

SAFETY DATA SHEET

SureVector E. coli Selection Kit, Part Number G7518A

Section 1. Identification

Product identifier	: SureVector E. coli Selection Kit, Part Number G7518A
Part no. (chemical kit)	: G7518A
Part no.	: 5X SureSolution 5190-8625 SureVector AmpR Selectable Marker 5190-8807 SureVector KanR Selectable Marker 5190-8808 SureVector ChIR Selectable Marker 5190-8809 SureVector pUC Origin 5190-8810 SureVector XP1 Linker 5190-8811 SureVector LacI Repressor 5190-8812 SureVector T7-HIS6 E. coli Promoter 5190-8813 SureVector LacZ Control (N-term) 5190-8814 SureVector Enzyme Mix 5190-8621 10X SureVector Buffer 5190-8622 dNTP Mix 200518-56 DpnI 5190-8624
Material uses	: Analytical reagent. 5X SureSolution 0.1 ml (15 reactions) SureVector AmpR Selectable Marker 0.01 ml (5 reactions) SureVector KanR Selectable Marker 0.01 ml (5 reactions) SureVector ChIR Selectable Marker 0.01 ml (5 reactions) SureVector pUC Origin 0.01 ml (5 reactions) SureVector XP1 Linker 0.01 ml (5 reactions) SureVector LacI Repressor 0.01 ml (5 reactions) SureVector T7-HIS6 E. coli Promoter 0.01 ml (5 reactions) SureVector LacZ Control (N-term) 0.01 ml (5 reactions) SureVector Enzyme Mix 0.015 ml (15 reactions) 10X SureVector Buffer 0.03 ml (15 reactions) dNTP Mix 0.03 ml DpnI 0.03 ml (15 reactions)
Supplier/Manufacturer	: Agilent Technologies, Inc. 5301 Stevens Creek Blvd Santa Clara, CA 95051, USA 800-227-9770
Emergency telephone number (with hours of operation)	: CHEMTREC®: 1-800-424-9300

Section 2. Hazard identification

Classification of the substance or mixture

5X SureSolution

H227 FLAMMABLE LIQUIDS - Category 4
H320 EYE IRRITATION - Category 2B

SureVector Enzyme Mix

H320 EYE IRRITATION - Category 2B

10X SureVector Buffer

H319 EYE IRRITATION - Category 2A

DpnI

Section 2. Hazard identification

H319

EYE IRRITATION - Category 2A

GHS label elements

Hazard pictograms

: 10X SureVector Buffer



Dpnl



Signal word

: 5X SureSolution	Warning
SureVector AmpR Selectable Marker	No signal word.
SureVector KanR Selectable Marker	No signal word.
SureVector ChIR Selectable Marker	No signal word.
SureVector pUC Origin	No signal word.
SureVector XP1 Linker	No signal word.
SureVector LacI Repressor	No signal word.
SureVector T7-HIS6 E. coli Promoter	No signal word.
SureVector LacZ Control (N-term)	No signal word.
SureVector Enzyme Mix	Warning
10X SureVector Buffer	Warning
dNTP Mix	No signal word.
Dpnl	Warning

Hazard statements

: 5X SureSolution	H227 - Combustible liquid. H320 - Causes eye irritation.
SureVector AmpR Selectable Marker	No known significant effects or critical hazards.
SureVector KanR Selectable Marker	No known significant effects or critical hazards.
SureVector ChIR Selectable Marker	No known significant effects or critical hazards.
SureVector pUC Origin	No known significant effects or critical hazards.
SureVector XP1 Linker	No known significant effects or critical hazards.
SureVector LacI Repressor	No known significant effects or critical hazards.
SureVector T7-HIS6 E. coli Promoter	No known significant effects or critical hazards.
SureVector LacZ Control (N-term)	No known significant effects or critical hazards.
SureVector Enzyme Mix	H320 - Causes eye irritation.
10X SureVector Buffer	H319 - Causes serious eye irritation.
dNTP Mix	No known significant effects or critical hazards.
Dpnl	H319 - Causes serious eye irritation.

Precautionary statements

Prevention

: 5X SureSolution	P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
SureVector AmpR Selectable Marker	Not applicable.
SureVector KanR Selectable Marker	Not applicable.
SureVector ChIR Selectable	Not applicable.

