

SAFETY DATA SHEET

VariFlex Bacterial Protein Expression System, Part Number 240165

Section 1. Identification

1.1 Product identifier

Product name : VariFlex Bacterial Protein Expression System, Part Number 240165

Part no. (chemical kit) : 240165

Part no. :

Streptavidin Resin	240105-51
pBEn-SBP-SET1a Vector	240164-51
pBEn-SBP-SET1b Vector	240164-52
pBEn-SBP-SET1c	240164-53
pBEn-SBP-SET2a Vector	240164-54
pBEn-SBP-SET2b	240164-55
pBEn-SBP-SET2c	240164-56
pBEn-SBP-SET3a Vector	240164-57
pBEn-SBP-SET3b Vector	240164-58
pBEn-SBP-SET3c	240164-59

Validation date : 5/21/2018

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

Material uses : Analytical reagent.

Streptavidin Resin	1.25 ml
pBEn-SBP-SET1a Vector	0.02 ml
pBEn-SBP-SET1b Vector	0.02 ml (20 µg 1 µg/µl)
pBEn-SBP-SET1c	0.02 ml (20 µg 1 µg/µl)
pBEn-SBP-SET2a Vector	0.02 ml
pBEn-SBP-SET2b	0.02 ml (20 µg 1 µg/µl)
pBEn-SBP-SET2c	0.02 ml (20 µg 1 µg/µl)
pBEn-SBP-SET3a Vector	0.02 ml (20 µg 1 µg/µl)
pBEn-SBP-SET3b Vector	0.02 ml (20 µg 1 µg/µl)
pBEn-SBP-SET3c	0.02 ml (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	: Streptavidin Resin	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	pBEn-SBP-SET1a 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.
	pBEn-SBP-SET1b Vector	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.

Section 2. Hazards identification

	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.
pBEn-SBP-SET1c	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.
pBEn-SBP-SET2a 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.
pBEn-SBP-SET2b	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.
pBEn-SBP-SET2c	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.
pBEn-SBP-SET3a 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.
pBEn-SBP-SET3b 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.
pBEn-SBP-SET3c	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.

Classification of the substance or mixture

Streptavidin Resin

H226	FLAMMABLE LIQUIDS - Category 3
H315	SKIN IRRITATION - Category 2
H319	EYE IRRITATION - Category 2A
H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

2.2 GHS label elements

Section 2. Hazards identification

Hazard pictograms

: Streptavidin Resin



Signal word

: Streptavidin Resin
 pBEn-SBP-SET1a Vector
 pBEn-SBP-SET1b Vector
 pBEn-SBP-SET1c
 pBEn-SBP-SET2a Vector
 pBEn-SBP-SET2b
 pBEn-SBP-SET2c
 pBEn-SBP-SET3a Vector
 pBEn-SBP-SET3b Vector
 pBEn-SBP-SET3c

Warning

No signal word.
 No signal word.
 No signal word.
 No signal word.
 No signal word.
 No signal word.
 No signal word.
 No signal word.
 No signal word.
 No signal word.

Hazard statements

: Streptavidin Resin

pBEn-SBP-SET1a Vector
 pBEn-SBP-SET1b Vector
 pBEn-SBP-SET1c
 pBEn-SBP-SET2a Vector
 pBEn-SBP-SET2b
 pBEn-SBP-SET2c
 pBEn-SBP-SET3a Vector
 pBEn-SBP-SET3b Vector
 pBEn-SBP-SET3c

H226 - Flammable liquid and vapor.
 H319 - Causes serious eye irritation.
 H315 - Causes skin irritation.
 H335 - May cause respiratory irritation.
 H336 - May cause drowsiness or dizziness.
 No known significant effects or critical hazards.
 No known significant effects or critical hazards.
 No known significant effects or critical hazards.
 No known significant effects or critical hazards.
 No known significant effects or critical hazards.
 No known significant effects or critical hazards.
 No known significant effects or critical hazards.
 No known significant effects or critical hazards.
 No known significant effects or critical hazards.

Precautionary statements

Prevention


: Streptavidin Resin

pBEn-SBP-SET1a Vector
 pBEn-SBP-SET1b Vector
 pBEn-SBP-SET1c
 pBEn-SBP-SET2a Vector
 pBEn-SBP-SET2b
 pBEn-SBP-SET2c
 pBEn-SBP-SET3a Vector
 pBEn-SBP-SET3b Vector
 pBEn-SBP-SET3c

P280 - Wear protective gloves. Wear eye or face protection.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.
 P242 - Use only non-sparking tools.
 P243 - Take precautionary measures against static discharge.
 P233 - Keep container tightly closed.
 P271 - Use only outdoors or in a well-ventilated area.
 P261 - Avoid breathing vapor.
 P264 - Wash hands thoroughly after handling.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.

Section 2. Hazards identification

Response

:  Streptavidin Resin

P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
 P302 + P352 + P362+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.
 P332 + P313 - If skin irritation occurs: Get medical attention.
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337 + P313 - If eye irritation persists: Get medical attention.

pBEn-SBP-SET1a Vector
 pBEn-SBP-SET1b Vector
 pBEn-SBP-SET1c
 pBEn-SBP-SET2a Vector
 pBEn-SBP-SET2b
 pBEn-SBP-SET2c
 pBEn-SBP-SET3a Vector
 pBEn-SBP-SET3b Vector
 pBEn-SBP-SET3c

Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.

Storage

:  Streptavidin Resin

pBEn-SBP-SET1a Vector
 pBEn-SBP-SET1b Vector
 pBEn-SBP-SET1c
 pBEn-SBP-SET2a Vector
 pBEn-SBP-SET2b
 pBEn-SBP-SET2c
 pBEn-SBP-SET3a Vector
 pBEn-SBP-SET3b Vector
 pBEn-SBP-SET3c

P405 - Store locked up.
 P403 - Store in a well-ventilated place.
 P235 - Keep cool.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.

Disposal

:  Streptavidin Resin

pBEn-SBP-SET1a Vector
 pBEn-SBP-SET1b Vector
 pBEn-SBP-SET1c
 pBEn-SBP-SET2a Vector
 pBEn-SBP-SET2b
 pBEn-SBP-SET2c
 pBEn-SBP-SET3a Vector
 pBEn-SBP-SET3b Vector
 pBEn-SBP-SET3c

P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.

