

SAFETY DATA SHEET



Lambda ZAP-CMV RI Predigested Vector Kit, Part Number 239221

Section 1. Identification

Product identifier	: Lambda ZAP-CMV RI Predigested Vector Kit, Part Number 239221	
Part No. (Chemical Kit)	: 239221	
Part No.	: <input checked="" type="checkbox"/> 408 Interference-Resistant Helper Phage	200252-81
	ExAssist Interference-Resistant Helper Phage	200253-81
	XL1-Blue MRF' E.coli Strain	200301-81
	XLOLR E. coli Strain	200304-81
	pRho/EcoR I Test Insert	210200-51
	Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	239221-51

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

Analytical reagent.

<input checked="" type="checkbox"/> 408 Interference-Resistant Helper Phage	1 ml
ExAssist Interference-Resistant Helper Phage	1 ml >1 X E10 pfu/ml
XL1-Blue MRF' E.coli Strain	0.5 ml
XLOLR E. coli Strain	0.5 ml
pRho/EcoR I Test Insert	0.01 ml (1.25 µg 0.25 µg/µl)
Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	0.02 ml (10 µg 1 µg/µl)

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia
1800 802 402

Emergency telephone number (with hours of operation) : CHEMTREC®: +(61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture

Not classified.

<input checked="" type="checkbox"/> XL1-Blue MRF' E.coli Strain	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 10 - 30%
XLOLR E. coli Strain	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 10 - 30%

GHS label elements

Signal word	: <input checked="" type="checkbox"/> 408 Interference-Resistant Helper Phage	No signal word.
	ExAssist Interference-Resistant Helper Phage	No signal word.
	XL1-Blue MRF' E.coli Strain	No signal word.
	XLOLR E. coli Strain	No signal word.
	pRho/EcoR I Test Insert	No signal word.
	Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	No signal word.

Section 2. Hazard(s) identification

Hazard statements	: R408 Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	ExAssist Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	XL1-Blue MRF' E.coli Strain	No known significant effects or critical hazards.
	XLOLR E. coli Strain	No known significant effects or critical hazards.
	pRho/EcoR I Test Insert	No known significant effects or critical hazards.
	Lambda ZAP-CMV-RI	No known significant effects or critical hazards.
	Vector Digested With EcoR I And CIAP Treated	No known significant effects or critical hazards.

Precautionary statements

Prevention	: R408 Interference-Resistant Helper Phage	Not applicable.
	ExAssist Interference-Resistant Helper Phage	Not applicable.
	XL1-Blue MRF' E.coli Strain	Not applicable.
	XLOLR E. coli Strain	Not applicable.
	pRho/EcoR I Test Insert	Not applicable.
	Lambda ZAP-CMV-RI	Not applicable.
	Vector Digested With EcoR I And CIAP Treated	Not applicable.

Response	: R408 Interference-Resistant Helper Phage	Not applicable.
	ExAssist Interference-Resistant Helper Phage	Not applicable.
	XL1-Blue MRF' E.coli Strain	Not applicable.
	XLOLR E. coli Strain	Not applicable.
	pRho/EcoR I Test Insert	Not applicable.
	Lambda ZAP-CMV-RI	Not applicable.
	Vector Digested With EcoR I And CIAP Treated	Not applicable.

Storage	: R408 Interference-Resistant Helper Phage	Not applicable.
	ExAssist Interference-Resistant Helper Phage	Not applicable.
	XL1-Blue MRF' E.coli Strain	Not applicable.
	XLOLR E. coli Strain	Not applicable.
	pRho/EcoR I Test Insert	Not applicable.
	Lambda ZAP-CMV-RI	Not applicable.
	Vector Digested With EcoR I And CIAP Treated	Not applicable.

Disposal	: R408 Interference-Resistant Helper Phage	Not applicable.
	ExAssist Interference-Resistant Helper Phage	Not applicable.
	XL1-Blue MRF' E.coli Strain	Not applicable.
	XLOLR E. coli Strain	Not applicable.
	pRho/EcoR I Test Insert	Not applicable.
	Lambda ZAP-CMV-RI	Not applicable.
	Vector Digested With EcoR I And CIAP Treated	Not applicable.