Section 2. Hazard identification

	Marker	
	SureVector pUC Origin	Not applicable.
	SureVector XP1 Linker	Not applicable.
	SureVector LacI Repressor	Not applicable.
	SureVector T7-HIS6 E. coli Promoter	Not applicable.
	SureVector LacZ Control (N-term)	Not applicable.
	SureVector Enzyme Mix	Not applicable.
	10X SureVector Buffer	P280 - Wear eye or face protection.
	dNTP Mix	Not applicable.
	DpnI	P280 - Wear eye or face protection.
Response	: <input checked="" type="checkbox"/> SureSolution	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 advice or attention.
	SureVector AmpR Selectable Marker	Not applicable.
	SureVector KanR Selectable Marker	Not applicable.
	SureVector ChIR Selectable Marker	Not applicable.
	SureVector pUC Origin	Not applicable.
	SureVector XP1 Linker	Not applicable.
	SureVector LacI Repressor	Not applicable.
	SureVector T7-HIS6 E. coli Promoter	Not applicable.
	SureVector LacZ Control (N-term)	Not applicable.
	SureVector Enzyme Mix	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 advice or attention.
	10X SureVector Buffer	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 advice or attention.
	dNTP Mix	Not applicable.
	DpnI	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 advice or attention.
Storage	: 5X SureSolution	Not applicable.
	SureVector AmpR Selectable Marker	Not applicable.
	SureVector KanR Selectable Marker	Not applicable.
	SureVector ChIR Selectable Marker	Not applicable.
	SureVector pUC Origin	Not applicable.
	SureVector XP1 Linker	Not applicable.
	SureVector LacI Repressor	Not applicable.
	SureVector T7-HIS6 E. coli Promoter	Not applicable.
	SureVector LacZ Control (N-term)	Not applicable.

Section 2. Hazard identification

	term)	
	SureVector Enzyme Mix	Not applicable.
	10X SureVector Buffer	Not applicable.
	dNTP Mix	Not applicable.
	DpnI	Not applicable.
Disposal	: 5X SureSolution	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	SureVector AmpR Selectable Marker	Not applicable.
	SureVector KanR Selectable Marker	Not applicable.
	SureVector ChlR Selectable Marker	Not applicable.
	SureVector pUC Origin	Not applicable.
	SureVector XP1 Linker	Not applicable.
	SureVector LacI Repressor	Not applicable.
	SureVector T7-HIS6 E. coli Promoter	Not applicable.
	SureVector LacZ Control (N-term)	Not applicable.
	SureVector Enzyme Mix	Not applicable.
	10X SureVector Buffer	Not applicable.
	dNTP Mix	Not applicable.
	DpnI	Not applicable.
Supplemental label elements	: 5X SureSolution	None known.
	SureVector AmpR Selectable Marker	None known.
	SureVector KanR Selectable Marker	None known.
	SureVector ChlR Selectable Marker	None known.
	SureVector pUC Origin	None known.
	SureVector XP1 Linker	None known.
	SureVector LacI Repressor	None known.
	SureVector T7-HIS6 E. coli Promoter	None known.
	SureVector LacZ Control (N-term)	None known.
	SureVector Enzyme Mix	None known.
	10X SureVector Buffer	None known.
	dNTP Mix	None known.
	DpnI	None known.
Other hazards which do not result in classification	: 5X SureSolution	None known.
	SureVector AmpR Selectable Marker	None known.
	SureVector KanR Selectable Marker	None known.
	SureVector ChlR Selectable Marker	None known.
	SureVector pUC Origin	None known.
	SureVector XP1 Linker	None known.
	SureVector LacI Repressor	None known.
	SureVector T7-HIS6 E. coli Promoter	None known.
	SureVector LacZ Control (N-term)	None known.
	SureVector Enzyme Mix	None known.
	10X SureVector Buffer	None known.

Section 2. Hazard identification

dNTP Mix	None known.
DpnI	None known.

Section 3. Composition/information on ingredients

Substance/mixture	:	5X SureSolution	Substance
		SureVector AmpR	Mixture
		Selectable Marker	
		SureVector KanR Selectable Marker	Mixture
		SureVector ChIR Selectable Marker	Mixture
		SureVector pUC Origin	Mixture
		SureVector XP1 Linker	Mixture
		SureVector LacI Repressor	Mixture
		SureVector T7-HIS6 E. coli Promoter	Mixture
		SureVector LacZ Control (N-term)	Mixture
		SureVector Enzyme Mix	Mixture
		10X SureVector Buffer	Mixture
		dNTP Mix	Mixture
		DpnI	Mixture