Section 2. Hazards identification

Supplemental label elements	: Streptavidin Resin pBEn-SBP-SET1a Vector pBEn-SBP-SET1b Vector pBEn-SBP-SET1c pBEn-SBP-SET2a Vector pBEn-SBP-SET2b pBEn-SBP-SET2c pBEn-SBP-SET3a Vector pBEn-SBP-SET3b Vector pBEn-SBP-SET3c	None known. None known. None known. None known. None known. None known. None known. None known. None known. None known.
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2.3 Other hazards

Hazards not otherwise classified	: Streptavidin Resin pBEn-SBP-SET1a Vector pBEn-SBP-SET1b Vector pBEn-SBP-SET1c pBEn-SBP-SET2a Vector pBEn-SBP-SET2b pBEn-SBP-SET2c pBEn-SBP-SET3a Vector pBEn-SBP-SET3b Vector pBEn-SBP-SET3c	None known. None known. None known. None known. None known. None known. None known. None known. None known. None known.
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Section 3. Composition/information on ingredients

Substance/mixture	: Streptavidin Resin pBEn-SBP-SET1a Vector pBEn-SBP-SET1b Vector pBEn-SBP-SET1c pBEn-SBP-SET2a Vector pBEn-SBP-SET2b pBEn-SBP-SET2c pBEn-SBP-SET3a Vector pBEn-SBP-SET3b Vector pBEn-SBP-SET3c	Mixture Mixture Mixture Mixture Mixture Mixture Mixture Mixture Mixture Mixture
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Ingredient name	%	CAS number
Streptavidin Resin Ethanol	≥10 - ≤25	64-17-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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

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

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact	: Streptavidin Resin pBEn-SBP-SET1a Vector	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. 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.
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Section 4. First aid measures

pBEn-SBP-SET1b 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.
pBEn-SBP-SET1c	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.
pBEn-SBP-SET2a 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.
pBEn-SBP-SET2b	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.
pBEn-SBP-SET2c	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.
pBEn-SBP-SET3a 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.
pBEn-SBP-SET3b 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.
pBEn-SBP-SET3c	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	
: Streptavidin Resin	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
pBEn-SBP-SET1a Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
pBEn-SBP-SET1b Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
pBEn-SBP-SET1c	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
pBEn-SBP-SET2a Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Section 4. First aid measures

	pBEn-SBP-SET2b	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	pBEn-SBP-SET2c	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	pBEn-SBP-SET3a Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	pBEn-SBP-SET3b Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	pBEn-SBP-SET3c	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	: Streptavidin Resin	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	pBEn-SBP-SET1a Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pBEn-SBP-SET1b Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pBEn-SBP-SET1c	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pBEn-SBP-SET2a Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pBEn-SBP-SET2b	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pBEn-SBP-SET2c	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pBEn-SBP-SET3a Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pBEn-SBP-SET3b Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pBEn-SBP-SET3c	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: Streptavidin Resin	Wash out mouth with water. Remove dentures if any. 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. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never

Section 4. First aid measures

	give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
pBEn-SBP-SET1a 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.
pBEn-SBP-SET1b 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.
pBEn-SBP-SET1c	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.
pBEn-SBP-SET2a 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.
pBEn-SBP-SET2b	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.
pBEn-SBP-SET2c	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.
pBEn-SBP-SET3a 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.
pBEn-SBP-SET3b 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

Section 4. First aid measures

pBEn-SBP-SET3c

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

: Streptavidin Resin
pBEn-SBP-SET1a Vector
pBEn-SBP-SET1b Vector
pBEn-SBP-SET1c
pBEn-SBP-SET2a Vector
pBEn-SBP-SET2b
pBEn-SBP-SET2c
pBEn-SBP-SET3a Vector
pBEn-SBP-SET3b Vector
pBEn-SBP-SET3c

Causes serious eye irritation.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
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

: Streptavidin Resin

pBEn-SBP-SET1a Vector
pBEn-SBP-SET1b Vector
pBEn-SBP-SET1c
pBEn-SBP-SET2a Vector
pBEn-SBP-SET2b
pBEn-SBP-SET2c
pBEn-SBP-SET3a Vector
pBEn-SBP-SET3b Vector
pBEn-SBP-SET3c

Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
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

: Streptavidin Resin
pBEn-SBP-SET1a Vector
pBEn-SBP-SET1b Vector
pBEn-SBP-SET1c
pBEn-SBP-SET2a Vector
pBEn-SBP-SET2b
pBEn-SBP-SET2c
pBEn-SBP-SET3a Vector
pBEn-SBP-SET3b Vector
pBEn-SBP-SET3c

Causes skin irritation.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
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

: Streptavidin Resin

pBEn-SBP-SET1a Vector
pBEn-SBP-SET1b Vector
pBEn-SBP-SET1c
pBEn-SBP-SET2a Vector
pBEn-SBP-SET2b
pBEn-SBP-SET2c
pBEn-SBP-SET3a Vector
pBEn-SBP-SET3b Vector
pBEn-SBP-SET3c

Can cause central nervous system (CNS) depression.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
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

