0.314 g/L Fresh water		Daphnia - Daphnia pulex	21 days
Chronic NOEC 100 mg/l Fresh water		Fish - Gambusia holbrooki - Adult	8 weeks

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
XL1-Blue MRA E.coli Strain Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
XL1-Blue MRA (p2) E.coli Strain Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
XL1-Blue MRA E.coli Strain Glycerol	-1.76	-	low
XL1-Blue MRA (p2) E.coli Strain Glycerol	-1.76	-	low

Section 12. Ecological information

12.4 Mobility in soil

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

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

Section 13. Disposal considerations

13.1 Waste treatment methods

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

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

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

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

Section 14. Transport information

DOT / TDG / Mexico / IMDG / IATA : Not regulated.

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

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

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

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
Clean Water Act (CWA) 311: Edetic acid

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

Section 15. Regulatory information

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : pBR322 Test Insert Digested With EcoR I and Sal I Not applicable.
 XL1-Blue MRA E.coli Strain EYE IRRITATION - Category 2A
 XL1-Blue MRA (p2) E.coli Strain EYE IRRITATION - Category 2A
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not applicable.

Composition/information on ingredients

Name	%	Classification
XL1-Blue MRA E.coli Strain		
Glycerol	≥10 - ≤25	EYE IRRITATION - Category 2B
Sodium chloride	≤3	EYE IRRITATION - Category 2A
XL1-Blue MRA (p2) E.coli Strain		
Glycerol	≥10 - ≤25	EYE IRRITATION - Category 2B
Sodium chloride	≤3	EYE IRRITATION - Category 2A

State regulations

Massachusetts : The following components are listed: GLYCERINE MIST

New York : None of the components are listed.

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

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

California Prop. 65

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

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Section 15. Regulatory information

Inventory list

Australia	: All components are listed or exempted.
Canada	: All components are listed or exempted.
China	: All components are listed or exempted.
Europe	: All components are listed or exempted.
Japan	: Japan inventory (CSCL) : All components are listed or exempted. Japan inventory (ISHL) : All components are listed or exempted.
New Zealand	: All components are listed or exempted.
Philippines	: All components are listed or exempted.
Republic of Korea	: All components are listed or exempted.
Taiwan	: All components are listed or exempted.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: <input checked="" type="checkbox"/> All components are active or exempted.
Viet Nam	: <input checked="" type="checkbox"/> All components are listed or exempted.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
<input checked="" type="checkbox"/> XL1-Blue MRA E.coli Strain EYE IRRITATION - Category 2A	Calculation method
XL1-Blue MRA (p2) E.coli Strain EYE IRRITATION - Category 2A	Calculation method

History

Date of issue	: 09/30/2021
Date of previous issue	: 05/23/2019
Version	: 4

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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