

SAFETY DATA SHEET



pCMV-Tag4 Epitope Tagging Mammalian Expression Vectors, Part Number 211174

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

1.1 Product identifier

Product name	pCMV-Tag4 Epitope Tagging Mammalian Expression Vectors, Part Number 211174		
Part no. (chemical kit)	211174		
Part no.	pCMV-Tag4A Mammalian Expression Vector	211174-51	
	pCMV-Tag4B Mammalian Expression Vector	211174-52	
	pCMV-Tag4C Mammalian Expression Vector	211174-53	
	pCMV-Tag4 Expression Control Plasmid	211174-54	
	XL1-Blue E. coli Strain	200268-81	

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

Identified uses	Analytical reagent.		
	pCMV-Tag4A Mammalian Expression Vector	20 µl (20 µg	1 µg/µl)
	pCMV-Tag4B Mammalian Expression Vector	20 µl (20 µg	1 µg/µl)
	pCMV-Tag4C Mammalian Expression Vector	20 µl (20 µg	1 µg/µl)
	pCMV-Tag4 Expression Control Plasmid	20 µl (20 µg	1 µg/µl)
	XL1-Blue E. coli Strain	500 µl	
Uses advised against	None known.		

1.3 Details of the supplier of the safety data sheet

Agilent Technologies LDA UK Ltd.
5500 Lakeside Cheadle Royal Business Park,
Cheadle, Cheshire, SK8 3GR
United Kingdom
Tel: +44 (0) 345 712 5292
e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

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

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition	pCMV-Tag4A Mammalian Expression Vector	Mixture
	pCMV-Tag4B Mammalian Expression Vector	Mixture
	pCMV-Tag4C Mammalian Expression Vector	Mixture
	pCMV-Tag4 Expression Control Plasmid	Mixture

SECTION 2: Hazards identification

XL1-Blue E. coli Strain Mixture

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

Not classified.

pCMV-Tag4A Mammalian Expression Vector	The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.
pCMV-Tag4B Mammalian Expression Vector	The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.
pCMV-Tag4C Mammalian Expression Vector	The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.
pCMV-Tag4 Expression Control Plasmid	The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.
XL1-Blue E. coli Strain	The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Ingredients of unknown toxicity : XL1-Blue E. coli Strain Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%

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

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

2.2 Label elements

Signal word	: pCMV-Tag4A Mammalian Expression Vector	No signal word.
	pCMV-Tag4B Mammalian Expression Vector	No signal word.
	pCMV-Tag4C Mammalian Expression Vector	No signal word.
	pCMV-Tag4 Expression Control Plasmid	No signal word.
	XL1-Blue E. coli Strain	No signal word.
Hazard statements	: pCMV-Tag4A Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4B Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4C Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4 Expression Control Plasmid	No known significant effects or critical hazards.
	XL1-Blue E. coli Strain	No known significant effects or critical hazards.

Precautionary statements

Prevention	: pCMV-Tag4A Mammalian Expression Vector	Not applicable.
	pCMV-Tag4B Mammalian Expression Vector	Not applicable.
	pCMV-Tag4C Mammalian Expression Vector	Not applicable.
	pCMV-Tag4 Expression Control Plasmid	Not applicable.
	XL1-Blue E. coli Strain	Not applicable.

SECTION 2: Hazards identification

Response	: pCMV-Tag4A Mammalian Expression Vector	Not applicable.
	pCMV-Tag4B Mammalian Expression Vector	Not applicable.
	pCMV-Tag4C Mammalian Expression Vector	Not applicable.
	pCMV-Tag4 Expression Control Plasmid	Not applicable.
	XL1-Blue E. coli Strain	Not applicable.
Storage	: pCMV-Tag4A Mammalian Expression Vector	Not applicable.
	pCMV-Tag4B Mammalian Expression Vector	Not applicable.
	pCMV-Tag4C Mammalian Expression Vector	Not applicable.
	pCMV-Tag4 Expression Control Plasmid	Not applicable.
	XL1-Blue E. coli Strain	Not applicable.
Disposal	: pCMV-Tag4A Mammalian Expression Vector	Not applicable.
	pCMV-Tag4B Mammalian Expression Vector	Not applicable.
	pCMV-Tag4C Mammalian Expression Vector	Not applicable.
	pCMV-Tag4 Expression Control Plasmid	Not applicable.
	XL1-Blue E. coli Strain	Not applicable.
Supplemental label elements	: pCMV-Tag4A Mammalian Expression Vector	Not applicable.
	pCMV-Tag4B Mammalian Expression Vector	Not applicable.
	pCMV-Tag4C Mammalian Expression Vector	Not applicable.
	pCMV-Tag4 Expression Control Plasmid	Not applicable.
	XL1-Blue E. coli Strain	Safety data sheet available on request.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: pCMV-Tag4A Mammalian Expression Vector	Not applicable.
	pCMV-Tag4B Mammalian Expression Vector	Not applicable.
	pCMV-Tag4C Mammalian Expression Vector	Not applicable.
	pCMV-Tag4 Expression Control Plasmid	Not applicable.
	XL1-Blue E. coli Strain	Not applicable.