Section 4. First aid measures

Eye contact	: Streptavidin Resin pBEn-SBP-SET1a Vector pBEn-SBP-SET1b Vector pBEn-SBP-SET1c pBEn-SBP-SET2a Vector pBEn-SBP-SET2b pBEn-SBP-SET2c pBEn-SBP-SET3a Vector pBEn-SBP-SET3b Vector pBEn-SBP-SET3c	Adverse symptoms may include the following: pain or irritation watering redness No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Inhalation	: Streptavidin Resin pBEn-SBP-SET1a Vector pBEn-SBP-SET1b Vector pBEn-SBP-SET1c pBEn-SBP-SET2a Vector pBEn-SBP-SET2b pBEn-SBP-SET2c pBEn-SBP-SET3a Vector pBEn-SBP-SET3b Vector pBEn-SBP-SET3c	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Skin contact	: Streptavidin Resin pBEn-SBP-SET1a Vector pBEn-SBP-SET1b Vector pBEn-SBP-SET1c pBEn-SBP-SET2a Vector pBEn-SBP-SET2b pBEn-SBP-SET2c pBEn-SBP-SET3a Vector pBEn-SBP-SET3b Vector pBEn-SBP-SET3c	Adverse symptoms may include the following: irritation redness No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Ingestion	: Streptavidin Resin pBEn-SBP-SET1a Vector pBEn-SBP-SET1b Vector pBEn-SBP-SET1c pBEn-SBP-SET2a Vector pBEn-SBP-SET2b pBEn-SBP-SET2c pBEn-SBP-SET3a Vector pBEn-SBP-SET3b Vector pBEn-SBP-SET3c	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. 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	: Streptavidin Resin	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	pBEn-SBP-SET1a Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	pBEn-SBP-SET1b Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	pBEn-SBP-SET1c	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	pBEn-SBP-SET2a Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	pBEn-SBP-SET2b	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	pBEn-SBP-SET2c	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	pBEn-SBP-SET3a Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	pBEn-SBP-SET3b Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	pBEn-SBP-SET3c	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: Streptavidin Resin	No specific treatment.
	pBEn-SBP-SET1a Vector	No specific treatment.
	pBEn-SBP-SET1b Vector	No specific treatment.
	pBEn-SBP-SET1c	No specific treatment.
	pBEn-SBP-SET2a Vector	No specific treatment.
	pBEn-SBP-SET2b	No specific treatment.
	pBEn-SBP-SET2c	No specific treatment.
	pBEn-SBP-SET3a Vector	No specific treatment.
	pBEn-SBP-SET3b Vector	No specific treatment.
	pBEn-SBP-SET3c	No specific treatment.
Protection of first-aiders	: Streptavidin Resin	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	pBEn-SBP-SET1a Vector	No action shall be taken involving any personal risk or without suitable training.
	pBEn-SBP-SET1b Vector	No action shall be taken involving any personal risk or without suitable training.
	pBEn-SBP-SET1c	No action shall be taken involving any personal risk or without suitable training.
	pBEn-SBP-SET2a Vector	No action shall be taken involving any personal risk or without suitable training.
	pBEn-SBP-SET2b	No action shall be taken involving any personal risk or without suitable training.
	pBEn-SBP-SET2c	No action shall be taken involving any personal risk or without suitable training.

Section 4. First aid measures

pBEn-SBP-SET3a Vector	No action shall be taken involving any personal risk or without suitable training.
pBEn-SBP-SET3b Vector	No action shall be taken involving any personal risk or without suitable training.
pBEn-SBP-SET3c	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	: Streptavidin Resin	Use dry chemical, CO ₂ , water spray (fog) or foam.
	pBEn-SBP-SET1a Vector	Use an extinguishing agent suitable for the surrounding fire.
	pBEn-SBP-SET1b Vector	Use an extinguishing agent suitable for the surrounding fire.
	pBEn-SBP-SET1c	Use an extinguishing agent suitable for the surrounding fire.
	pBEn-SBP-SET2a Vector	Use an extinguishing agent suitable for the surrounding fire.
	pBEn-SBP-SET2b	Use an extinguishing agent suitable for the surrounding fire.
	pBEn-SBP-SET2c	Use an extinguishing agent suitable for the surrounding fire.
	pBEn-SBP-SET3a Vector	Use an extinguishing agent suitable for the surrounding fire.
	pBEn-SBP-SET3b Vector	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	pBEn-SBP-SET3c	Use an extinguishing agent suitable for the surrounding fire.
	: Streptavidin Resin	Do not use water jet.
	pBEn-SBP-SET1a Vector	None known.
	pBEn-SBP-SET1b Vector	None known.
	pBEn-SBP-SET1c	None known.
	pBEn-SBP-SET2a Vector	None known.
	pBEn-SBP-SET2b	None known.
	pBEn-SBP-SET2c	None known.
	pBEn-SBP-SET3a Vector	None known.
pBEn-SBP-SET3b Vector	None known.	
pBEn-SBP-SET3c	None known.	

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	: Streptavidin Resin	Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
	pBEn-SBP-SET1a Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pBEn-SBP-SET1b Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pBEn-SBP-SET1c	In a fire or if heated, a pressure increase will occur and the container may burst.
	pBEn-SBP-SET2a Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pBEn-SBP-SET2b	In a fire or if heated, a pressure increase will occur and the container may burst.

Section 5. Fire-fighting measures

	pBEn-SBP-SET2c	In a fire or if heated, a pressure increase will occur and the container may burst.
	pBEn-SBP-SET3a Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pBEn-SBP-SET3b Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pBEn-SBP-SET3c	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: Streptavidin Resin	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	pBEn-SBP-SET1a Vector	No specific data.
	pBEn-SBP-SET1b Vector	No specific data.
	pBEn-SBP-SET1c	No specific data.
	pBEn-SBP-SET2a Vector	No specific data.
	pBEn-SBP-SET2b	No specific data.
	pBEn-SBP-SET2c	No specific data.
	pBEn-SBP-SET3a Vector	No specific data.
	pBEn-SBP-SET3b Vector	No specific data.
	pBEn-SBP-SET3c	No specific data.

5.3 Advice for firefighters

Special protective actions for fire-fighters	: Streptavidin Resin	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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
	pBEn-SBP-SET1a 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.
	pBEn-SBP-SET1b 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.
	pBEn-SBP-SET1c	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.
	pBEn-SBP-SET2a 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.
	pBEn-SBP-SET2b	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.
	pBEn-SBP-SET2c	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.
	pBEn-SBP-SET3a 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.
	pBEn-SBP-SET3b Vector	Promptly isolate the scene by removing all persons

Section 5. Fire-fighting measures

Special protective equipment for fire-fighters

pBEn-SBP-SET3c	: Streptavidin Resin	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.
pBEn-SBP-SET1a Vector		Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
pBEn-SBP-SET1b Vector		Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
pBEn-SBP-SET1c		Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
pBEn-SBP-SET2a Vector		Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
pBEn-SBP-SET2b		Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
pBEn-SBP-SET2c		Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
pBEn-SBP-SET3a Vector		Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
pBEn-SBP-SET3b Vector		Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
pBEn-SBP-SET3c		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

: Streptavidin Resin

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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate

Section 6. Accidental release measures

pBEn-SBP-SET1a Vector	<p>respirator when ventilation is inadequate. Put on appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.</p>
pBEn-SBP-SET1b Vector	<p>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. 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.</p>
pBEn-SBP-SET1c	<p>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. 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.</p>
pBEn-SBP-SET2a Vector	<p>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. 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.</p>
pBEn-SBP-SET2b	<p>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. 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.</p>
pBEn-SBP-SET2c	<p>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. 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.</p>
pBEn-SBP-SET3a Vector	<p>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. 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.</p>
pBEn-SBP-SET3b Vector	<p>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. 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.</p>
pBEn-SBP-SET3c	<p>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.</p>

