

SAFETY DATA SHEET



pET 11a-d Vectors, Part Number 211523

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

1.1 Product identifier

Product name : pET 11a-d Vectors, Part Number 211523
Part No. (Kit) : 211523
Part No. : pET-11a Vector 211523-51
pET-11b Vector 211523-52
pET-11c Vector 211523-53
pET-11d Vector 211523-54

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

Identified uses		
Analytical reagent.		
pET-11a Vector	20 µl (20 µg	1 µg/µl)
pET-11b Vector	20 µl (20 µg	1 µg/µl)
pET-11c Vector	20 µl (20 µg	1 µg/µl)
pET-11d Vector	20 µl (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-11a Vector Mixture
pET-11b Vector Mixture
pET-11c Vector Mixture
pET-11d 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-11a Vector No signal word.
pET-11b Vector No signal word.
pET-11c Vector No signal word.
pET-11d Vector No signal word.

Hazard statements :

Date of issue/Date of revision : 27/03/2017

SECTION 2: Hazards identification

pET-11a Vector	No known significant effects or critical hazards.
pET-11b Vector	No known significant effects or critical hazards.
pET-11c Vector	No known significant effects or critical hazards.
pET-11d Vector	No known significant effects or critical hazards.

Precautionary statements

Prevention	: pET-11a Vector	Not applicable.
	pET-11b Vector	Not applicable.
	pET-11c Vector	Not applicable.
	pET-11d Vector	Not applicable.
Response	: pET-11a Vector	Not applicable.
	pET-11b Vector	Not applicable.
	pET-11c Vector	Not applicable.
	pET-11d Vector	Not applicable.
Storage	: pET-11a Vector	Not applicable.
	pET-11b Vector	Not applicable.
	pET-11c Vector	Not applicable.
	pET-11d Vector	Not applicable.
Disposal	: pET-11a Vector	Not applicable.
	pET-11b Vector	Not applicable.
	pET-11c Vector	Not applicable.
	pET-11d Vector	Not applicable.
Supplemental label elements	: pET-11a Vector	Not applicable.
	pET-11b Vector	Not applicable.
	pET-11c Vector	Not applicable.
	pET-11d Vector	Not applicable.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: pET-11a Vector	Not applicable.
	pET-11b Vector	Not applicable.
	pET-11c Vector	Not applicable.
	pET-11d Vector	Not applicable.
Special packaging requirements		
Tactile warning of danger	: pET-11a Vector	Not applicable.
	pET-11b Vector	Not applicable.
	pET-11c Vector	Not applicable.
	pET-11d Vector	Not applicable.
2.3 Other hazards		
Other hazards which do not result in classification	: pET-11a Vector	None known.
	pET-11b Vector	None known.
	pET-11c Vector	None known.
	pET-11d Vector	None known.

SECTION 3: Composition/information on ingredients

3.1 Substances	: pET-11a Vector	Mixture
	pET-11b Vector	Mixture
	pET-11c Vector	Mixture
	pET-11d 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.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

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-11a 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-11b 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-11c 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-11d 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-11a Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	pET-11b Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	pET-11c Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	pET-11d 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-11a Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pET-11b Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pET-11c Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pET-11d Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: pET-11a Vector	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	pET-11b Vector	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	pET-11c Vector	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	pET-11d Vector	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

SECTION 4: First aid measures

Protection of first-aiders	: pET-11a Vector pET-11b Vector pET-11c Vector pET-11d Vector	No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training.
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4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact	: pET-11a Vector pET-11b Vector pET-11c Vector pET-11d 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-11a Vector pET-11b Vector pET-11c Vector pET-11d 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-11a Vector pET-11b Vector pET-11c Vector pET-11d 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-11a Vector pET-11b Vector pET-11c Vector pET-11d 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-11a Vector pET-11b Vector pET-11c Vector pET-11d Vector	No specific data. No specific data. No specific data. No specific data.
Inhalation	: pET-11a Vector pET-11b Vector pET-11c Vector pET-11d Vector	No specific data. No specific data. No specific data. No specific data.
Skin contact	: pET-11a Vector pET-11b Vector pET-11c Vector pET-11d Vector	No specific data. No specific data. No specific data. No specific data.
Ingestion	: pET-11a Vector pET-11b Vector pET-11c Vector pET-11d 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

Notes to physician	: pET-11a Vector pET-11b Vector pET-11c Vector pET-11d Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: pET-11a Vector pET-11b Vector pET-11c Vector pET-11d Vector	No specific treatment. No specific treatment. No specific treatment. No specific treatment.