Supplemental label elements

Additional warning phrases	: R408 Interference-Resistant Helper Phage	Not applicable.
	ExAssist Interference-Resistant Helper Phage	Not applicable.
	XL1-Blue MRF' E.coli Strain	Not applicable.
	XLOLR E. coli Strain	Not applicable.
	pRho/EcoR I Test Insert	Not applicable.
	Lambda ZAP-CMV-RI	Not applicable.

Section 2. Hazard(s) identification

Vector Digested With EcoR I
And CIAP Treated

Other hazards which do not result in classification :

- 408 Interference-Resistant Helper Phage None known.
- ExAssist Interference-Resistant Helper Phage None known.
- XL1-Blue MRF' E.coli Strain None known.
- XLOLR E. coli Strain None known.
- pRheo/EcoR I Test Insert None known.
- Lambda ZAP-CMV-RI None known.
- Vector Digested With EcoR I And CIAP Treated

Section 3. Composition and ingredient information

Substance/mixture :

- 408 Interference-Resistant Helper Phage Mixture
- ExAssist Interference-Resistant Helper Phage Mixture
- XL1-Blue MRF' E.coli Strain Mixture
- XLOLR E. coli Strain Mixture
- pRheo/EcoR I Test Insert Mixture
- Lambda ZAP-CMV-RI Mixture
- Vector Digested With EcoR I And CIAP Treated

CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
<input checked="" type="checkbox"/> XL1-Blue MRF' E.coli Strain Glycerol	≥10 - ≤30	56-81-5
XLOLR E. coli Strain Glycerol	≥10 - ≤30	56-81-5

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.




Section 4. First aid measures

Description of necessary first aid measures

Eye contact :

- 408 Interference-Resistant Helper Phage 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.
- ExAssist Interference-Resistant Helper Phage 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 MRF' E.coli Strain 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.
- XLOLR E. coli Strain 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.
- pRheo/EcoR I Test Insert Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids.

Section 4. First aid measures

		Check for and remove any contact lenses. Get medical attention if irritation occurs.
	Lambda ZAP-CMV-RI Vector Digested With EcoR I And 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	:  408 Interference-Resistant Helper Phage	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	ExAssist Interference-Resistant Helper Phage	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	XL1-Blue MRF' E.coli Strain	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	XL0LR E. coli Strain	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	pRho/EcoR I Test Insert	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Lambda ZAP-CMV-RI Vector Digested With EcoR I And 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	:  408 Interference-Resistant Helper Phage	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	ExAssist Interference-Resistant Helper Phage	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	XL1-Blue MRF' E.coli Strain	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	XL0LR E. coli Strain	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pRho/EcoR I Test Insert	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	:  408 Interference-Resistant Helper Phage	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	ExAssist Interference-Resistant Helper Phage	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	XL1-Blue MRF' E.coli Strain	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical

Section 4. First aid measures

XLOLR E. coli Strain	attention if symptoms occur. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
pRho/EcoR I Test Insert	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: <input checked="" type="checkbox"/> 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And 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. No known significant effects or critical hazards. No known significant effects or critical hazards.
Inhalation	: <input checked="" type="checkbox"/> 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And 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. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: <input checked="" type="checkbox"/> 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And 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. No known significant effects or critical hazards. No known significant effects or critical hazards.

Section 4. First aid measures

Ingestion	: ☒ 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And 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. No known significant effects or critical hazards. No known significant effects or critical hazards.
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Over-exposure signs/symptoms

Eye contact	: ☒ 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
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Inhalation	: ☒ 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
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Skin contact	: ☒ 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
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Ingestion	: ☒ 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
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Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	: ☒ 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain	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
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Section 4. First aid measures