Section 6. Accidental release measures

For emergency responders :	Streptavidin Resin	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".
	pBEn-SBP-SET1a Vector	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".
	pBEn-SBP-SET1b Vector	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".
	pBEn-SBP-SET1c	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".
	pBEn-SBP-SET2a Vector	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".
	pBEn-SBP-SET2b	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".
	pBEn-SBP-SET2c	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".
	pBEn-SBP-SET3a Vector	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".
	pBEn-SBP-SET3b Vector	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".
	pBEn-SBP-SET3c	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".
6.2 Environmental precautions :	Streptavidin Resin	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).
	pBEn-SBP-SET1a 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).
	pBEn-SBP-SET1b 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).
	pBEn-SBP-SET1c	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 6. Accidental release measures

	Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). 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).
pBEn-SBP-SET2a 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).
pBEn-SBP-SET2b	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).
pBEn-SBP-SET2c	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).
pBEn-SBP-SET3a 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).
pBEn-SBP-SET3b 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).
pBEn-SBP-SET3c	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 : Streptavidin Resin

	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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.
pBEn-SBP-SET1a 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.
pBEn-SBP-SET1b 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.
pBEn-SBP-SET1c	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.

Section 6. Accidental release measures

pBEn-SBP-SET2a Vector	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.
pBEn-SBP-SET2b	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.
pBEn-SBP-SET2c	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.
pBEn-SBP-SET3a 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.
pBEn-SBP-SET3b 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.
pBEn-SBP-SET3c	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 :  Streptavidin Resin

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Section 7. Handling and storage

pBEn-SBP-SET1a Vector	Put on appropriate personal protective equipment (see Section 8).
pBEn-SBP-SET1b Vector	Put on appropriate personal protective equipment (see Section 8).
pBEn-SBP-SET1c	Put on appropriate personal protective equipment (see Section 8).
pBEn-SBP-SET2a Vector	Put on appropriate personal protective equipment (see Section 8).
pBEn-SBP-SET2b	Put on appropriate personal protective equipment (see Section 8).
pBEn-SBP-SET2c	Put on appropriate personal protective equipment (see Section 8).
pBEn-SBP-SET3a Vector	Put on appropriate personal protective equipment (see Section 8).
pBEn-SBP-SET3b Vector	Put on appropriate personal protective equipment (see Section 8).
pBEn-SBP-SET3c	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	
: Streptavidin Resin	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.
pBEn-SBP-SET1a 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.
pBEn-SBP-SET1b 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.
pBEn-SBP-SET1c	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.
pBEn-SBP-SET2a 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.
pBEn-SBP-SET2b	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

Section 7. Handling and storage

pBEn-SBP-SET2c	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.
pBEn-SBP-SET3a 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.
pBEn-SBP-SET3b 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.
pBEn-SBP-SET3c	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

:  Streptavidin Resin

pBEn-SBP-SET1a Vector	Store in accordance with local regulations. Store in a segregated and approved area. 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. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. 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. See Section 10 for incompatible materials before handling or use.
pBEn-SBP-SET1b 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. See Section 10 for incompatible materials before handling or use.

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pBEn-SBP-SET1c	<p>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. See Section 10 for incompatible materials before handling or use. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
pBEn-SBP-SET2a Vector	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
pBEn-SBP-SET2b	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
pBEn-SBP-SET2c	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
pBEn-SBP-SET3a Vector	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright</p>

Section 7. Handling and storage

pBEn-SBP-SET3b Vector

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

pBEn-SBP-SET3c

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

7.3 Specific end use(s)

Recommendations

<ul style="list-style-type: none"> : Streptavidin Resin pBEn-SBP-SET1a Vector pBEn-SBP-SET1b Vector pBEn-SBP-SET1c pBEn-SBP-SET2a Vector pBEn-SBP-SET2b pBEn-SBP-SET2c pBEn-SBP-SET3a Vector pBEn-SBP-SET3b Vector pBEn-SBP-SET3c 	<ul style="list-style-type: none"> Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications.
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Industrial sector specific solutions

<ul style="list-style-type: none"> : Streptavidin Resin pBEn-SBP-SET1a Vector pBEn-SBP-SET1b Vector pBEn-SBP-SET1c pBEn-SBP-SET2a Vector pBEn-SBP-SET2b pBEn-SBP-SET2c pBEn-SBP-SET3a Vector pBEn-SBP-SET3b Vector pBEn-SBP-SET3c 	<ul style="list-style-type: none"> Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
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Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
Streptavidin Resin Ethanol	<p>ACGIH TLV (United States, 3/2017). STEL: 1000 ppm 15 minutes.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours.</p> <p>NIOSH REL (United States, 10/2016). TWA: 1000 ppm 10 hours. TWA: 1900 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 6/2016). TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours.</p>

8.2 Exposure controls

Appropriate engineering controls

- Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

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

Individual protection measures

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	: Streptavidin Resin	Liquid.
	pBEn-SBP-SET1a Vector	Liquid.
	pBEn-SBP-SET1b Vector	Liquid.
	pBEn-SBP-SET1c	Liquid.
	pBEn-SBP-SET2a Vector	Liquid.
	pBEn-SBP-SET2b	Liquid.
	pBEn-SBP-SET2c	Liquid.
	pBEn-SBP-SET3a Vector	Liquid.
	pBEn-SBP-SET3b Vector	Liquid.
	pBEn-SBP-SET3c	Liquid.
Color	: Streptavidin Resin	Not available.
	pBEn-SBP-SET1a Vector	Not available.
	pBEn-SBP-SET1b Vector	Not available.
	pBEn-SBP-SET1c	Not available.
	pBEn-SBP-SET2a Vector	Not available.
	pBEn-SBP-SET2b	Not available.
	pBEn-SBP-SET2c	Not available.
	pBEn-SBP-SET3a Vector	Not available.
	pBEn-SBP-SET3b Vector	Not available.
	pBEn-SBP-SET3c	Not available.
Odor	: Streptavidin Resin	Not available.
	pBEn-SBP-SET1a Vector	Not available.
	pBEn-SBP-SET1b Vector	Not available.
	pBEn-SBP-SET1c	Not available.
	pBEn-SBP-SET2a Vector	Not available.
	pBEn-SBP-SET2b	Not available.
	pBEn-SBP-SET2c	Not available.
	pBEn-SBP-SET3a Vector	Not available.
	pBEn-SBP-SET3b Vector	Not available.
	pBEn-SBP-SET3c	Not available.
Odor threshold	: Streptavidin Resin	Not available.
	pBEn-SBP-SET1a Vector	Not available.
	pBEn-SBP-SET1b Vector	Not available.
	pBEn-SBP-SET1c	Not available.
	pBEn-SBP-SET2a Vector	Not available.
	pBEn-SBP-SET2b	Not available.
	pBEn-SBP-SET2c	Not available.
	pBEn-SBP-SET3a Vector	Not available.
	pBEn-SBP-SET3b Vector	Not available.
	pBEn-SBP-SET3c	Not available.
pH	: Streptavidin Resin	7.5
	pBEn-SBP-SET1a Vector	7.5
	pBEn-SBP-SET1b Vector	7.5
	pBEn-SBP-SET1c	7.5
	pBEn-SBP-SET2a Vector	7.5
	pBEn-SBP-SET2b	7.5
	pBEn-SBP-SET2c	7.5
	pBEn-SBP-SET3a Vector	7.5
	pBEn-SBP-SET3b Vector	7.5
	pBEn-SBP-SET3c	7.5