Ingredient name	% (w/w)	CAS number
5X SureSolution Dimethyl sulfoxide	80 - 100	67-68-5
SureVector Enzyme Mix Glycerol	30 - 60	56-81-5
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	<0.1	9036-19-5
10X SureVector Buffer Potassium chloride	1 - 5	7447-40-7
Ammonium sulphate	0.5 - 1.5	7783-20-2
Polyoxyethylene octyl phenyl ether	0.1 - 1	9002-93-1
DpnI Glycerol	30 - 60	56-81-5
Sodium chloride	1 - 5	7647-14-5

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

Description of necessary first aid measures

Eye contact	:	5X SureSolution	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. If irritation persists, get medical attention.
		SureVector AmpR Selectable Marker	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.
		SureVector KanR Selectable	Immediately flush eyes with plenty of water,

Section 4. First-aid measures

Marker	occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
SureVector ChIR Selectable Marker	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.
SureVector pUC Origin	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.
SureVector XP1 Linker	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.
SureVector LacI Repressor	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.
SureVector T7-HIS6 <i>E. coli</i> Promoter	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.
SureVector LacZ Control (N-term)	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.
SureVector Enzyme Mix	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. If irritation persists, get medical attention.
10X SureVector Buffer	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.
dNTP Mix	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.
Dpnl	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.
Inhalation : 5X SureSolution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 adverse health effects persist or are severe. 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.
SureVector AmpR Selectable Marker	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
SureVector KanR Selectable Marker	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical

Section 4. First-aid measures

SureVector ChIR Selectable Marker	attention if symptoms occur. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
SureVector pUC Origin	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
SureVector XP1 Linker	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
SureVector LacI Repressor	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
SureVector T7-HIS6 E. coli Promoter	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
SureVector LacZ Control (N-term)	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
SureVector Enzyme Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 adverse health effects persist or are severe. 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.
10X SureVector Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 adverse health effects persist or are severe. 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
dNTP Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
DpnI	Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 adverse health effects persist or are severe. 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.

Section 4. First-aid measures

Skin contact	: 5X SureSolution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	SureVector AmpR Selectable Marker	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	SureVector KanR Selectable Marker	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	SureVector ChIR Selectable Marker	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	SureVector pUC Origin	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	SureVector XP1 Linker	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	SureVector LacI Repressor	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	SureVector T7-HIS6 E. coli Promoter	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	SureVector LacZ Control (N-term)	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	SureVector Enzyme Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	10X SureVector Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	dNTP Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	DpnI	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	: 5X SureSolution	Wash out mouth with water. Remove dentures if any. 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 adverse health effects persist or are severe. Never 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.
	SureVector AmpR Selectable Marker	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce

Section 4. First-aid measures

SureVector KanR Selectable Marker	vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
SureVector ChIR Selectable Marker	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
SureVector pUC Origin	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
SureVector XP1 Linker	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
SureVector LacI Repressor	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
SureVector T7-HIS6 E. coli Promoter	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
SureVector LacZ Control (N-term)	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
SureVector Enzyme Mix	Wash out mouth with water. Remove dentures if any. 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 adverse health effects persist or are severe. Never 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.
10X SureVector Buffer	Wash out mouth with water. Remove dentures if any. 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 adverse health effects persist or are severe. Never

Section 4. First-aid measures

dNTP Mix	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. Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Dpnl	Wash out mouth with water. Remove dentures if any. 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 adverse health effects persist or are severe. Never 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact

: 5X SureSolution	Causes eye irritation.
SureVector AmpR Selectable Marker	No known significant effects or critical hazards.
SureVector KanR Selectable Marker	No known significant effects or critical hazards.
SureVector ChIR Selectable Marker	No known significant effects or critical hazards.
SureVector pUC Origin	No known significant effects or critical hazards.
SureVector XP1 Linker	No known significant effects or critical hazards.
SureVector LacI Repressor	No known significant effects or critical hazards.
SureVector T7-HIS6 E. coli Promoter	No known significant effects or critical hazards.
SureVector LacZ Control (N-term)	No known significant effects or critical hazards.
SureVector Enzyme Mix	Causes eye irritation.
10X SureVector Buffer	Causes serious eye irritation.
dNTP Mix	No known significant effects or critical hazards.
Dpnl	Causes serious eye irritation.