	XLOLR E. coli Strain	ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	pRho/EcoR I Test Insert	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: R408 Interference-Resistant Helper Phage	No specific treatment.
	ExAssist Interference-Resistant Helper Phage	No specific treatment.
	XL1-Blue MRF' E.coli Strain	No specific treatment.
	XLOLR E. coli Strain	No specific treatment.
	pRho/EcoR I Test Insert	No specific treatment.
	Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	No specific treatment.
Protection of first-aiders	: R408 Interference-Resistant Helper Phage	No action shall be taken involving any personal risk or without suitable training.
	ExAssist Interference-Resistant Helper Phage	No action shall be taken involving any personal risk or without suitable training.
	XL1-Blue MRF' E.coli Strain	No action shall be taken involving any personal risk or without suitable training.
	XLOLR E. coli Strain	No action shall be taken involving any personal risk or without suitable training.
	pRho/EcoR I Test Insert	No action shall be taken involving any personal risk or without suitable training.
	Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media	: R408 Interference-Resistant Helper Phage	Use an extinguishing agent suitable for the surrounding fire.
	ExAssist Interference-Resistant Helper Phage	Use an extinguishing agent suitable for the surrounding fire.
	XL1-Blue MRF' E.coli Strain	Use an extinguishing agent suitable for the surrounding fire.
	XLOLR E. coli Strain	Use an extinguishing agent suitable for the surrounding fire.
	pRho/EcoR I Test Insert	Use an extinguishing agent suitable for the surrounding fire.
	Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: R408 Interference-Resistant Helper Phage	None known.
	ExAssist Interference-Resistant Helper Phage	None known.
	XL1-Blue MRF' E.coli Strain	None known.
	XLOLR E. coli Strain	None known.
	pRho/EcoR I Test Insert	None known.
	Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	None known.

Section 5. Firefighting measures

Specific hazards arising from the chemical	: 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRheo/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And 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. 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	: 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRheo/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	No specific data. 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. No specific data.
Special protective actions for fire-fighters	: 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRheo/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And 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. 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.

Section 5. Firefighting measures


Special protective equipment for fire-fighters	: R408 Interference-Resistant Helper Phage	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	ExAssist Interference-Resistant Helper Phage	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	XL1-Blue MRF' E.coli Strain	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	XLOLR E. coli Strain	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	pRheo/EcoR I Test Insert	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Lambda ZAP-CMV-RI Vector Digested With EcoR I And 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.


Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: R408 Interference-Resistant Helper Phage	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	ExAssist Interference-Resistant Helper Phage	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	XL1-Blue MRF' 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 spilt material. Put on appropriate personal protective equipment.
	XLOLR 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 spilt material. Put on appropriate personal protective equipment.
	pRheo/EcoR I Test Insert	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	Lambda ZAP-CMV-RI Vector Digested With EcoR I And 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 spilt material. Put on appropriate personal


Section 6. Accidental release measures

For emergency responders	:  408 Interference-Resistant Helper Phage	protective equipment. If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	ExAssist Interference-Resistant Helper Phage	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	XL1-Blue MRF' E.coli Strain	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	XLOLR E. coli Strain	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	pRheo/EcoR I Test Insert	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions	:  408 Interference-Resistant Helper Phage	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	ExAssist Interference-Resistant Helper Phage	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	XL1-Blue MRF' E.coli Strain	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	XLOLR E. coli Strain	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	pRheo/EcoR I Test Insert	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).



[Methods and material for containment and cleaning up](#)

Section 6. Accidental release measures

Methods for cleaning up	:  408 Interference-Resistant Helper Phage	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.
	ExAssist Interference-Resistant Helper Phage	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 MRF' 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.
	XL0LR 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.
	pRho/EcoR I Test Insert	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	Lambda ZAP-CMV-RI Vector Digested With EcoR I And 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

Precautions for safe handling

Protective measures	:  408 Interference-Resistant Helper Phage	Put on appropriate personal protective equipment (see Section 8).
	ExAssist Interference-Resistant Helper Phage	Put on appropriate personal protective equipment (see Section 8).
	XL1-Blue MRF' E.coli Strain	Put on appropriate personal protective equipment (see Section 8).
	XL0LR E. coli Strain	Put on appropriate personal protective equipment (see Section 8).
	pRho/EcoR I Test Insert	Put on appropriate personal protective equipment (see Section 8).
	Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	:  408 Interference-Resistant Helper Phage	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.
	ExAssist Interference-Resistant Helper Phage	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face