Special packaging requirements

SECTION 2: Hazards identification

Containers to be fitted with child-resistant fastenings	: pCMV-Tag4A Mammalian Expression Vector	Not applicable.
	pCMV-Tag4B Mammalian Expression Vector	Not applicable.
	pCMV-Tag4C Mammalian Expression Vector	Not applicable.
	pCMV-Tag4 Expression Control Plasmid	Not applicable.
	XL1-Blue E. coli Strain	Not applicable.
Tactile warning of danger	: pCMV-Tag4A Mammalian Expression Vector	Not applicable.
	pCMV-Tag4B Mammalian Expression Vector	Not applicable.
	pCMV-Tag4C Mammalian Expression Vector	Not applicable.
	pCMV-Tag4 Expression Control Plasmid	Not applicable.
	XL1-Blue E. coli Strain	Not applicable.


2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	: pCMV-Tag4A Mammalian Expression Vector	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
	pCMV-Tag4B Mammalian Expression Vector	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
	pCMV-Tag4C Mammalian Expression Vector	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
	pCMV-Tag4 Expression Control Plasmid	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
	XL1-Blue E. coli Strain	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Other hazards which do not result in classification	: pCMV-Tag4A Mammalian Expression Vector	None known.
	pCMV-Tag4B Mammalian Expression Vector	None known.
	pCMV-Tag4C Mammalian Expression Vector	None known.
	pCMV-Tag4 Expression Control Plasmid	None known.
	XL1-Blue E. coli Strain	None known.

SECTION 3: Composition/information on ingredients


3.1 Substances	: pCMV-Tag4A Mammalian Expression Vector	Mixture
	pCMV-Tag4B Mammalian Expression Vector	Mixture
	pCMV-Tag4C Mammalian Expression Vector	Mixture
	pCMV-Tag4 Expression Control Plasmid	Mixture
	XL1-Blue E. coli Strain	Mixture

SECTION 3: Composition/information on ingredients

Product/ingredient name	Identifiers	%	Classification	Type
 XL1-Blue E. coli Strain Glycerol	UK (GB) REACH #: Annex V REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥10 - ≤25	Not classified. See Section 16 for the full text of the H statements declared above.	[1]




There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type

 XL1-Blue E. coli Strain [1] Substance with a workplace exposure limit
Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	 pCMV-Tag4A Mammalian Expression Vector pCMV-Tag4B Mammalian Expression Vector pCMV-Tag4C Mammalian Expression Vector pCMV-Tag4 Expression Control Plasmid XL1-Blue 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. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	 pCMV-Tag4A Mammalian Expression Vector pCMV-Tag4B Mammalian Expression Vector pCMV-Tag4C Mammalian Expression Vector pCMV-Tag4 Expression Control Plasmid XL1-Blue E. coli Strain	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	 pCMV-Tag4A Mammalian Expression Vector pCMV-Tag4B Mammalian Expression Vector pCMV-Tag4C Mammalian Expression Vector pCMV-Tag4 Expression Control Plasmid	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

SECTION 4: First aid measures**Ingestion**

XL1-Blue E. coli Strain	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
pCMV-Tag4A Mammalian Expression Vector	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.
pCMV-Tag4B Mammalian Expression Vector	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.
pCMV-Tag4C Mammalian Expression Vector	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.
pCMV-Tag4 Expression Control Plasmid	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
XL1-Blue E. coli Strain	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.