Section 9. Physical and chemical properties

Melting point	: Streptavidin Resin	Not available.
	pBEn-SBP-SET1a Vector	0°C (32°F)
	pBEn-SBP-SET1b Vector	0°C (32°F)
	pBEn-SBP-SET1c	0°C (32°F)
	pBEn-SBP-SET2a Vector	0°C (32°F)
	pBEn-SBP-SET2b	0°C (32°F)
	pBEn-SBP-SET2c	0°C (32°F)
	pBEn-SBP-SET3a Vector	0°C (32°F)
	pBEn-SBP-SET3b Vector	0°C (32°F)
pBEn-SBP-SET3c	0°C (32°F)	
Boiling point	: Streptavidin Resin	Not available.
	pBEn-SBP-SET1a Vector	100°C (212°F)
	pBEn-SBP-SET1b Vector	100°C (212°F)
	pBEn-SBP-SET1c	100°C (212°F)
	pBEn-SBP-SET2a Vector	100°C (212°F)
	pBEn-SBP-SET2b	100°C (212°F)
	pBEn-SBP-SET2c	100°C (212°F)
	pBEn-SBP-SET3a Vector	100°C (212°F)
	pBEn-SBP-SET3b Vector	100°C (212°F)
pBEn-SBP-SET3c	100°C (212°F)	
Flash point	: Streptavidin Resin	Closed cup: 37.8 to 61°C (100 to 141.8°F)
	pBEn-SBP-SET1a Vector	Not available.
	pBEn-SBP-SET1b Vector	Not available.
	pBEn-SBP-SET1c	Not available.
	pBEn-SBP-SET2a Vector	Not available.
	pBEn-SBP-SET2b	Not available.
	pBEn-SBP-SET2c	Not available.
	pBEn-SBP-SET3a Vector	Not available.
	pBEn-SBP-SET3b Vector	Not available.
pBEn-SBP-SET3c	Not available.	
Evaporation rate	: Streptavidin Resin	Not available.
	pBEn-SBP-SET1a Vector	Not available.
	pBEn-SBP-SET1b Vector	Not available.
	pBEn-SBP-SET1c	Not available.
	pBEn-SBP-SET2a Vector	Not available.
	pBEn-SBP-SET2b	Not available.
	pBEn-SBP-SET2c	Not available.
	pBEn-SBP-SET3a Vector	Not available.
	pBEn-SBP-SET3b Vector	Not available.
pBEn-SBP-SET3c	Not available.	
Flammability (solid, gas)	: Streptavidin Resin	Not applicable.
	pBEn-SBP-SET1a Vector	Not applicable.
	pBEn-SBP-SET1b Vector	Not applicable.
	pBEn-SBP-SET1c	Not applicable.
	pBEn-SBP-SET2a Vector	Not applicable.
	pBEn-SBP-SET2b	Not applicable.
	pBEn-SBP-SET2c	Not applicable.
	pBEn-SBP-SET3a Vector	Not applicable.
	pBEn-SBP-SET3b Vector	Not applicable.
pBEn-SBP-SET3c	Not applicable.	
Lower and upper explosive (flammable) limits	: Streptavidin Resin	Not available.
	pBEn-SBP-SET1a Vector	Not available.
	pBEn-SBP-SET1b Vector	Not available.
	pBEn-SBP-SET1c	Not available.
	pBEn-SBP-SET2a Vector	Not available.
	pBEn-SBP-SET2b	Not available.
pBEn-SBP-SET2c	Not available.	

Section 9. Physical and chemical properties

	pBEn-SBP-SET3a Vector	Not available.
	pBEn-SBP-SET3b Vector	Not available.
	pBEn-SBP-SET3c	Not available.
Vapor pressure	: Streptavidin Resin	Not available.
	pBEn-SBP-SET1a Vector	Not available.
	pBEn-SBP-SET1b Vector	Not available.
	pBEn-SBP-SET1c	Not available.
	pBEn-SBP-SET2a Vector	Not available.
	pBEn-SBP-SET2b	Not available.
	pBEn-SBP-SET2c	Not available.
	pBEn-SBP-SET3a Vector	Not available.
	pBEn-SBP-SET3b Vector	Not available.
	pBEn-SBP-SET3c	Not available.
Vapor density	: Streptavidin Resin	Not available.
	pBEn-SBP-SET1a Vector	Not available.
	pBEn-SBP-SET1b Vector	Not available.
	pBEn-SBP-SET1c	Not available.
	pBEn-SBP-SET2a Vector	Not available.
	pBEn-SBP-SET2b	Not available.
	pBEn-SBP-SET2c	Not available.
	pBEn-SBP-SET3a Vector	Not available.
	pBEn-SBP-SET3b Vector	Not available.
	pBEn-SBP-SET3c	Not available.
Relative density	: Streptavidin Resin	Not available.
	pBEn-SBP-SET1a Vector	Not available.
	pBEn-SBP-SET1b Vector	Not available.
	pBEn-SBP-SET1c	Not available.
	pBEn-SBP-SET2a Vector	Not available.
	pBEn-SBP-SET2b	Not available.
	pBEn-SBP-SET2c	Not available.
	pBEn-SBP-SET3a Vector	Not available.
	pBEn-SBP-SET3b Vector	Not available.
	pBEn-SBP-SET3c	Not available.
Solubility	: Streptavidin Resin	Soluble in the following materials: cold water and hot water.
	pBEn-SBP-SET1a Vector	Easily soluble in the following materials: cold water and hot water.
	pBEn-SBP-SET1b Vector	Easily soluble in the following materials: cold water and hot water.
	pBEn-SBP-SET1c	Easily soluble in the following materials: cold water and hot water.
	pBEn-SBP-SET2a Vector	Easily soluble in the following materials: cold water and hot water.
	pBEn-SBP-SET2b	Easily soluble in the following materials: cold water and hot water.
	pBEn-SBP-SET2c	Easily soluble in the following materials: cold water and hot water.
	pBEn-SBP-SET3a Vector	Easily soluble in the following materials: cold water and hot water.
	pBEn-SBP-SET3b Vector	Easily soluble in the following materials: cold water and hot water.
	pBEn-SBP-SET3c	Easily soluble in the following materials: cold water and hot water.

