

SAFETY DATA SHEET



pET 3a-d Vectors, Part Number 211521

Section 1. Identification

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
Validation date : 3/24/2017

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

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

1.3 Details of the supplier of the safety data sheet

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

1.4 Emergency telephone number

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

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status : pET-3a Vector While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
 pET-3b Vector While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
 pET-3c Vector While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
 pET-3d Vector While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Section 2. Hazards identification

other users of this product.

Classification of the substance or mixture

Not classified.

2.2 GHS label elements

Signal word	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	No signal word. No signal word. No signal word. No signal word.
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	None known. None known. None known. None known.

2.3 Other hazards

Hazards not otherwise classified	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	None known. None known. None known. None known.
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Section 3. Composition/information on ingredients

Substance/mixture	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Mixture Mixture Mixture Mixture
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Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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 and hence require reporting in this section.

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

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact	:	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. 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-3b 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-3c Vector	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable

Section 4. First aid measures

pET-3d Vector

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.

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.

4.2 Most important symptoms/effects, 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 immediate medical attention and special treatment needed, if necessary

Section 4. First aid measures

Notes to physician	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d 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-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	No specific treatment. No specific treatment. No specific treatment. No specific treatment.
Protection of first-aiders	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d 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.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d 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-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	None known. None known. None known. None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d 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 thermal decomposition products	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	No specific data. No specific data. No specific data. No specific data.

Section 5. Fire-fighting measures

5.3 Advice for firefighters

Special protective actions 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.

pET-3b Vector

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

pET-3c Vector

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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.

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 spilled 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 spilled 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 spilled material. Put on appropriate personal protective equipment.

pET-3d Vector

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

Section 6. Accidental release measures

surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

For emergency responders : pET-3a Vector

pET-3b Vector

pET-3c Vector

pET-3d Vector

6.2 Environmental precautions : pET-3a Vector

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

pET-3b Vector

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

pET-3c Vector

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

pET-3d Vector

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

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : 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.

Section 6. Accidental release measures

pET-3d Vector

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.

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

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures

: 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 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-3c 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-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

: 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

Section 7. Handling and storage

pET-3b Vector	to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
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 unlabeled containers. Use appropriate containment to avoid environmental contamination.
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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

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

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
None.	

8.2 Exposure controls

Appropriate engineering controls	: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
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Section 8. Exposure controls/personal protection

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

Individual protection measures

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

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

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Liquid. Liquid. Liquid. Liquid.
Color	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Not available. Not available. Not available. Not available.
Odor	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Not available. Not available. Not available. Not available.
Odor threshold	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	Not available. Not available. Not available. Not available.
pH	: pET-3a Vector pET-3b Vector pET-3c Vector pET-3d Vector	7.5 7.5 7.5 7.5

Section 9. Physical and chemical properties

Melting point	: pET-3a Vector	0°C (32°F)
	pET-3b Vector	0°C (32°F)
	pET-3c Vector	0°C (32°F)
	pET-3d Vector	0°C (32°F)
Boiling point	: pET-3a Vector	100°C (212°F)
	pET-3b Vector	100°C (212°F)
	pET-3c Vector	100°C (212°F)
	pET-3d Vector	100°C (212°F)
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.
Lower and upper explosive (flammable) limits	: pET-3a Vector	Not available.
	pET-3b Vector	Not available.
	pET-3c Vector	Not available.
	pET-3d Vector	Not available.
Vapor pressure	: pET-3a Vector	Not available.
	pET-3b Vector	Not available.
	pET-3c Vector	Not available.
	pET-3d Vector	Not available.
Vapor density	: pET-3a Vector	Not available.
	pET-3b Vector	Not available.
	pET-3c Vector	Not available.
	pET-3d Vector	Not available.
Relative density	: pET-3a Vector	Not available.
	pET-3b Vector	Not available.
	pET-3c Vector	Not available.
	pET-3d Vector	Not available.
Solubility	: pET-3a Vector	Easily soluble in the following materials: cold water and hot water.
	pET-3b Vector	Easily soluble in the following materials: cold water and hot water.
	pET-3c Vector	Easily soluble in the following materials: cold water and hot water.
	pET-3d Vector	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: pET-3a Vector	Not available.
	pET-3b Vector	Not available.
	pET-3c Vector	Not available.
	pET-3d Vector	Not available.
Auto-ignition temperature	: pET-3a Vector	Not available.
	pET-3b Vector	Not available.
	pET-3c Vector	Not available.
	pET-3d Vector	Not available.
Decomposition temperature	: 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

Viscosity	: pET-3a Vector	Not available.
	pET-3b Vector	Not available.
	pET-3c Vector	Not available.
	pET-3d Vector	Not available.

Section 10. Stability and reactivity

10.1 Reactivity	: pET-3a Vector	No specific test data related to reactivity available for this product or its ingredients.
	pET-3b Vector	No specific test data related to reactivity available for this product or its ingredients.
	pET-3c Vector	No specific test data related to reactivity available for this product or its ingredients.
	pET-3d Vector	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: pET-3a Vector	The product is stable.
	pET-3b Vector	The product is stable.
	pET-3c Vector	The product is stable.
	pET-3d Vector	The product is stable.
10.3 Possibility of hazardous reactions	: pET-3a Vector	Under normal conditions of storage and use, hazardous reactions will not occur.
	pET-3b Vector	Under normal conditions of storage and use, hazardous reactions will not occur.
	pET-3c Vector	Under normal conditions of storage and use, hazardous reactions will not occur.
	pET-3d Vector	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: pET-3a Vector	No specific data.
	pET-3b Vector	No specific data.
	pET-3c Vector	No specific data.
	pET-3d Vector	No specific data.
10.5 Incompatible materials	: pET-3a Vector	May react or be incompatible with oxidizing materials.
	pET-3b Vector	May react or be incompatible with oxidizing materials.
	pET-3c Vector	May react or be incompatible with oxidizing materials.
	pET-3d Vector	May react or be incompatible with oxidizing materials.
10.6 Hazardous decomposition products	: pET-3a Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pET-3b Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pET-3c Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pET-3d 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.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the 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

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.
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.
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.
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.

Symptoms related to the physical, chemical and toxicological characteristics

Section 11. Toxicological information

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.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	: 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.
Carcinogenicity	: 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.
Mutagenicity	: 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.
Teratogenicity	: 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.
Developmental effects	: 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.
Fertility effects	: 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.

Numerical measures of toxicity

Section 11. Toxicological information

Acute toxicity estimates

Not available.

Section 12. Ecological information

12.1 Toxicity

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.

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

Section 13. Disposal considerations

13.1 Waste treatment methods

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

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

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

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

Section 14. Transport information

Regulatory information

DOT / IMDG / IATA : Not regulated.

Section 15. Regulatory information

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

U.S. Federal regulations : **United States inventory (TSCA 8b)**: All components are listed or exempted.
Clean Water Act (CWA) 311: Edetic acid

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

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

No products were found.

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

California Prop. 65

No products were found.

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.

Section 15. Regulatory information

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

[Inventory list](#)

Australia	: All components are listed or exempted.
Canada inventory	: All components are listed or exempted.
China	: All components are listed or exempted.
Europe	: All components are listed or exempted.
Japan	: <input checked="" type="checkbox"/> 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	: <input checked="" type="checkbox"/> Not determined.

Section 16. Other information

[History](#)

Date of issue	: 03/24/2017
Date of previous issue	: 09/04/2015.
Version	: 2

Indicates information that has changed from previously issued version.

[Notice to reader](#)

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