Protection of first-aiders

pCMV-Tag4A Mammalian Expression Vector	No action shall be taken involving any personal risk or without suitable training.
pCMV-Tag4B Mammalian Expression Vector	No action shall be taken involving any personal risk or without suitable training.
pCMV-Tag4C Mammalian Expression Vector	No action shall be taken involving any personal risk or without suitable training.
pCMV-Tag4 Expression Control Plasmid	No action shall be taken involving any personal risk or without suitable training.
XL1-Blue E. coli Strain	No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed**Over-exposure signs/symptoms****Eye contact**

pCMV-Tag4A Mammalian Expression Vector	No specific data.
pCMV-Tag4B Mammalian Expression Vector	No specific data.
pCMV-Tag4C Mammalian Expression Vector	No specific data.
pCMV-Tag4 Expression Control Plasmid	No specific data.
XL1-Blue E. coli Strain	No specific data.

SECTION 4: First aid measures

Inhalation	:	pCMV-Tag4A Mammalian Expression Vector	No specific data.
	:	pCMV-Tag4B Mammalian Expression Vector	No specific data.
	:	pCMV-Tag4C Mammalian Expression Vector	No specific data.
	:	pCMV-Tag4 Expression Control Plasmid	No specific data.
	:	XL1-Blue E. coli Strain	No specific data.
Skin contact	:	pCMV-Tag4A Mammalian Expression Vector	No specific data.
	:	pCMV-Tag4B Mammalian Expression Vector	No specific data.
	:	pCMV-Tag4C Mammalian Expression Vector	No specific data.
	:	pCMV-Tag4 Expression Control Plasmid	No specific data.
	:	XL1-Blue E. coli Strain	No specific data.
Ingestion	:	pCMV-Tag4A Mammalian Expression Vector	No specific data.
	:	pCMV-Tag4B Mammalian Expression Vector	No specific data.
	:	pCMV-Tag4C Mammalian Expression Vector	No specific data.
	:	pCMV-Tag4 Expression Control Plasmid	No specific data.
	:	XL1-Blue E. coli Strain	No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	:	pCMV-Tag4A Mammalian Expression Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	:	pCMV-Tag4B Mammalian Expression Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	:	pCMV-Tag4C Mammalian Expression Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	:	pCMV-Tag4 Expression Control Plasmid	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	:	XL1-Blue E. coli Strain	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	:	pCMV-Tag4A Mammalian Expression Vector	No specific treatment.
	:	pCMV-Tag4B Mammalian Expression Vector	No specific treatment.
	:	pCMV-Tag4C Mammalian Expression Vector	No specific treatment.
	:	pCMV-Tag4 Expression Control Plasmid	No specific treatment.

SECTION 4: First aid measures

XL1-Blue E. coli Strain No specific treatment.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media	pCMV-Tag4A Mammalian Expression Vector	Use an extinguishing agent suitable for the surrounding fire.
	pCMV-Tag4B Mammalian Expression Vector	Use an extinguishing agent suitable for the surrounding fire.
	pCMV-Tag4C Mammalian Expression Vector	Use an extinguishing agent suitable for the surrounding fire.
	pCMV-Tag4 Expression Control Plasmid	Use an extinguishing agent suitable for the surrounding fire.
	XL1-Blue E. coli Strain	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	pCMV-Tag4A Mammalian Expression Vector	None known.
	pCMV-Tag4B Mammalian Expression Vector	None known.
	pCMV-Tag4C Mammalian Expression Vector	None known.
	pCMV-Tag4 Expression Control Plasmid	None known.
	XL1-Blue E. coli Strain	None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	pCMV-Tag4A Mammalian Expression Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pCMV-Tag4B Mammalian Expression Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pCMV-Tag4C Mammalian Expression Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pCMV-Tag4 Expression Control Plasmid	In a fire or if heated, a pressure increase will occur and the container may burst.
	XL1-Blue E. coli Strain	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous combustion products	pCMV-Tag4A Mammalian Expression Vector	No specific data.
	pCMV-Tag4B Mammalian Expression Vector	No specific data.
	pCMV-Tag4C Mammalian Expression Vector	No specific data.
	pCMV-Tag4 Expression Control Plasmid	No specific data.
	XL1-Blue E. coli Strain	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides

5.3 Advice for firefighters

SECTION 5: Firefighting measures**Special protective actions for fire-fighters**

: pCMV-Tag4A Mammalian Expression Vector
 pCMV-Tag4B Mammalian Expression Vector
 pCMV-Tag4C Mammalian Expression Vector
 pCMV-Tag4 Expression Control Plasmid
 XL1-Blue E. coli Strain

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.