Section 9. Physical and chemical properties

Partition coefficient: n-octanol/water	: Streptavidin Resin	Not available.
	pBEn-SBP-SET1a Vector	Not available.
	pBEn-SBP-SET1b Vector	Not available.
	pBEn-SBP-SET1c	Not available.
	pBEn-SBP-SET2a Vector	Not available.
	pBEn-SBP-SET2b	Not available.
	pBEn-SBP-SET2c	Not available.
	pBEn-SBP-SET3a Vector	Not available.
	pBEn-SBP-SET3b Vector	Not available.
pBEn-SBP-SET3c	Not available.	
Auto-ignition temperature	: Streptavidin Resin	Not available.
	pBEn-SBP-SET1a Vector	Not available.
	pBEn-SBP-SET1b Vector	Not available.
	pBEn-SBP-SET1c	Not available.
	pBEn-SBP-SET2a Vector	Not available.
	pBEn-SBP-SET2b	Not available.
	pBEn-SBP-SET2c	Not available.
	pBEn-SBP-SET3a Vector	Not available.
	pBEn-SBP-SET3b Vector	Not available.
pBEn-SBP-SET3c	Not available.	
Decomposition temperature	: Streptavidin Resin	Not available.
	pBEn-SBP-SET1a Vector	Not available.
	pBEn-SBP-SET1b Vector	Not available.
	pBEn-SBP-SET1c	Not available.
	pBEn-SBP-SET2a Vector	Not available.
	pBEn-SBP-SET2b	Not available.
	pBEn-SBP-SET2c	Not available.
	pBEn-SBP-SET3a Vector	Not available.
	pBEn-SBP-SET3b Vector	Not available.
pBEn-SBP-SET3c	Not available.	
Viscosity	: Streptavidin Resin	Not available.
	pBEn-SBP-SET1a Vector	Not available.
	pBEn-SBP-SET1b Vector	Not available.
	pBEn-SBP-SET1c	Not available.
	pBEn-SBP-SET2a Vector	Not available.
	pBEn-SBP-SET2b	Not available.
	pBEn-SBP-SET2c	Not available.
	pBEn-SBP-SET3a Vector	Not available.
	pBEn-SBP-SET3b Vector	Not available.
pBEn-SBP-SET3c	Not available.	

Section 10. Stability and reactivity

10.1 Reactivity	: Streptavidin Resin	No specific test data related to reactivity available for this product or its ingredients.
	pBEn-SBP-SET1a Vector	No specific test data related to reactivity available for this product or its ingredients.
	pBEn-SBP-SET1b Vector	No specific test data related to reactivity available for this product or its ingredients.
	pBEn-SBP-SET1c	No specific test data related to reactivity available for this product or its ingredients.
	pBEn-SBP-SET2a Vector	No specific test data related to reactivity available for this product or its ingredients.
	pBEn-SBP-SET2b	No specific test data related to reactivity available for this product or its ingredients.
	pBEn-SBP-SET2c	No specific test data related to reactivity available for this product or its ingredients.
	pBEn-SBP-SET3a 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.

Section 10. Stability and reactivity

	pBEn-SBP-SET3b Vector	for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
	pBEn-SBP-SET3c	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: Streptavidin Resin	The product is stable.
	pBEn-SBP-SET1a Vector	The product is stable.
	pBEn-SBP-SET1b Vector	The product is stable.
	pBEn-SBP-SET1c	The product is stable.
	pBEn-SBP-SET2a Vector	The product is stable.
	pBEn-SBP-SET2b	The product is stable.
	pBEn-SBP-SET2c	The product is stable.
	pBEn-SBP-SET3a Vector	The product is stable.
	pBEn-SBP-SET3b Vector	The product is stable.
	pBEn-SBP-SET3c	The product is stable.
10.3 Possibility of hazardous reactions	: Streptavidin Resin	Under normal conditions of storage and use, hazardous reactions will not occur.
	pBEn-SBP-SET1a Vector	Under normal conditions of storage and use, hazardous reactions will not occur.
	pBEn-SBP-SET1b Vector	Under normal conditions of storage and use, hazardous reactions will not occur.
	pBEn-SBP-SET1c	Under normal conditions of storage and use, hazardous reactions will not occur.
	pBEn-SBP-SET2a Vector	Under normal conditions of storage and use, hazardous reactions will not occur.
	pBEn-SBP-SET2b	Under normal conditions of storage and use, hazardous reactions will not occur.
	pBEn-SBP-SET2c	Under normal conditions of storage and use, hazardous reactions will not occur.
	pBEn-SBP-SET3a Vector	Under normal conditions of storage and use, hazardous reactions will not occur.
	pBEn-SBP-SET3b Vector	Under normal conditions of storage and use, hazardous reactions will not occur.
	pBEn-SBP-SET3c	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: Streptavidin Resin	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
	pBEn-SBP-SET1a Vector	No specific data.
	pBEn-SBP-SET1b Vector	No specific data.
	pBEn-SBP-SET1c	No specific data.
	pBEn-SBP-SET2a Vector	No specific data.
	pBEn-SBP-SET2b	No specific data.
	pBEn-SBP-SET2c	No specific data.
	pBEn-SBP-SET3a Vector	No specific data.
	pBEn-SBP-SET3b Vector	No specific data.
	pBEn-SBP-SET3c	No specific data.