Inhalation

: 5X SureSolution	No known significant effects or critical hazards.
SureVector AmpR Selectable Marker	No known significant effects or critical hazards.
SureVector KanR Selectable Marker	No known significant effects or critical hazards.
SureVector ChIR Selectable Marker	No known significant effects or critical hazards.
SureVector pUC Origin	No known significant effects or critical hazards.
SureVector XP1 Linker	No known significant effects or critical hazards.
SureVector LacI Repressor	No known significant effects or critical hazards.
SureVector T7-HIS6 E. coli Promoter	No known significant effects or critical hazards.
SureVector LacZ Control (N-term)	No known significant effects or critical hazards.

Section 4. First-aid measures

	SureVector Enzyme Mix	No known significant effects or critical hazards.
	10X SureVector Buffer	No known significant effects or critical hazards.
	dNTP Mix	No known significant effects or critical hazards.
	DpnI	No known significant effects or critical hazards.
Skin contact	: 5X SureSolution	No known significant effects or critical hazards.
	SureVector AmpR	No known significant effects or critical hazards.
	Selectable Marker	
	SureVector KanR Selectable Marker	No known significant effects or critical hazards.
	SureVector ChIR Selectable Marker	No known significant effects or critical hazards.
	SureVector pUC Origin	No known significant effects or critical hazards.
	SureVector XP1 Linker	No known significant effects or critical hazards.
	SureVector LacI Repressor	No known significant effects or critical hazards.
	SureVector T7-HIS6 E. coli Promoter	No known significant effects or critical hazards.
	SureVector LacZ Control (N-term)	No known significant effects or critical hazards.
	SureVector Enzyme Mix	No known significant effects or critical hazards.
	10X SureVector Buffer	No known significant effects or critical hazards.
	dNTP Mix	No known significant effects or critical hazards.
	DpnI	No known significant effects or critical hazards.
Ingestion	: 5X SureSolution	No known significant effects or critical hazards.
	SureVector AmpR	No known significant effects or critical hazards.
	Selectable Marker	
	SureVector KanR Selectable Marker	No known significant effects or critical hazards.
	SureVector ChIR Selectable Marker	No known significant effects or critical hazards.
	SureVector pUC Origin	No known significant effects or critical hazards.
	SureVector XP1 Linker	No known significant effects or critical hazards.
	SureVector LacI Repressor	No known significant effects or critical hazards.
	SureVector T7-HIS6 E. coli Promoter	No known significant effects or critical hazards.
	SureVector LacZ Control (N-term)	No known significant effects or critical hazards.
	SureVector Enzyme Mix	No known significant effects or critical hazards.
	10X SureVector Buffer	No known significant effects or critical hazards.
	dNTP Mix	No known significant effects or critical hazards.
	DpnI	No known significant effects or critical hazards.
<u>Over-exposure signs/symptoms</u>		
Eye contact	: 5X SureSolution	Adverse symptoms may include the following: irritation watering redness
	SureVector AmpR	No specific data.
	Selectable Marker	
	SureVector KanR Selectable Marker	No specific data.
	SureVector ChIR Selectable Marker	No specific data.
	SureVector pUC Origin	No specific data.
	SureVector XP1 Linker	No specific data.
	SureVector LacI Repressor	No specific data.
	SureVector T7-HIS6 E. coli Promoter	No specific data.
	SureVector LacZ Control (N-term)	No specific data.
	SureVector Enzyme Mix	Adverse symptoms may include the following:

Section 4. First-aid measures

		irritation
		watering
		redness
	10X SureVector Buffer	Adverse symptoms may include the following: pain or irritation watering redness
	dNTP Mix	No specific data.
	DpnI	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: 5X SureSolution	No specific data.
	SureVector AmpR	No specific data.
	Selectable Marker	
	SureVector KanR Selectable	No specific data.
	Marker	
	SureVector ChIR Selectable	No specific data.
	Marker	
	SureVector pUC Origin	No specific data.
	SureVector XP1 Linker	No specific data.
	SureVector LacI Repressor	No specific data.
	SureVector T7-HIS6 E. coli	No specific data.
	Promoter	
	SureVector LacZ Control (N-term)	No specific data.
	SureVector Enzyme Mix	No specific data.
	10X SureVector Buffer	No specific data.
	dNTP Mix	No specific data.
	DpnI	No specific data.
Skin contact	: 5X SureSolution	No specific data.
	SureVector AmpR	No specific data.
	Selectable Marker	
	SureVector KanR Selectable	No specific data.
	Marker	
	SureVector ChIR Selectable	No specific data.
	Marker	
	SureVector pUC Origin	No specific data.
	SureVector XP1 Linker	No specific data.
	SureVector LacI Repressor	No specific data.
	SureVector T7-HIS6 E. coli	No specific data.
	Promoter	
	SureVector LacZ Control (N-term)	No specific data.
	SureVector Enzyme Mix	No specific data.
	10X SureVector Buffer	No specific data.
	dNTP Mix	No specific data.
	DpnI	No specific data.
Ingestion	: 5X SureSolution	No specific data.
	SureVector AmpR	No specific data.
	Selectable Marker	
	SureVector KanR Selectable	No specific data.
	Marker	
	SureVector ChIR Selectable	No specific data.
	Marker	
	SureVector pUC Origin	No specific data.
	SureVector XP1 Linker	No specific data.
	SureVector LacI Repressor	No specific data.
	SureVector T7-HIS6 E. coli	No specific data.