Special protective equipment for fire-fighters

: pCMV-Tag4A Mammalian Expression Vector
 pCMV-Tag4B Mammalian Expression Vector
 pCMV-Tag4C Mammalian Expression Vector
 pCMV-Tag4 Expression Control Plasmid
 XL1-Blue 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. 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. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

: pCMV-Tag4A Mammalian Expression Vector
 pCMV-Tag4B Mammalian Expression Vector
 pCMV-Tag4C Mammalian Expression Vector
 pCMV-Tag4 Expression Control Plasmid
 XL1-Blue 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. 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. 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. 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. 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.

SECTION 6: Accidental release measures**For emergency responders**

pCMV-Tag4A Mammalian Expression Vector	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".
pCMV-Tag4B Mammalian Expression Vector	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".
pCMV-Tag4C Mammalian Expression Vector	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".
pCMV-Tag4 Expression Control Plasmid	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
XL1-Blue 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".

6.2 Environmental precautions

pCMV-Tag4A Mammalian Expression Vector	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).
pCMV-Tag4B Mammalian Expression Vector	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).
pCMV-Tag4C Mammalian Expression Vector	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).
pCMV-Tag4 Expression Control Plasmid	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
XL1-Blue 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).

6.3 Methods and material for containment and cleaning up**Methods for cleaning up**

pCMV-Tag4A Mammalian Expression Vector	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.
pCMV-Tag4B Mammalian Expression Vector	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.
pCMV-Tag4C Mammalian Expression Vector	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.
pCMV-Tag4 Expression Control Plasmid	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

SECTION 6: Accidental release measures

XL1-Blue 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.
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6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures	pCMV-Tag4A Mammalian Expression Vector	Put on appropriate personal protective equipment (see Section 8).
	pCMV-Tag4B Mammalian Expression Vector	Put on appropriate personal protective equipment (see Section 8).
	pCMV-Tag4C Mammalian Expression Vector	Put on appropriate personal protective equipment (see Section 8).
	pCMV-Tag4 Expression Control Plasmid	Put on appropriate personal protective equipment (see Section 8).
	XL1-Blue E. coli Strain	Put on appropriate personal protective equipment (see Section 8).
	pCMV-Tag4A Mammalian Expression Vector	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.
	pCMV-Tag4B Mammalian Expression Vector	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.
	pCMV-Tag4C Mammalian Expression Vector	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.
	pCMV-Tag4 Expression Control Plasmid	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	XL1-Blue E. coli Strain	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.
Advice on general occupational hygiene		

7.2 Conditions for safe storage, including any incompatibilities

SECTION 7: Handling and storage

Storage	:	pCMV-Tag4A Mammalian Expression Vector	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.
		pCMV-Tag4B Mammalian Expression Vector	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.
		pCMV-Tag4C Mammalian Expression Vector	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.
		pCMV-Tag4 Expression Control Plasmid	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
		XL1-Blue E. coli Strain	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations	:	pCMV-Tag4A Mammalian Expression Vector	Industrial applications, Professional applications.
		pCMV-Tag4B Mammalian Expression Vector	Industrial applications, Professional applications.
		pCMV-Tag4C Mammalian Expression Vector	Industrial applications, Professional applications.
		pCMV-Tag4 Expression	Industrial applications, Professional applications.

SECTION 7: Handling and storage

Industrial sector specific solutions	Control Plasmid	
	XL1-Blue E. coli Strain	Industrial applications, Professional applications.
	pCMV-Tag4A Mammalian Expression Vector	Not available.
	pCMV-Tag4B Mammalian Expression Vector	Not available.
	pCMV-Tag4C Mammalian Expression Vector	Not available.
	pCMV-Tag4 Expression Control Plasmid	Not available.
	XL1-Blue E. coli Strain	Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
XL1-Blue E. coli Strain Glycerol	EH40/2005 WELs (United Kingdom (UK), 1/2020). TWA: 10 mg/m³ 8 hours. Form: Mist

