

SAFETY DATA SHEET



pET 3a-d Vectors, Part Number 211521

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

1.1 Product identifier

Product name	: pET 3a-d Vectors, Part Number 211521
Part no. (chemical kit)	: 211521
Part no.	: pET-3a Vector 211521-51
	pET-3b Vector 211521-52
	pET-3c Vector 211521-53
	pET-3d Vector 211521-54

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

Material uses	: Analytical reagent.	
	pET-3a Vector	0.02 ml (20 µg 1 µg/µl)
	pET-3b Vector	0.02 ml (20 µg 1 µg/µl)
	pET-3c Vector	0.02 ml (20 µg 1 µg/µl)
	pET-3d Vector	0.02 ml (20 µg 1 µg/µl)

1.3 Details of the supplier of the safety data sheet

Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str. 8
76337 Waldbronn
Germany
0800 603 1000

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	: pET-3a Vector	Mixture
	pET-3b Vector	Mixture
	pET-3c Vector	Mixture
	pET-3d Vector	Mixture

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

Not classified.

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	: pET-3a Vector	No signal word.
	pET-3b Vector	No signal word.
	pET-3c Vector	No signal word.
	pET-3d Vector	No signal word.

SECTION 2: Hazards identification

Hazard statements	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	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.
--------------------------	--	--

Precautionary statements

Prevention	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Not applicable. Not applicable. Not applicable. Not applicable.
Response	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Not applicable. Not applicable. Not applicable. Not applicable.
Storage	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Not applicable. Not applicable. Not applicable. Not applicable.
Disposal	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Not applicable. Not applicable. Not applicable. Not applicable.
Supplemental label elements	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Not applicable. Not applicable. Not applicable. Not applicable.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Not applicable. Not applicable. Not applicable. Not applicable.

Special packaging requirements

Tactile warning of danger	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Not applicable. Not applicable. Not applicable. Not applicable.
----------------------------------	--	--

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	This mixture does not contain any substances that are assessed to be a PBT or a vPvB. This mixture does not contain any substances that are assessed to be a PBT or a vPvB. This mixture does not contain any substances that are assessed to be a PBT or a vPvB. 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	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	None known. None known. None known. None known.

SECTION 3: Composition/information on ingredients

3.1 Substances	:	pET-3a Vector	Mixture
		pET-3b Vector	Mixture
		pET-3c Vector	Mixture
		pET-3d Vector	Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

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

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	:	pET-3a Vector	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.
		pET-3b Vector	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.
		pET-3c Vector	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.
		pET-3d Vector	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	:	pET-3a Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		pET-3b Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		pET-3c Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		pET-3d Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	:	pET-3a Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		pET-3b Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		pET-3c Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		pET-3d Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	:	pET-3a 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.
		pET-3b 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.
		pET-3c 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

SECTION 4: First aid measures

pET-3d Vector

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

Protection of first-aiders : pET-3a Vector

No action shall be taken involving any personal risk or without suitable training.

pET-3b Vector

No action shall be taken involving any personal risk or without suitable training.

pET-3c Vector

No action shall be taken involving any personal risk or without suitable training.

pET-3d Vector

No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact

: pET-3a Vector
pET-3b Vector
pET-3c Vector
pET-3d Vector

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

: pET-3a Vector
pET-3b Vector
pET-3c Vector
pET-3d Vector

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

: pET-3a Vector
pET-3b Vector
pET-3c Vector
pET-3d Vector

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

: pET-3a Vector
pET-3b Vector
pET-3c Vector
pET-3d Vector

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.

Over-exposure signs/symptoms

Eye contact

: pET-3a Vector
pET-3b Vector
pET-3c Vector
pET-3d Vector

No specific data.
No specific data.
No specific data.
No specific data.

Inhalation

: pET-3a Vector
pET-3b Vector
pET-3c Vector
pET-3d Vector

No specific data.
No specific data.
No specific data.
No specific data.

Skin contact

: pET-3a Vector
pET-3b Vector
pET-3c Vector
pET-3d Vector

No specific data.
No specific data.
No specific data.
No specific data.

Ingestion

: pET-3a Vector
pET-3b Vector
pET-3c Vector
pET-3d Vector

No specific data.
No specific data.
No specific data.
No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

SECTION 4: First aid measures

Notes to physician	: pET-3a Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	pET-3b Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	pET-3c Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	pET-3d Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: pET-3a Vector	No specific treatment.
	pET-3b Vector	No specific treatment.
	pET-3c Vector	No specific treatment.
	pET-3d Vector	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	: pET-3a Vector	Use an extinguishing agent suitable for the surrounding fire.
	pET-3b Vector	Use an extinguishing agent suitable for the surrounding fire.
	pET-3c Vector	Use an extinguishing agent suitable for the surrounding fire.
	pET-3d Vector	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: pET-3a Vector	None known.
	pET-3b Vector	None known.
	pET-3c Vector	None known.
	pET-3d Vector	None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: pET-3a Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pET-3b Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pET-3c Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pET-3d Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous combustion products	: pET-3a Vector	No specific data.
	pET-3b Vector	No specific data.
	pET-3c Vector	No specific data.
	pET-3d Vector	No specific data.