Section 4. First-aid measures

Promoter	
SureVector LacZ Control (N-term)	No specific data.
SureVector Enzyme Mix	No specific data.
10X SureVector Buffer	No specific data.
dNTP Mix	No specific data.
DpnI	No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	: 5X SureSolution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	SureVector AmpR Selectable Marker	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	SureVector KanR Selectable Marker	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	SureVector ChIR Selectable Marker	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	SureVector pUC Origin	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	SureVector XP1 Linker	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	SureVector LacI Repressor	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	SureVector T7-HIS6 E. coli Promoter	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	SureVector LacZ Control (N-term)	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	SureVector Enzyme Mix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	10X SureVector Buffer	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	dNTP Mix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	DpnI	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: 5X SureSolution	No specific treatment.
	SureVector AmpR Selectable Marker	No specific treatment.
	SureVector KanR Selectable Marker	No specific treatment.
	SureVector ChIR Selectable Marker	No specific treatment.
	SureVector pUC Origin	No specific treatment.
	SureVector XP1 Linker	No specific treatment.
	SureVector LacI Repressor	No specific treatment.

Section 4. First-aid measures

	SureVector T7-HIS6 E. coli Promoter	No specific treatment.
	SureVector LacZ Control (N-term)	No specific treatment.
	SureVector Enzyme Mix	No specific treatment.
	10X SureVector Buffer	No specific treatment.
	dNTP Mix	No specific treatment.
	DpnI	No specific treatment.
Protection of first-aiders	: 5X SureSolution	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	SureVector AmpR Selectable Marker	No action shall be taken involving any personal risk or without suitable training.
	SureVector KanR Selectable Marker	No action shall be taken involving any personal risk or without suitable training.
	SureVector ChIR Selectable Marker	No action shall be taken involving any personal risk or without suitable training.
	SureVector pUC Origin	No action shall be taken involving any personal risk or without suitable training.
	SureVector XP1 Linker	No action shall be taken involving any personal risk or without suitable training.
	SureVector LacI Repressor	No action shall be taken involving any personal risk or without suitable training.
	SureVector T7-HIS6 E. coli Promoter	No action shall be taken involving any personal risk or without suitable training.
	SureVector LacZ Control (N-term)	No action shall be taken involving any personal risk or without suitable training.
	SureVector Enzyme Mix	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	10X SureVector Buffer	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	dNTP Mix	No action shall be taken involving any personal risk or without suitable training.
	DpnI	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	: 5X SureSolution	Use dry chemical, CO ₂ , water spray (fog) or foam.
	SureVector AmpR Selectable Marker	Use an extinguishing agent suitable for the surrounding fire.
	SureVector KanR Selectable Marker	Use an extinguishing agent suitable for the surrounding fire.
	SureVector ChIR Selectable Marker	Use an extinguishing agent suitable for the surrounding fire.
	SureVector pUC Origin	Use an extinguishing agent suitable for the surrounding fire.
	SureVector XP1 Linker	Use an extinguishing agent suitable for the surrounding fire.