Section 7. Handling and storage

	<p>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 MRF' 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>XL0LR 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>pRho/EcoR I Test Insert</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>Lambda ZAP-CMV-RI Vector Digested With EcoR I And 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>Conditions for safe storage, including any incompatibilities : R408 Interference-Resistant Helper Phage</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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
<p>ExAssist Interference-Resistant Helper Phage</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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
<p>XL1-Blue MRF' 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</p>

Section 7. Handling and storage

XLOLR E. coli Strain

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

pRho/EcoR I Test Insert

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

Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated

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

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
<input checked="" type="checkbox"/> XL1-Blue MRF' E.coli Strain Glycerol	Safe Work Australia (Australia, 1/2014). TWA: 10 mg/m ³ 8 hours.
XLOLR E. coli Strain Glycerol	Safe Work Australia (Australia, 1/2014). TWA: 10 mg/m ³ 8 hours.

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

Section 8. Exposure controls and personal protection

- 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.
- 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

Appearance

- Physical state** :
- | | |
|--|---------|
| ☑408 Interference-Resistant Helper Phage | Liquid. |
| ExAssist Interference-Resistant Helper Phage | Liquid. |
| XL1-Blue MRF' E.coli Strain | Liquid. |
| XLOLR E. coli Strain | Liquid. |
| pRho/EcoR I Test Insert | Liquid. |
| Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated | Liquid. |
- Colour** :
- | | |
|--|----------------|
| ☑408 Interference-Resistant Helper Phage | Not available. |
| ExAssist Interference-Resistant Helper Phage | Not available. |
| XL1-Blue MRF' E.coli Strain | Not available. |
| XLOLR E. coli Strain | Not available. |
| pRho/EcoR I Test Insert | Not available. |
| Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated | Not available. |
- Odour** :
- | | |
|--|----------------|
| ☑408 Interference-Resistant Helper Phage | Not available. |
| ExAssist Interference-Resistant Helper Phage | Not available. |
| XL1-Blue MRF' E.coli Strain | Not available. |
| XLOLR E. coli Strain | Not available. |
| pRho/EcoR I Test Insert | Not available. |
| Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated | Not available. |

Section 9. Physical and chemical properties

Odour threshold	: R408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XL0LR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	Not available. Not available. Not available. Not available. Not available. Not available.
pH	: R408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XL0LR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	7.5 7.5 7 7 7.5 7
Melting point	: R408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XL0LR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	0°C (32°F) 0°C (32°F) Not available. Not available. 0°C (32°F) 0°C (32°F)
Boiling point	: R408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XL0LR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	100°C (212°F) 100°C (212°F) Not available. Not available. 100°C (212°F) 100°C (212°F)
Flash point	: R408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XL0LR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	Not available. Not available. Not available. Not available. Not available. Not available.
Evaporation rate	: R408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XL0LR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	Not available. Not available. Not available. Not available. Not available. Not available.

Section 9. Physical and chemical properties

Flammability (solid, gas)	: R 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Lower and upper explosive (flammable) limits	: R 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	Not available. Not available. Not available. Not available. Not available. Not available.
Vapour pressure	: R 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	Not available. Not available. Not available. Not available. Not available. Not available.
Vapour density	: R 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	Not available. Not available. Not available. Not available. Not available. Not available.
Relative density	: R 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	Not available. Not available. Not available. Not available. Not available. Not available.
Solubility	: R 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I	Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Soluble in the following materials: cold water and hot water. Soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water.

Section 9. Physical and chemical properties

		And CIAP Treated	
Partition coefficient: n-octanol/water	:	<input checked="" type="checkbox"/> 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	Not available. Not available. Not available. Not available. Not available. Not available.
Auto-ignition temperature	:	<input checked="" type="checkbox"/> 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	Not available. Not available. Not available. Not available. Not available. Not available.
Decomposition temperature	:	<input checked="" type="checkbox"/> 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	Not available. Not available. Not available. Not available. Not available. Not available.
Viscosity	:	<input checked="" type="checkbox"/> 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	Not available. Not available. Not available. Not available. Not available. Not available.