Section 10. Stability and reactivity

10.5 Incompatible materials	: Streptavidin Resin	Reactive or incompatible with the following materials: oxidizing materials
	pBEn-SBP-SET1a Vector	May react or be incompatible with oxidizing materials.
	pBEn-SBP-SET1b Vector	May react or be incompatible with oxidizing materials.
	pBEn-SBP-SET1c	May react or be incompatible with oxidizing materials.
	pBEn-SBP-SET2a Vector	May react or be incompatible with oxidizing materials.
	pBEn-SBP-SET2b	May react or be incompatible with oxidizing materials.
	pBEn-SBP-SET2c	May react or be incompatible with oxidizing materials.
	pBEn-SBP-SET3a Vector	May react or be incompatible with oxidizing materials.
	pBEn-SBP-SET3b Vector	May react or be incompatible with oxidizing materials.
	pBEn-SBP-SET3c	May react or be incompatible with oxidizing materials.
10.6 Hazardous decomposition products	: Streptavidin Resin	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pBEn-SBP-SET1a Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pBEn-SBP-SET1b Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pBEn-SBP-SET1c	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pBEn-SBP-SET2a Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pBEn-SBP-SET2b	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pBEn-SBP-SET2c	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pBEn-SBP-SET3a Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pBEn-SBP-SET3b Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pBEn-SBP-SET3c	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Streptavidin Resin Ethanol	LC50 Inhalation Vapor LD50 Oral	Rat Rat	124700 mg/m ³ 7 g/kg	4 hours -

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Streptavidin Resin Ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Skin - Mild irritant	Rabbit	-	400 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Streptavidin Resin Ethanol	-	1	-

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Streptavidin Resin Ethanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Section 11. Toxicological information

Information on the likely routes of exposure	<p>: Streptavidin Resin</p> <p>pBEn-SBP-SET1a Vector</p> <p>pBEn-SBP-SET1b Vector</p> <p>pBEn-SBP-SET1c</p> <p>pBEn-SBP-SET2a Vector</p> <p>pBEn-SBP-SET2b</p> <p>pBEn-SBP-SET2c</p> <p>pBEn-SBP-SET3a Vector</p> <p>pBEn-SBP-SET3b Vector</p> <p>pBEn-SBP-SET3c</p>	<p>Routes of entry anticipated: Oral, Dermal, Inhalation.</p> <p>Not available.</p> <p>Not available.</p> <p>Not available.</p> <p>Not available.</p> <p>Not available.</p> <p>Not available.</p> <p>Not available.</p> <p>Not available.</p> <p>Not available.</p> <p>Not available.</p>
<u>Potential acute health effects</u>		
Eye contact	<p>: Streptavidin Resin</p> <p>pBEn-SBP-SET1a Vector</p> <p>pBEn-SBP-SET1b Vector</p> <p>pBEn-SBP-SET1c</p> <p>pBEn-SBP-SET2a Vector</p> <p>pBEn-SBP-SET2b</p> <p>pBEn-SBP-SET2c</p> <p>pBEn-SBP-SET3a Vector</p> <p>pBEn-SBP-SET3b Vector</p> <p>pBEn-SBP-SET3c</p>	<p>Causes serious eye irritation.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p>
Inhalation	<p>: Streptavidin Resin</p> <p>pBEn-SBP-SET1a Vector</p> <p>pBEn-SBP-SET1b Vector</p> <p>pBEn-SBP-SET1c</p> <p>pBEn-SBP-SET2a Vector</p> <p>pBEn-SBP-SET2b</p> <p>pBEn-SBP-SET2c</p> <p>pBEn-SBP-SET3a Vector</p> <p>pBEn-SBP-SET3b Vector</p> <p>pBEn-SBP-SET3c</p>	<p>Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p>
Skin contact	<p>: Streptavidin Resin</p> <p>pBEn-SBP-SET1a Vector</p> <p>pBEn-SBP-SET1b Vector</p> <p>pBEn-SBP-SET1c</p> <p>pBEn-SBP-SET2a Vector</p> <p>pBEn-SBP-SET2b</p> <p>pBEn-SBP-SET2c</p> <p>pBEn-SBP-SET3a Vector</p> <p>pBEn-SBP-SET3b Vector</p> <p>pBEn-SBP-SET3c</p>	<p>Causes skin irritation.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p>
Ingestion	<p>: Streptavidin Resin</p> <p>pBEn-SBP-SET1a Vector</p> <p>pBEn-SBP-SET1b Vector</p> <p>pBEn-SBP-SET1c</p> <p>pBEn-SBP-SET2a Vector</p> <p>pBEn-SBP-SET2b</p> <p>pBEn-SBP-SET2c</p> <p>pBEn-SBP-SET3a Vector</p> <p>pBEn-SBP-SET3b Vector</p> <p>pBEn-SBP-SET3c</p>	<p>Can cause central nervous system (CNS) depression.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p> <p>No known significant effects or critical hazards.</p>

Symptoms related to the physical, chemical and toxicological characteristics

Section 11. Toxicological information

Eye contact	: Streptavidin Resin	Adverse symptoms may include the following: pain or irritation watering redness
	pBEn-SBP-SET1a Vector	No specific data.
	pBEn-SBP-SET1b Vector	No specific data.
	pBEn-SBP-SET1c	No specific data.
	pBEn-SBP-SET2a Vector	No specific data.
	pBEn-SBP-SET2b	No specific data.
	pBEn-SBP-SET2c	No specific data.
	pBEn-SBP-SET3a Vector	No specific data.
	pBEn-SBP-SET3b Vector	No specific data.
	pBEn-SBP-SET3c	No specific data.
Inhalation	: Streptavidin Resin	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
	pBEn-SBP-SET1a Vector	No specific data.
	pBEn-SBP-SET1b Vector	No specific data.
	pBEn-SBP-SET1c	No specific data.
	pBEn-SBP-SET2a Vector	No specific data.
	pBEn-SBP-SET2b	No specific data.
	pBEn-SBP-SET2c	No specific data.
	pBEn-SBP-SET3a Vector	No specific data.
	pBEn-SBP-SET3b Vector	No specific data.
	pBEn-SBP-SET3c	No specific data.
Skin contact	: Streptavidin Resin	Adverse symptoms may include the following: irritation redness
	pBEn-SBP-SET1a Vector	No specific data.
	pBEn-SBP-SET1b Vector	No specific data.
	pBEn-SBP-SET1c	No specific data.
	pBEn-SBP-SET2a Vector	No specific data.
	pBEn-SBP-SET2b	No specific data.
	pBEn-SBP-SET2c	No specific data.
	pBEn-SBP-SET3a Vector	No specific data.
	pBEn-SBP-SET3b Vector	No specific data.
	pBEn-SBP-SET3c	No specific data.
Ingestion	: Streptavidin Resin	No specific data.
	pBEn-SBP-SET1a Vector	No specific data.
	pBEn-SBP-SET1b Vector	No specific data.
	pBEn-SBP-SET1c	No specific data.
	pBEn-SBP-SET2a Vector	No specific data.
	pBEn-SBP-SET2b	No specific data.
	pBEn-SBP-SET2c	No specific data.
	pBEn-SBP-SET3a Vector	No specific data.
	pBEn-SBP-SET3b Vector	No specific data.
	pBEn-SBP-SET3c	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.