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures : Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
XL1-Blue E. coli Strain Glycerol	DNEL	Long term Inhalation	33 mg/m³	General population	Local
	DNEL	Long term Inhalation	56 mg/m³	Workers	Local
	DNEL	Long term Oral	229 mg/kg bw/day	General population	Systemic

PNECs

No PNECs available

8.2 Exposure controls

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

Individual protection measures

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

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

Skin protection

SECTION 8: Exposure controls/personal 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.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

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

9.1 Information on basic physical and chemical properties**Appearance**

Physical state	:	pCMV-Tag4A Mammalian Expression Vector	Liquid.
	:	pCMV-Tag4B Mammalian Expression Vector	Liquid.
	:	pCMV-Tag4C Mammalian Expression Vector	Liquid.
	:	pCMV-Tag4 Expression Control Plasmid	Liquid.
	:	XL1-Blue E. coli Strain	Liquid.
Colour	:	pCMV-Tag4A Mammalian Expression Vector	Not available.
	:	pCMV-Tag4B Mammalian Expression Vector	Not available.
	:	pCMV-Tag4C Mammalian Expression Vector	Not available.
	:	pCMV-Tag4 Expression Control Plasmid	Not available.
	:	XL1-Blue E. coli Strain	Not available.
Odour	:	pCMV-Tag4A Mammalian Expression Vector	Not available.
	:	pCMV-Tag4B Mammalian Expression Vector	Not available.
	:	pCMV-Tag4C Mammalian Expression Vector	Not available.
	:	pCMV-Tag4 Expression Control Plasmid	Not available.
	:	XL1-Blue E. coli Strain	Not available.

SECTION 9: Physical and chemical properties

Odour threshold	: pCMV-Tag4A Mammalian Expression Vector	Not available.
	pCMV-Tag4B Mammalian Expression Vector	Not available.
	pCMV-Tag4C Mammalian Expression Vector	Not available.
	pCMV-Tag4 Expression Control Plasmid	Not available.
	XL1-Blue E. coli Strain	Not available.
Melting point/freezing point	: pCMV-Tag4A Mammalian Expression Vector	0°C
	pCMV-Tag4B Mammalian Expression Vector	0°C
	pCMV-Tag4C Mammalian Expression Vector	0°C
	pCMV-Tag4 Expression Control Plasmid	0°C
	XL1-Blue E. coli Strain	Not available.
Initial boiling point and boiling range	: pCMV-Tag4A Mammalian Expression Vector	100°C
	pCMV-Tag4B Mammalian Expression Vector	100°C
	pCMV-Tag4C Mammalian Expression Vector	100°C
	pCMV-Tag4 Expression Control Plasmid	100°C
	XL1-Blue E. coli Strain	Not available.
Flammability	: pCMV-Tag4A Mammalian Expression Vector	Not applicable.
	pCMV-Tag4B Mammalian Expression Vector	Not applicable.
	pCMV-Tag4C Mammalian Expression Vector	Not applicable.
	pCMV-Tag4 Expression Control Plasmid	Not applicable.
	XL1-Blue E. coli Strain	Not applicable.
Upper/lower flammability or explosive limits	: pCMV-Tag4A Mammalian Expression Vector	Not available.
	pCMV-Tag4B Mammalian Expression Vector	Not available.
	pCMV-Tag4C Mammalian Expression Vector	Not available.
	pCMV-Tag4 Expression Control Plasmid	Not available.
	XL1-Blue E. coli Strain	Not available.
Flash point	:	