Section 5. Fire-fighting measures

	SureVector LacI Repressor	Use an extinguishing agent suitable for the surrounding fire.
	SureVector T7-HIS6 E. coli Promoter	Use an extinguishing agent suitable for the surrounding fire.
	SureVector LacZ Control (N-term)	Use an extinguishing agent suitable for the surrounding fire.
	SureVector Enzyme Mix	Use an extinguishing agent suitable for the surrounding fire.
	10X SureVector Buffer	Use an extinguishing agent suitable for the surrounding fire.
	dNTP Mix	Use an extinguishing agent suitable for the surrounding fire.
	DpnI	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: 5X SureSolution	Do not use water jet.
	SureVector AmpR Selectable Marker	None known.
	SureVector KanR Selectable Marker	None known.
	SureVector ChlR Selectable Marker	None known.
	SureVector pUC Origin	None known.
	SureVector XP1 Linker	None known.
	SureVector LacI Repressor	None known.
	SureVector T7-HIS6 E. coli Promoter	None known.
	SureVector LacZ Control (N-term)	None known.
	SureVector Enzyme Mix	None known.
	10X SureVector Buffer	None known.
	dNTP Mix	None known.
	DpnI	None known.
Specific hazards arising from the chemical	: 5X SureSolution	Combustible liquid. 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. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.
	SureVector AmpR Selectable Marker	In a fire or if heated, a pressure increase will occur and the container may burst.
	SureVector KanR Selectable Marker	In a fire or if heated, a pressure increase will occur and the container may burst.
	SureVector ChlR Selectable Marker	In a fire or if heated, a pressure increase will occur and the container may burst.
	SureVector pUC Origin	In a fire or if heated, a pressure increase will occur and the container may burst.
	SureVector XP1 Linker	In a fire or if heated, a pressure increase will occur and the container may burst.
	SureVector LacI Repressor	In a fire or if heated, a pressure increase will occur and the container may burst.
	SureVector T7-HIS6 E. coli Promoter	In a fire or if heated, a pressure increase will occur and the container may burst.
	SureVector LacZ Control (N-term)	In a fire or if heated, a pressure increase will occur and the container may burst.
	SureVector Enzyme Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
	10X SureVector Buffer	In a fire or if heated, a pressure increase will occur

Section 5. Fire-fighting measures

	dNTP Mix	and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst.
	DpnI	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: 5X SureSolution	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides
	SureVector AmpR Selectable Marker	No specific data.
	SureVector KanR Selectable Marker	No specific data.
	SureVector ChIR Selectable Marker	No specific data.
	SureVector pUC Origin	No specific data.
	SureVector XP1 Linker	No specific data.
	SureVector LacI Repressor	No specific data.
	SureVector T7-HIS6 E. coli Promoter	No specific data.
	SureVector LacZ Control (N-term)	No specific data.
	SureVector Enzyme Mix	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	10X SureVector Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides halogenated compounds metal oxide/oxides
	dNTP Mix	No specific data.
	DpnI	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
Special protective actions for fire-fighters	: 5X SureSolution	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.
	SureVector AmpR Selectable Marker	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.
	SureVector KanR Selectable Marker	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.
	SureVector ChIR Selectable Marker	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No

Section 5. Fire-fighting measures

		action shall be taken involving any personal risk or without suitable training.
	SureVector pUC Origin	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.
	SureVector XP1 Linker	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.
	SureVector LacI Repressor	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.
	SureVector T7-HIS6 E. coli Promoter	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.
	SureVector LacZ Control (N-term)	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.
	SureVector Enzyme Mix	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.
	10X SureVector Buffer	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.
	dNTP Mix	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.
	Dpnl	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	: 5X SureSolution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	SureVector AmpR Selectable Marker	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	SureVector KanR Selectable Marker	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	SureVector ChIR Selectable Marker	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	SureVector pUC Origin	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	SureVector XP1 Linker	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus

Section 5. Fire-fighting measures

	(SCBA) with a full face-piece operated in positive pressure mode.
SureVector LacI Repressor	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
SureVector T7-HIS6 E. coli Promoter	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
SureVector LacZ Control (N-term)	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
SureVector Enzyme Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
10X SureVector Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
dNTP Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
DpnI	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

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: 5X SureSolution	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 respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
SureVector AmpR Selectable Marker		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.
SureVector KanR Selectable Marker		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.
SureVector ChIR Selectable Marker		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

Section 6. Accidental release measures

	through spilled material. Put on appropriate personal protective equipment.
SureVector pUC Origin	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.
SureVector XP1 Linker	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.
SureVector LacI Repressor	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.
SureVector T7-HIS6 <i>E. coli</i> Promoter	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.
SureVector LacZ Control (N-term)	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.
SureVector Enzyme Mix	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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
10X SureVector Buffer	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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
dNTP Mix	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.
DpnI	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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear

Section 6. Accidental release measures

For emergency responders : 5X SureSolution

SureVector AmpR
Selectable Marker

SureVector KanR Selectable
Marker

SureVector ChIR Selectable
Marker

SureVector pUC Origin

SureVector XP1 Linker

SureVector LacI Repressor

SureVector T7-HIS6 *E. coli*
Promoter

SureVector LacZ Control (N-
term)

SureVector Enzyme Mix

10X SureVector Buffer

dNTP Mix

DpnI

appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

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

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

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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".