Section 11. Toxicological information

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	: Streptavidin Resin pBEn-SBP-SET1a Vector pBEn-SBP-SET1b Vector pBEn-SBP-SET1c pBEn-SBP-SET2a Vector pBEn-SBP-SET2b pBEn-SBP-SET2c pBEn-SBP-SET3a Vector pBEn-SBP-SET3b Vector pBEn-SBP-SET3c	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: Streptavidin Resin pBEn-SBP-SET1a Vector pBEn-SBP-SET1b Vector pBEn-SBP-SET1c pBEn-SBP-SET2a Vector pBEn-SBP-SET2b pBEn-SBP-SET2c pBEn-SBP-SET3a Vector pBEn-SBP-SET3b Vector pBEn-SBP-SET3c	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: Streptavidin Resin pBEn-SBP-SET1a Vector pBEn-SBP-SET1b Vector pBEn-SBP-SET1c pBEn-SBP-SET2a Vector pBEn-SBP-SET2b pBEn-SBP-SET2c pBEn-SBP-SET3a Vector pBEn-SBP-SET3b Vector pBEn-SBP-SET3c	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Teratogenicity	: Streptavidin Resin pBEn-SBP-SET1a Vector pBEn-SBP-SET1b Vector pBEn-SBP-SET1c pBEn-SBP-SET2a Vector pBEn-SBP-SET2b pBEn-SBP-SET2c pBEn-SBP-SET3a Vector pBEn-SBP-SET3b Vector pBEn-SBP-SET3c	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Developmental effects	: Streptavidin Resin pBEn-SBP-SET1a Vector pBEn-SBP-SET1b Vector pBEn-SBP-SET1c pBEn-SBP-SET2a Vector pBEn-SBP-SET2b pBEn-SBP-SET2c pBEn-SBP-SET3a Vector pBEn-SBP-SET3b Vector pBEn-SBP-SET3c	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Section 11. Toxicological information

Fertility effects	: Streptavidin Resin pBEn-SBP-SET1a Vector pBEn-SBP-SET1b Vector pBEn-SBP-SET1c pBEn-SBP-SET2a Vector pBEn-SBP-SET2b pBEn-SBP-SET2c pBEn-SBP-SET3a Vector pBEn-SBP-SET3b Vector pBEn-SBP-SET3c	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
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Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Streptavidin Resin Ethanol	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 100 ul/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks

12.2 Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Streptavidin Resin Ethanol	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Streptavidin Resin Ethanol	-0.35	0.5	low

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

DOT / TDG / Mexico / IMDG / IATA : Not regulated.

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

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

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

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
Clean Water Act (CWA) 311: Disodium hydrogenorthophosphate; 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

Section 15. Regulatory information

[SARA 302/304](#)

[Composition/information on ingredients](#)

No products were found.

SARA 304 RQ : Not applicable.

[SARA 311/312](#)

Classification

<p>Streptavidin Resin</p> <p>pBEn-SBP-SET1a Vector</p> <p>pBEn-SBP-SET1b Vector</p> <p>pBEn-SBP-SET1c</p> <p>pBEn-SBP-SET2a Vector</p> <p>pBEn-SBP-SET2b</p> <p>pBEn-SBP-SET2c</p> <p>pBEn-SBP-SET3a Vector</p> <p>pBEn-SBP-SET3b Vector</p> <p>pBEn-SBP-SET3c</p>	<p>FLAMMABLE LIQUIDS - Category 3</p> <p>SKIN IRRITATION - Category 2</p> <p>EYE IRRITATION - Category 2A</p> <p>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3</p> <p>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p>
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[Composition/information on ingredients](#)

Name	%	Classification
Streptavidin Resin		
Ethanol	≥10 - ≤25	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 HNOC - Defatting irritant

[State regulations](#)

Massachusetts : The following components are listed: ETHYL ALCOHOL; DENATURED ALCOHOL

New York : None of the components are listed.

New Jersey : The following components are listed: ETHYL ALCOHOL; ALCOHOL

Pennsylvania : The following components are listed: DENATURED ALCOHOL; ETHANOL

[International regulations](#)

[Chemical Weapon Convention List Schedules I, II & III Chemicals](#)

Not listed.

[Montreal Protocol \(Annexes A, B, C, E\)](#)

Not listed.

[Stockholm Convention on Persistent Organic Pollutants](#)

Not listed.

[Rotterdam Convention on Prior Informed Consent \(PIC\)](#)

Not listed.

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

Not listed.

[Inventory list](#)

Australia : All components are listed or exempted.

Section 15. Regulatory information

Canada	: All components are listed or exempted.
China	: All components are listed or exempted.
Europe	: 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.
Thailand	: <input checked="" type="checkbox"/> Not determined.
Turkey	: Not determined.
United States	: All components are listed or exempted.
Viet Nam	: <input checked="" type="checkbox"/> Not determined.

Section 16. Other information

History

Date of issue	: 05/21/2018
Date of previous issue	: 04/29/2016
Version	: 5

Procedure used to derive the classification

Classification	Justification
<input checked="" type="checkbox"/> Streptavidin Resin FLAMMABLE LIQUIDS - Category 3 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	On basis of test data Calculation method Calculation method Calculation method Calculation method

Indicates information that has changed from previously issued version.

Notice to reader

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