SECTION 9: Physical and chemical properties

		Closed cup		Open cup	
	Ingredient name	°C	Method	°C	Method
	XL1-Blue E. coli Strain				
Auto-ignition temperature	glycerol	-	-	177	-
	Ingredient name	°C		Method	
	XL1-Blue E. coli Strain				
Decomposition temperature	glycerol	370		-	
	pCMV-Tag4A Mammalian Expression Vector	Not available.			
	pCMV-Tag4B Mammalian Expression Vector	Not available.			
pH	pCMV-Tag4C Mammalian Expression Vector	Not available.			
	pCMV-Tag4 Expression Control Plasmid	Not available.			
	XL1-Blue E. coli Strain	Not available.			
Viscosity	pCMV-Tag4A Mammalian Expression Vector	7.5			
	pCMV-Tag4B Mammalian Expression Vector	7.5			
	pCMV-Tag4C Mammalian Expression Vector	7.5			
Solubility(ies)	pCMV-Tag4 Expression Control Plasmid	7.5			
	XL1-Blue E. coli Strain	7.5			
	pCMV-Tag4A Mammalian Expression Vector	Not available.			
	pCMV-Tag4B Mammalian Expression Vector	Not available.			
	pCMV-Tag4C Mammalian Expression Vector	Not available.			
	pCMV-Tag4 Expression Control Plasmid	Not available.			
	XL1-Blue E. coli Strain	Not available.			
	Media	Result			
	pCMV-Tag4A Mammalian Expression Vector				
	water	Soluble			
	pCMV-Tag4B Mammalian Expression Vector				
	water	Soluble			
	pCMV-Tag4C Mammalian Expression Vector				
	water	Soluble			
	pCMV-Tag4 Expression Control Plasmid				
	water	Soluble			
	XL1-Blue E. coli Strain				
	water	Soluble			

SECTION 9: Physical and chemical properties

Partition coefficient: n-octanol/water	pCMV-Tag4A Mammalian Expression Vector	Not applicable.
	pCMV-Tag4B Mammalian Expression Vector	Not applicable.
	pCMV-Tag4C Mammalian Expression Vector	Not applicable.
	pCMV-Tag4 Expression Control Plasmid	Not applicable.
	XL1-Blue E. coli Strain	Not applicable.

Vapour pressure	Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
		mm Hg	kPa	Method	mm Hg	kPa	Method
	pCMV-Tag4A Mammalian Expression Vector						
	water	17.5	2.3	-	92.258	12.3	-
	pCMV-Tag4B Mammalian Expression Vector						
	water	17.5	2.3	-	92.258	12.3	-
	pCMV-Tag4C Mammalian Expression Vector						
	water	17.5	2.3	-	92.258	12.3	-
	pCMV-Tag4 Expression Control Plasmid						
	water	17.5	2.3	-	92.258	12.3	-
	XL1-Blue E. coli Strain						
	water	17.5	2.3	-	92.258	12.3	-
	glycerol	0.000075	0.00001	-	0.0025	0.00033	-

Evaporation rate	pCMV-Tag4A Mammalian Expression Vector	Not available.
	pCMV-Tag4B Mammalian Expression Vector	Not available.
	pCMV-Tag4C Mammalian Expression Vector	Not available.
	pCMV-Tag4 Expression Control Plasmid	Not available.
	XL1-Blue E. coli Strain	Not available.

SECTION 9: Physical and chemical properties

Relative density	:	pCMV-Tag4A Mammalian Expression Vector	Not available.
	:	pCMV-Tag4B Mammalian Expression Vector	Not available.
	:	pCMV-Tag4C Mammalian Expression Vector	Not available.
	:	pCMV-Tag4 Expression Control Plasmid	Not available.
	:	XL1-Blue E. coli Strain	Not available.
Vapour density	:	pCMV-Tag4A Mammalian Expression Vector	Not available.
	:	pCMV-Tag4B Mammalian Expression Vector	Not available.
	:	pCMV-Tag4C Mammalian Expression Vector	Not available.
	:	pCMV-Tag4 Expression Control Plasmid	Not available.
	:	XL1-Blue E. coli Strain	Not available.
Explosive properties	:	pCMV-Tag4A Mammalian Expression Vector	Not available.
	:	pCMV-Tag4B Mammalian Expression Vector	Not available.
	:	pCMV-Tag4C Mammalian Expression Vector	Not available.
	:	pCMV-Tag4 Expression Control Plasmid	Not available.
	:	XL1-Blue E. coli Strain	Not available.
Oxidising properties	:	pCMV-Tag4A Mammalian Expression Vector	Not available.
	:	pCMV-Tag4B Mammalian Expression Vector	Not available.
	:	pCMV-Tag4C Mammalian Expression Vector	Not available.
	:	pCMV-Tag4 Expression Control Plasmid	Not available.
	:	XL1-Blue E. coli Strain	Not available.
Particle characteristics			
Median particle size	:	pCMV-Tag4A Mammalian Expression Vector	Not applicable.
	:	pCMV-Tag4B Mammalian Expression Vector	Not applicable.
	:	pCMV-Tag4C Mammalian Expression Vector	Not applicable.
	:	pCMV-Tag4 Expression Control Plasmid	Not applicable.
	:	XL1-Blue E. coli Strain	Not applicable.