Section 6. Accidental release measures

Environmental precautions : 5X SureSolution	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).
SureVector AmpR Selectable Marker	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).
SureVector KanR Selectable Marker	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).
SureVector ChlR Selectable Marker	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).
SureVector pUC Origin	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).
SureVector XP1 Linker	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).
SureVector LacI Repressor	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).
SureVector T7-HIS6 <i>E. coli</i> Promoter	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).
SureVector LacZ Control (N-term)	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).
SureVector Enzyme Mix	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).
10X SureVector Buffer	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).
dNTP Mix	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).

Section 6. Accidental release measures

Dpnl	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).
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Methods and materials for containment and cleaning up

Methods for cleaning up : 5X SureSolution

SureVector AmpR Selectable Marker	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.
SureVector KanR Selectable Marker	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.
SureVector ChIR Selectable Marker	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.
SureVector pUC Origin	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.
SureVector XP1 Linker	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.
SureVector LacI Repressor	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.
SureVector T7-HIS6 <i>E. coli</i> Promoter	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.
SureVector LacZ Control (N-term)	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

Section 6. Accidental release measures

	inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
SureVector Enzyme Mix	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.
10X SureVector Buffer	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.
dNTP Mix	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.
Dpnl	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

[Precautions for safe handling](#)

Protective measures : 5X SureSolution

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. Empty containers retain product residue and can be hazardous. Do not reuse container.

SureVector AmpR Selectable Marker	Put on appropriate personal protective equipment (see Section 8).
SureVector KanR Selectable Marker	Put on appropriate personal protective equipment (see Section 8).
SureVector ChIR Selectable Marker	Put on appropriate personal protective equipment (see Section 8).
SureVector pUC Origin	Put on appropriate personal protective equipment (see Section 8).
SureVector XP1 Linker	Put on appropriate personal protective equipment (see Section 8).
SureVector LacI Repressor	Put on appropriate personal protective equipment (see Section 8).
SureVector T7-HIS6 E. coli Promoter	Put on appropriate personal protective equipment (see Section 8).

Section 7. Handling and storage

SureVector LacZ Control (N-term)	Put on appropriate personal protective equipment (see Section 8).
SureVector Enzyme Mix	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
10X SureVector Buffer	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
dNTP Mix	Put on appropriate personal protective equipment (see Section 8).
Dpnl	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
: 5X SureSolution	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.
SureVector AmpR Selectable Marker	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.
SureVector KanR Selectable Marker	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.
SureVector ChIR Selectable Marker	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.
SureVector pUC Origin	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

Advice on general occupational hygiene

Section 7. Handling and storage

SureVector XP1 Linker	contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
SureVector LacI Repressor	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.
SureVector T7-HIS6 <i>E. coli</i> Promoter	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.
SureVector LacZ Control (N-term)	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.
SureVector Enzyme Mix	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.
10X SureVector Buffer	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.
dNTP Mix	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.
Dpnl	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.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : 5X SureSolution

SureVector AmpR
Selectable Marker

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. 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.

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.

SureVector KanR Selectable
Marker

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.

SureVector ChIR Selectable
Marker

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.

SureVector pUC Origin

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.

SureVector XP1 Linker

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from

Section 7. Handling and storage

	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.
SureVector LacI Repressor	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.
SureVector T7-HIS6 <i>E. coli</i> Promoter	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.
SureVector LacZ Control (N-term)	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.
SureVector Enzyme Mix	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.
10X SureVector Buffer	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

Section 7. Handling and storage

dNTP Mix

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.