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

Suitable extinguishing media	: pET-11a Vector pET-11b Vector pET-11c Vector pET-11d Vector	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: pET-11a Vector pET-11b Vector pET-11c Vector pET-11d Vector	None known. None known. None known. None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: pET-11a Vector pET-11b Vector pET-11c Vector pET-11d Vector	In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous combustion products	: pET-11a Vector pET-11b Vector pET-11c Vector pET-11d Vector	No specific data. No specific data. No specific data. No specific data.

5.3 Advice for firefighters

Special precautions for fire-fighters	: pET-11a Vector pET-11b Vector pET-11c Vector pET-11d 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. 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	: pET-11a Vector pET-11b Vector pET-11c Vector pET-11d 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. 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-11a 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-11b 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-11c 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-11d 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-11a 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-11b 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-11c 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-11d 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".
6.2 Environmental precautions	: pET-11a 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-11b 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-11c 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-11d 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

SECTION 6: Accidental release measures

Methods for cleaning up	: pET-11a 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-11b 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-11c 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-11d 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-11a Vector	Put on appropriate personal protective equipment (see Section 8).
	pET-11b Vector	Put on appropriate personal protective equipment (see Section 8).
	pET-11c Vector	Put on appropriate personal protective equipment (see Section 8).
	pET-11d Vector	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	: pET-11a 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-11b 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-11c 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-11d 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

SECTION 7: Handling and storage

Storage	: pET-11a 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.
	pET-11b 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.
	pET-11c 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.
	pET-11d 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.

7.3 Specific end use(s)

Recommendations	: pET-11a Vector pET-11b Vector pET-11c Vector pET-11d Vector	Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications.
Industrial sector specific solutions	: pET-11a Vector pET-11b Vector pET-11c Vector pET-11d Vector	Not applicable. Not applicable. Not applicable. Not applicable.

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
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SECTION 8: Exposure controls/personal protection

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.

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-11a Vector	Liquid.
	pET-11b Vector	Liquid.
	pET-11c Vector	Liquid.
	pET-11d Vector	Liquid.
Colour	: pET-11a Vector	Not available.
	pET-11b Vector	Not available.
	pET-11c Vector	Not available.
	pET-11d Vector	Not available.
Odour	: pET-11a Vector	Not available.
	pET-11b Vector	Not available.
	pET-11c Vector	Not available.
	pET-11d Vector	Not available.