SECTION 9: Physical and chemical properties**9.2 Other information**

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: pCMV-Tag4A Mammalian Expression Vector	No specific test data related to reactivity available for this product or its ingredients.
	pCMV-Tag4B Mammalian Expression Vector	No specific test data related to reactivity available for this product or its ingredients.
	pCMV-Tag4C Mammalian Expression Vector	No specific test data related to reactivity available for this product or its ingredients.
	pCMV-Tag4 Expression Control Plasmid	No specific test data related to reactivity available for this product or its ingredients.
	XL1-Blue E. coli Strain	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: pCMV-Tag4A Mammalian Expression Vector	The product is stable.
	pCMV-Tag4B Mammalian Expression Vector	The product is stable.
	pCMV-Tag4C Mammalian Expression Vector	The product is stable.
	pCMV-Tag4 Expression Control Plasmid	The product is stable.
	XL1-Blue E. coli Strain	The product is stable.
10.3 Possibility of hazardous reactions	: pCMV-Tag4A Mammalian Expression Vector	Under normal conditions of storage and use, hazardous reactions will not occur.
	pCMV-Tag4B Mammalian Expression Vector	Under normal conditions of storage and use, hazardous reactions will not occur.
	pCMV-Tag4C Mammalian Expression Vector	Under normal conditions of storage and use, hazardous reactions will not occur.
	pCMV-Tag4 Expression Control Plasmid	Under normal conditions of storage and use, hazardous reactions will not occur.
	XL1-Blue E. coli Strain	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: pCMV-Tag4A Mammalian Expression Vector	No specific data.
	pCMV-Tag4B Mammalian Expression Vector	No specific data.
	pCMV-Tag4C Mammalian Expression Vector	No specific data.
	pCMV-Tag4 Expression Control Plasmid	No specific data.
	XL1-Blue E. coli Strain	No specific data.

SECTION 10: Stability and reactivity**10.5 Incompatible materials**

pCMV-Tag4A Mammalian Expression Vector	May react or be incompatible with oxidising materials.
pCMV-Tag4B Mammalian Expression Vector	May react or be incompatible with oxidising materials.
pCMV-Tag4C Mammalian Expression Vector	May react or be incompatible with oxidising materials.
pCMV-Tag4 Expression Control Plasmid	May react or be incompatible with oxidising materials.
XL1-Blue E. coli Strain	May react or be incompatible with oxidising materials.

10.6 Hazardous decomposition products

pCMV-Tag4A Mammalian Expression Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
pCMV-Tag4B Mammalian Expression Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
pCMV-Tag4C Mammalian Expression Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
pCMV-Tag4 Expression Control Plasmid	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
XL1-Blue E. coli Strain	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 E. coli Strain Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
XL1-Blue E. coli Strain Glycerol	12600	N/A	N/A	N/A	N/A

Irritation/Corrosion

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

Conclusion/Summary : Not available.**Sensitiser****Conclusion/Summary** : Not available.**Mutagenicity****Conclusion/Summary** : Not available.**Carcinogenicity****Conclusion/Summary** : Not available.**Reproductive toxicity**

SECTION 11: Toxicological information**Conclusion/Summary** : Not available.**Teratogenicity****Conclusion/Summary** : Not available.**Specific target organ toxicity (single exposure)**

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure	:	pCMV-Tag4A Mammalian Expression Vector	Not available.
		pCMV-Tag4B Mammalian Expression Vector	Not available.
		pCMV-Tag4C Mammalian Expression Vector	Not available.
		pCMV-Tag4 Expression Control Plasmid	Not available.
		XL1-Blue E. coli Strain	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Inhalation	:	pCMV-Tag4A Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4B Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4C Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4 Expression Control Plasmid	No known significant effects or critical hazards.
		XL1-Blue E. coli Strain	No known significant effects or critical hazards.
Ingestion	:	pCMV-Tag4A Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4B Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4C Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4 Expression Control Plasmid	No known significant effects or critical hazards.
		XL1-Blue E. coli Strain	No known significant effects or critical hazards.
Skin contact	:	pCMV-Tag4A Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4B Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4C Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4 Expression Control Plasmid	No known significant effects or critical hazards.
		XL1-Blue E. coli Strain	No known significant effects or critical hazards.