Section 10. Stability and reactivity

Reactivity	:	<input checked="" type="checkbox"/> 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	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. 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.
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Section 10. Stability and reactivity

Chemical stability	:  408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XL0LR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable.
Possibility of hazardous reactions	:  408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XL0LR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	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. 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.
Conditions to avoid	:  408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XL0LR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Incompatible materials	:  408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XL0LR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
Hazardous decomposition products	:  408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XL0LR E. coli Strain pRho/EcoR I Test Insert	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. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 10. Stability and reactivity

Lambda ZAP-CMV-RI
 Vector Digested With EcoR I
 And CIAP Treated

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 MRF' E.coli Strain Glycerol	LD50 Oral	Rat	12600 mg/kg	-
XL0LR E. coli Strain Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
XL1-Blue MRF' E.coli Strain Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
XL0LR E. coli Strain Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitisation

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Section 11. Toxicological information

Information on likely routes of exposure	: ☒ 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	Not available. Not available. Routes of entry anticipated: Oral, Dermal, Inhalation. Routes of entry anticipated: Oral, Dermal, Inhalation. Not available. Not available.
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Potential acute health effects

Eye contact	: ☒ 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And 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. No known significant effects or critical hazards. No known significant effects or critical hazards.
Inhalation	: ☒ 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And 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. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: ☒ 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And 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. No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: ☒ 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And 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. No known significant effects or critical hazards. No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: ☒ 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
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Section 11. Toxicological information

		Vector Digested With EcoR I And CIAP Treated	
Inhalation	:	R408 Interference-Resistant Helper Phage ExAssist Interference- Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Skin contact	:	R408 Interference-Resistant Helper Phage ExAssist Interference- Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Ingestion	:	R408 Interference-Resistant Helper Phage ExAssist Interference- Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And CIAP Treated	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General	:	R408 Interference-Resistant Helper Phage ExAssist Interference- Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And 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. No known significant effects or critical hazards. No known significant effects or critical hazards.
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Section 11. Toxicological information

Carcinogenicity	: <input checked="" type="checkbox"/> 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And 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. No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: <input checked="" type="checkbox"/> 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And 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. No known significant effects or critical hazards. No known significant effects or critical hazards.
Teratogenicity	: <input checked="" type="checkbox"/> 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And 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. No known significant effects or critical hazards. No known significant effects or critical hazards.
Developmental effects	: <input checked="" type="checkbox"/> 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And 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. No known significant effects or critical hazards. No known significant effects or critical hazards.
Fertility effects	: <input checked="" type="checkbox"/> 408 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage XL1-Blue MRF' E.coli Strain XLOLR E. coli Strain pRho/EcoR I Test Insert Lambda ZAP-CMV-RI Vector Digested With EcoR I And 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. No known significant effects or critical hazards. No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
<input checked="" type="checkbox"/> L1-Blue MRF' E.coli Strain Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
XL0LR E. coli Strain Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<input checked="" type="checkbox"/> L1-Blue MRF' E.coli Strain Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
XL0LR E. coli Strain Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
<input checked="" type="checkbox"/> L1-Blue MRF' E.coli Strain Glycerol	-1.76	-	low
XL0LR E. coli Strain Glycerol	-1.76	-	low

Mobility in soil

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

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

Section 13. Disposal considerations

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

Section 14. Transport information

ADG / IMDG / IATA : Not regulated as Dangerous Goods according to the ADG Code .

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 Annex II of Marpol and the IBC Code : Not available.

Section 15. Regulatory information

Standard Uniform Schedule of Medicine and Poisons



Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

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

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

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

Section 16. Any other relevant information

History

Date of issue/Date of revision : 23/01/2018

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Key to abbreviations

: ADG = Australian Dangerous Goods
 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)
 NOHSC = National Occupational Health and Safety Commission
 SUSMP = Standard Uniform Schedule of Medicine and Poisons
 UN = United Nations

Procedure used to derive the classification

Classification	Justification
Not classified.	

References : Not available.

✔ Indicates information that has changed from previously issued version.

Notice to reader

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