SECTION 9: Physical and chemical properties

Odour threshold	:	pET-11a Vector	Not available.
		pET-11b Vector	Not available.
		pET-11c Vector	Not available.
		pET-11d Vector	Not available.
pH	:	pET-11a Vector	7.5
		pET-11b Vector	7.5
		pET-11c Vector	7.5
		pET-11d Vector	7.5
Melting point/freezing point	:	pET-11a Vector	0°C
		pET-11b Vector	0°C
		pET-11c Vector	0°C
		pET-11d Vector	0°C
Initial boiling point and boiling range	:	pET-11a Vector	100°C
		pET-11b Vector	100°C
		pET-11c Vector	100°C
		pET-11d Vector	100°C
Flash point	:	pET-11a Vector	Not available.
		pET-11b Vector	Not available.
		pET-11c Vector	Not available.
		pET-11d Vector	Not available.
Evaporation rate	:	pET-11a Vector	Not available.
		pET-11b Vector	Not available.
		pET-11c Vector	Not available.
		pET-11d Vector	Not available.
Flammability (solid, gas)	:	pET-11a Vector	Not applicable.
		pET-11b Vector	Not applicable.
		pET-11c Vector	Not applicable.
		pET-11d Vector	Not applicable.
Upper/lower flammability or explosive limits	:	pET-11a Vector	Not available.
		pET-11b Vector	Not available.
		pET-11c Vector	Not available.
		pET-11d Vector	Not available.
Vapour pressure	:	pET-11a Vector	Not available.
		pET-11b Vector	Not available.
		pET-11c Vector	Not available.
		pET-11d Vector	Not available.
Vapour density	:	pET-11a Vector	Not available.
		pET-11b Vector	Not available.
		pET-11c Vector	Not available.
		pET-11d Vector	Not available.
Relative density	:	pET-11a Vector	Not available.
		pET-11b Vector	Not available.
		pET-11c Vector	Not available.
		pET-11d Vector	Not available.
Solubility(ies)	:	pET-11a Vector	Easily soluble in the following materials: cold water and hot water.
		pET-11b Vector	Easily soluble in the following materials: cold water and hot water.
		pET-11c Vector	Easily soluble in the following materials: cold water and hot water.
		pET-11d Vector	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	:	pET-11a Vector	Not available.
		pET-11b Vector	Not available.
		pET-11c Vector	Not available.
		pET-11d Vector	Not available.
Auto-ignition temperature	:	pET-11a Vector	Not available.
		pET-11b Vector	Not available.
		pET-11c Vector	Not available.
		pET-11d Vector	Not available.

SECTION 9: Physical and chemical properties

Decomposition temperature	: pET-11a Vector	Not available.
	pET-11b Vector	Not available.
	pET-11c Vector	Not available.
	pET-11d Vector	Not available.
Viscosity	: pET-11a Vector	Not available.
	pET-11b Vector	Not available.
	pET-11c Vector	Not available.
	pET-11d Vector	Not available.
Explosive properties	: pET-11a Vector	Not available.
	pET-11b Vector	Not available.
	pET-11c Vector	Not available.
	pET-11d Vector	Not available.
Oxidising properties	: pET-11a Vector	Not available.
	pET-11b Vector	Not available.
	pET-11c Vector	Not available.
	pET-11d Vector	Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: pET-11a Vector	No specific test data related to reactivity available for this product or its ingredients.
	pET-11b Vector	No specific test data related to reactivity available for this product or its ingredients.
	pET-11c Vector	No specific test data related to reactivity available for this product or its ingredients.
	pET-11d Vector	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: pET-11a Vector	The product is stable.
	pET-11b Vector	The product is stable.
	pET-11c Vector	The product is stable.
	pET-11d Vector	The product is stable.
10.3 Possibility of hazardous reactions	: pET-11a Vector	Under normal conditions of storage and use, hazardous reactions will not occur.
	pET-11b Vector	Under normal conditions of storage and use, hazardous reactions will not occur.
	pET-11c Vector	Under normal conditions of storage and use, hazardous reactions will not occur.
	pET-11d Vector	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: pET-11a Vector	No specific data.
	pET-11b Vector	No specific data.
	pET-11c Vector	No specific data.
	pET-11d Vector	No specific data.
10.5 Incompatible materials	: pET-11a Vector	May react or be incompatible with oxidising materials.
	pET-11b Vector	May react or be incompatible with oxidising materials.
	pET-11c Vector	May react or be incompatible with oxidising materials.
	pET-11d Vector	May react or be incompatible with oxidising materials.

SECTION 10: Stability and reactivity

10.6 Hazardous decomposition products	: pET-11a Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pET-11b Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pET-11c Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pET-11d Vector	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

Not available.

Irritation/Corrosion

Conclusion/Summary : Not available.

Sensitiser

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 : pET-11a Vector
pET-11b Vector
pET-11c Vector
pET-11d Vector

Not available.
Not available.
Not available.
Not available.