SECTION 11: Toxicological information

Eye contact	: pCMV-Tag4A Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4B Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4C Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4 Expression Control Plasmid	No known significant effects or critical hazards.
	XL1-Blue E. coli Strain	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	: pCMV-Tag4A Mammalian Expression Vector	No specific data.
	pCMV-Tag4B Mammalian Expression Vector	No specific data.
	pCMV-Tag4C Mammalian Expression Vector	No specific data.
	pCMV-Tag4 Expression Control Plasmid	No specific data.
	XL1-Blue E. coli Strain	No specific data.

Ingestion	: pCMV-Tag4A Mammalian Expression Vector	No specific data.
	pCMV-Tag4B Mammalian Expression Vector	No specific data.
	pCMV-Tag4C Mammalian Expression Vector	No specific data.
	pCMV-Tag4 Expression Control Plasmid	No specific data.
	XL1-Blue E. coli Strain	No specific data.

Skin contact	: pCMV-Tag4A Mammalian Expression Vector	No specific data.
	pCMV-Tag4B Mammalian Expression Vector	No specific data.
	pCMV-Tag4C Mammalian Expression Vector	No specific data.
	pCMV-Tag4 Expression Control Plasmid	No specific data.
	XL1-Blue E. coli Strain	No specific data.

Eye contact	: pCMV-Tag4A Mammalian Expression Vector	No specific data.
	pCMV-Tag4B Mammalian Expression Vector	No specific data.
	pCMV-Tag4C Mammalian Expression Vector	No specific data.
	pCMV-Tag4 Expression Control Plasmid	No specific data.
	XL1-Blue E. coli Strain	No specific data.

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

SECTION 11: Toxicological informationShort 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

Conclusion/Summary : Not available.

General	:	pCMV-Tag4A Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4B Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4C Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4 Expression Control Plasmid	No known significant effects or critical hazards.
		XL1-Blue E. coli Strain	No known significant effects or critical hazards.
Carcinogenicity	:	pCMV-Tag4A Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4B Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4C Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4 Expression Control Plasmid	No known significant effects or critical hazards.
		XL1-Blue E. coli Strain	No known significant effects or critical hazards.
Mutagenicity	:	pCMV-Tag4A Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4B Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4C Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4 Expression Control Plasmid	No known significant effects or critical hazards.
		XL1-Blue E. coli Strain	No known significant effects or critical hazards.
Reproductive toxicity	:	pCMV-Tag4A Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4B Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4C Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4 Expression Control Plasmid	No known significant effects or critical hazards.
		XL1-Blue E. coli Strain	No known significant effects or critical hazards.

SECTION 12: Ecological information**12.1 Toxicity**

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

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<input checked="" type="checkbox"/> XL1-Blue E. coli Strain Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
<input checked="" type="checkbox"/> XL1-Blue E. coli Strain Glycerol	-1.76	-	Low

12.4 Mobility in soil

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

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product**

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

Hazardous waste : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

Packaging

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

Special precautions : This material and its container must be disposed of in a safe way. 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

	ADR/RID	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No.	No.	No.

Additional information

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

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

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture UK (GB)/REACH****Annex XIV - List of substances subject to authorisation****Annex XIV**

None of the components are listed.

Substances of very high concern

None of the components are listed.

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

No listed substance

Label	:	pCMV-Tag4A Mammalian Expression Vector	Not applicable.
		pCMV-Tag4B Mammalian Expression Vector	Not applicable.
		pCMV-Tag4C Mammalian Expression Vector	Not applicable.
		pCMV-Tag4 Expression Control Plasmid	Not applicable.

SECTION 15: Regulatory information

XL1-Blue E. coli Strain

Not applicable.

Seveso Directive

This product is not controlled under the Seveso Directive.

EU regulations

**Industrial emissions
(integrated pollution
prevention and control) -
Air** : Not listed

**Industrial emissions
(integrated pollution
prevention and control) -
Water** : Not listed

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

International regulations**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

United States : All components are active or exempted.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

**Abbreviations and
acronyms**

: ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

Classification	Justification
Not classified.	

Full text of abbreviated H statements

Not applicable.

Full text of classifications

Not applicable.

**Date of issue/ Date of
revision** : 08/01/2024

SECTION 16: Other information

Date of previous issue : 10/11/2020
Version : 4

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