5.3 Advice for firefighters

Special precautions for fire-fighters	: pET-3a Vector	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.
	pET-3b Vector	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.
	pET-3c Vector	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.
	pET-3d Vector	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	: pET-3a Vector	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	pET-3b Vector	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full

SECTION 5: Firefighting measures

pET-3c Vector

face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

pET-3d Vector

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: pET-3a Vector

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.

pET-3b Vector

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.

pET-3c Vector

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.

pET-3d Vector

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.

For emergency responders

: pET-3a 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".

pET-3b 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".

pET-3c 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".

pET-3d 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".

SECTION 6: Accidental release measures

6.2 Environmental precautions	: pET-3a 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).
	pET-3b 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).
	pET-3c 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).
	pET-3d 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).

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	: pET-3a 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.
	pET-3b 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.
	pET-3c 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.
	pET-3d 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.

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	: pET-3a Vector	Put on appropriate personal protective equipment (see Section 8).
	pET-3b Vector	Put on appropriate personal protective equipment (see Section 8).
	pET-3c Vector	Put on appropriate personal protective equipment (see Section 8).
	pET-3d Vector	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	: pET-3a 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.
	pET-3b Vector	Eating, drinking and smoking should be prohibited in areas

pET 3a-d Vectors, Part Number 211521

SECTION 7: Handling and storage

pET-3c Vector	where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
pET-3d 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.

7.2 Conditions for safe storage, including any incompatibilities

Storage	: pET-3a 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.
	pET-3b 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.
	pET-3c 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.
	pET-3d 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.

SECTION 7: Handling and storage

7.3 Specific end use(s)

Recommendations	:	pET-3a Vector	Industrial applications, Professional applications.
		pET-3b Vector	Industrial applications, Professional applications.
		pET-3c Vector	Industrial applications, Professional applications.
		pET-3d Vector	Industrial applications, Professional applications.
Industrial sector specific solutions	:	pET-3a Vector	Not available.
		pET-3b Vector	Not available.
		pET-3c Vector	Not available.
		pET-3d Vector	Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Recommended monitoring procedures	:	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
--	---	--

DNELs/DMELs

No DNELs/DMELs available.

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	:	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.

SECTION 8: Exposure controls/personal protection

- 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

9.1 Information on basic physical and chemical properties

Appearance

Physical state	:	pET-3a Vector	Liquid.
	:	pET-3b Vector	Liquid.
	:	pET-3c Vector	Liquid.
	:	pET-3d Vector	Liquid.
Colour	:	pET-3a Vector	Not available.
	:	pET-3b Vector	Not available.
	:	pET-3c Vector	Not available.
	:	pET-3d Vector	Not available.
Odour	:	pET-3a Vector	Not available.
	:	pET-3b Vector	Not available.
	:	pET-3c Vector	Not available.
	:	pET-3d Vector	Not available.
Odour threshold	:	pET-3a Vector	Not available.
	:	pET-3b Vector	Not available.
	:	pET-3c Vector	Not available.
	:	pET-3d Vector	Not available.
pH	:	pET-3a Vector	7.5
	:	pET-3b Vector	7.5
	:	pET-3c Vector	7.5
	:	pET-3d Vector	7.5
Melting point/freezing point	:	pET-3a Vector	0°C
	:	pET-3b Vector	0°C
	:	pET-3c Vector	0°C
	:	pET-3d Vector	0°C
Initial boiling point and boiling range	:	pET-3a Vector	100°C
	:	pET-3b Vector	100°C
	:	pET-3c Vector	100°C
	:	pET-3d Vector	100°C
Flash point	:	pET-3a Vector	Not available.
	:	pET-3b Vector	Not available.
	:	pET-3c Vector	Not available.
	:	pET-3d Vector	Not available.
Evaporation rate	:	pET-3a Vector	Not available.
	:	pET-3b Vector	Not available.
	:	pET-3c Vector	Not available.
	:	pET-3d Vector	Not available.
Flammability (solid, gas)	:	pET-3a Vector	Not applicable.
	:	pET-3b Vector	Not applicable.
	:	pET-3c Vector	Not applicable.
	:	pET-3d Vector	Not applicable.
Upper/lower flammability or explosive limits	:	pET-3a Vector	Not available.
	:	pET-3b Vector	Not available.
	:	pET-3c Vector	Not available.
	:	pET-3d Vector	Not available.