Potential acute health effects

Inhalation	: pET-11a Vector	No known significant effects or critical hazards.
	pET-11b Vector	No known significant effects or critical hazards.
	pET-11c Vector	No known significant effects or critical hazards.
	pET-11d Vector	No known significant effects or critical hazards.
Ingestion	: pET-11a Vector	No known significant effects or critical hazards.
	pET-11b Vector	No known significant effects or critical hazards.
	pET-11c Vector	No known significant effects or critical hazards.
	pET-11d Vector	No known significant effects or critical hazards.
Skin contact	: pET-11a Vector	No known significant effects or critical hazards.
	pET-11b Vector	No known significant effects or critical hazards.
	pET-11c Vector	No known significant effects or critical hazards.
	pET-11d Vector	No known significant effects or critical hazards.
Eye contact	: pET-11a Vector	No known significant effects or critical hazards.
	pET-11b Vector	No known significant effects or critical hazards.
	pET-11c Vector	No known significant effects or critical hazards.
	pET-11d Vector	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	: pET-11a Vector	No specific data.
	pET-11b Vector	No specific data.
	pET-11c Vector	No specific data.
	pET-11d Vector	No specific data.
Ingestion	: pET-11a Vector	No specific data.
	pET-11b Vector	No specific data.
	pET-11c Vector	No specific data.
	pET-11d Vector	No specific data.

SECTION 11: Toxicological information

Skin contact	:	pET-11a Vector	No specific data.
		pET-11b Vector	No specific data.
		pET-11c Vector	No specific data.
		pET-11d Vector	No specific data.
Eye contact	:	pET-11a Vector	No specific data.
		pET-11b Vector	No specific data.
		pET-11c Vector	No specific data.
		pET-11d 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

General	:	pET-11a Vector	No known significant effects or critical hazards.
		pET-11b Vector	No known significant effects or critical hazards.
		pET-11c Vector	No known significant effects or critical hazards.
		pET-11d Vector	No known significant effects or critical hazards.
Carcinogenicity	:	pET-11a Vector	No known significant effects or critical hazards.
		pET-11b Vector	No known significant effects or critical hazards.
		pET-11c Vector	No known significant effects or critical hazards.
		pET-11d Vector	No known significant effects or critical hazards.
Mutagenicity	:	pET-11a Vector	No known significant effects or critical hazards.
		pET-11b Vector	No known significant effects or critical hazards.
		pET-11c Vector	No known significant effects or critical hazards.
		pET-11d Vector	No known significant effects or critical hazards.
Teratogenicity	:	pET-11a Vector	No known significant effects or critical hazards.
		pET-11b Vector	No known significant effects or critical hazards.
		pET-11c Vector	No known significant effects or critical hazards.
		pET-11d Vector	No known significant effects or critical hazards.
Developmental effects	:	pET-11a Vector	No known significant effects or critical hazards.
		pET-11b Vector	No known significant effects or critical hazards.
		pET-11c Vector	No known significant effects or critical hazards.
		pET-11d Vector	No known significant effects or critical hazards.
Fertility effects	:	pET-11a Vector	No known significant effects or critical hazards.
		pET-11b Vector	No known significant effects or critical hazards.
		pET-11c Vector	No known significant effects or critical hazards.
		pET-11d 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

Date of issue/Date of revision : 27/03/2017

SECTION 12: Ecological information

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

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

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

Regulatory information

ADR/RID / IMDG / IATA : Not regulated.

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 Annex II of Marpol and the IBC Code : 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.

SECTION 15: Regulatory information

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: pET-11a Vector	Not applicable.
	pET-11b Vector	Not applicable.
	pET-11c Vector	Not applicable.
	pET-11d Vector	Not applicable.

Other EU regulations

Europe inventory : All components are listed or exempted.

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.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

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

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

Australia	: All components are listed or exempted.
Canada	: All components are listed or exempted.
China	: All components are listed or exempted.
Japan	: Japan inventory (ENCS): All components are listed or exempted. Japan inventory (ISHL): All components are listed or exempted.
Malaysia	: Not determined.
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.
Turkey	: Not determined.
United States	: 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]
 DNEL = Derived No Effect Level
 EUH statement = CLP-specific Hazard statement
 PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number

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.

Full text of classifications [CLP/GHS]

Not applicable.

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Date of previous issue : No previous validation.

Version : 1

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