SECTION 9: Physical and chemical properties

Vapour pressure	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Not available. Not available. Not available. Not available.
Vapour density	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Not available. Not available. Not available. Not available.
Relative density	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Not available. Not available. Not available. Not available.
Solubility(ies)	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Easily 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. Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Not applicable. Not applicable. Not applicable. Not applicable.
Auto-ignition temperature	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Not available. Not available. Not available. Not available.
Decomposition temperature	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Not available. Not available. Not available. Not available.
Viscosity	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Not available. Not available. Not available. Not available.
Explosive properties	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Not available. Not available. Not available. Not available.
Oxidising properties	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Not available. Not available. Not available. Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	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.
------------------------	--	--

SECTION 10: Stability and reactivity

10.2 Chemical stability	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	The product is stable. The product is stable. The product is stable. The product is stable.
10.3 Possibility of hazardous reactions	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	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.
10.4 Conditions to avoid	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	No specific data. No specific data. No specific data. No specific data.
10.5 Incompatible materials	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	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.
10.6 Hazardous decomposition products	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Not available.

Acute toxicity estimates

N/A

Irritation/Corrosion

Conclusion/Summary : Not available.

Sensitiser

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

SECTION 11: Toxicological information

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure	: pET-3a Vector	Not available.
	pET-3b Vector	Not available.
	pET-3c Vector	Not available.
	pET-3d Vector	Not available.

Potential acute health effects

Inhalation	: pET-3a Vector	No known significant effects or critical hazards.
	pET-3b Vector	No known significant effects or critical hazards.
	pET-3c Vector	No known significant effects or critical hazards.
	pET-3d Vector	No known significant effects or critical hazards.
Ingestion	: pET-3a Vector	No known significant effects or critical hazards.
	pET-3b Vector	No known significant effects or critical hazards.
	pET-3c Vector	No known significant effects or critical hazards.
	pET-3d Vector	No known significant effects or critical hazards.
Skin contact	: pET-3a Vector	No known significant effects or critical hazards.
	pET-3b Vector	No known significant effects or critical hazards.
	pET-3c Vector	No known significant effects or critical hazards.
	pET-3d Vector	No known significant effects or critical hazards.
Eye contact	: pET-3a Vector	No known significant effects or critical hazards.
	pET-3b Vector	No known significant effects or critical hazards.
	pET-3c Vector	No known significant effects or critical hazards.
	pET-3d Vector	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	: pET-3a Vector	No specific data.
	pET-3b Vector	No specific data.
	pET-3c Vector	No specific data.
	pET-3d Vector	No specific data.
Ingestion	: pET-3a Vector	No specific data.
	pET-3b Vector	No specific data.
	pET-3c Vector	No specific data.
	pET-3d Vector	No specific data.
Skin contact	: pET-3a Vector	No specific data.
	pET-3b Vector	No specific data.
	pET-3c Vector	No specific data.
	pET-3d Vector	No specific data.
Eye contact	: pET-3a Vector	No specific data.
	pET-3b Vector	No specific data.
	pET-3c Vector	No specific data.
	pET-3d Vector	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

pET 3a-d Vectors, Part Number 211521

SECTION 11: Toxicological information

General	: pET-3a Vector	No known significant effects or critical hazards.
	pET-3b Vector	No known significant effects or critical hazards.
	pET-3c Vector	No known significant effects or critical hazards.
	pET-3d Vector	No known significant effects or critical hazards.
Carcinogenicity	: pET-3a Vector	No known significant effects or critical hazards.
	pET-3b Vector	No known significant effects or critical hazards.
	pET-3c Vector	No known significant effects or critical hazards.
	pET-3d Vector	No known significant effects or critical hazards.
Mutagenicity	: pET-3a Vector	No known significant effects or critical hazards.
	pET-3b Vector	No known significant effects or critical hazards.
	pET-3c Vector	No known significant effects or critical hazards.
	pET-3d Vector	No known significant effects or critical hazards.
Reproductive toxicity	: pET-3a Vector	No known significant effects or critical hazards.
	pET-3b Vector	No known significant effects or critical hazards.
	pET-3c Vector	No known significant effects or critical hazards.
	pET-3d Vector	No known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Not available.

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.
----------------------------	--

pET 3a-d Vectors, Part Number 211521

SECTION 13: Disposal considerations

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

EU Regulation (EC) No. 1907/2006 (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.

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

Label	: pET-3a Vector	Not applicable.
	pET-3b Vector	Not applicable.
	pET-3c Vector	Not applicable.
	pET-3d Vector	Not applicable.

Other EU regulations

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

SECTION 15: Regulatory information

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

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

15.2 Chemical safety assessment

: This product contains substances for which Chemical Safety Assessments might still be required.

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

Classification	Justification
Not classified.	

Full text of abbreviated H statements

Not applicable.

pET 3a-d Vectors, Part Number 211521

SECTION 16: Other information

[Full text of classifications \[CLP/GHS\]](#)

Not applicable.

Date of issue/ Date of revision : 31/08/2021

Date of previous issue : 16/04/2019

Version : 3

Notice to reader

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