Dpnl

Section 8. Exposure controls/personal protection

[Control parameters](#)

[Occupational exposure limits](#)

Ingredient name	Exposure limits
<p>5X SureSolution Dimethyl sulfoxide</p> <p>SureVector Enzyme Mix Glycerol</p> <p>Dpnl Glycerol</p>	<p>OARS WEEL (United States, 1/2021). TWA: 250 ppm 8 hours.</p> <p>CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 10 mg/m³ 8 hours. Form: Mist</p> <p>CA Quebec Provincial (Canada, 7/2019). TWAEV: 10 mg/m³ 8 hours. Form: mist</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). STEL: 20 mg/m³ 15 minutes. Form: mist TWA: 10 mg/m³ 8 hours. Form: mist</p> <p>CA British Columbia Provincial (Canada, 1/2021). TWA: 3 mg/m³ 8 hours. Form: respirable mist TWA: 10 mg/m³ 8 hours. Form: total mist</p> <p>CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 10 mg/m³ 8 hours. Form: Mist</p> <p>CA Quebec Provincial (Canada, 7/2019). TWAEV: 10 mg/m³ 8 hours. Form: mist</p> <p>CA Saskatchewan Provincial (Canada, 7/2013).</p>

Section 8. Exposure controls/personal protection

STEL: 20 mg/m³ 15 minutes. Form: mist
 TWA: 10 mg/m³ 8 hours. Form: mist
CA British Columbia Provincial (Canada, 1/2021).
 TWA: 3 mg/m³ 8 hours. Form: respirable mist
 TWA: 10 mg/m³ 8 hours. Form: total mist

- 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: chemical splash goggles.
- 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- 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 and safety characteristics

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

Appearance

Section 9. Physical and chemical properties and safety characteristics

Physical state	: 5X SureSolution	Liquid. [Clear.]	
	SureVector AmpR Selectable Marker	Liquid.	
	SureVector KanR Selectable Marker	Liquid.	
	SureVector ChIR Selectable Marker	Liquid.	
	SureVector pUC Origin	Liquid.	
	SureVector XP1 Linker	Liquid.	
	SureVector LacI Repressor	Liquid.	
	SureVector T7-HIS6 E. coli Promoter	Liquid.	
	SureVector LacZ Control (N-term)	Liquid.	
	SureVector Enzyme Mix	Liquid.	
	10X SureVector Buffer	Liquid.	
	dNTP Mix	Liquid.	
	DpnI	Liquid.	
	Color	: 5X SureSolution	Blue.
		SureVector AmpR Selectable Marker	Not available.
		SureVector KanR Selectable Marker	Not available.
SureVector ChIR Selectable Marker		Not available.	
SureVector pUC Origin		Not available.	
SureVector XP1 Linker		Not available.	
SureVector LacI Repressor		Not available.	
SureVector T7-HIS6 E. coli Promoter		Not available.	
SureVector LacZ Control (N-term)		Not available.	
SureVector Enzyme Mix		Not available.	
10X SureVector Buffer		Not available.	
dNTP Mix		Not available.	
DpnI		Not available.	
Odor		: 5X SureSolution	Odorless. [Slight]
		SureVector AmpR Selectable Marker	Not available.
		SureVector KanR Selectable Marker	Not available.
	SureVector ChIR Selectable Marker	Not available.	
	SureVector pUC Origin	Not available.	
	SureVector XP1 Linker	Not available.	
	SureVector LacI Repressor	Not available.	
	SureVector T7-HIS6 E. coli Promoter	Not available.	
	SureVector LacZ Control (N-term)	Not available.	
	SureVector Enzyme Mix	Not available.	
	10X SureVector Buffer	Not available.	
	dNTP Mix	Not available.	
	DpnI	Not available.	

Section 9. Physical and chemical properties and safety characteristics

Odor threshold	: 5X SureSolution	Not available.
	SureVector AmpR	Not available.
	Selectable Marker	
	SureVector KanR Selectable	Not available.
	Marker	
	SureVector ChIR Selectable	Not available.
	Marker	
	SureVector pUC Origin	Not available.
	SureVector XP1 Linker	Not available.
	SureVector LacI Repressor	Not available.
	SureVector T7-HIS6 E. coli	Not available.
	Promoter	
	SureVector LacZ Control (N-term)	Not available.
	SureVector Enzyme Mix	Not available.
	10X SureVector Buffer	Not available.
	dNTP Mix	Not available.
DpnI	Not available.	
pH	: 5X SureSolution	Not available.
	SureVector AmpR	8
	Selectable Marker	
	SureVector KanR Selectable	8
	Marker	
	SureVector ChIR Selectable	8
	Marker	
	SureVector pUC Origin	8
	SureVector XP1 Linker	8
	SureVector LacI Repressor	8
	SureVector T7-HIS6 E. coli	8
	Promoter	
	SureVector LacZ Control (N-term)	8
	SureVector Enzyme Mix	8.2
	10X SureVector Buffer	8.8
	dNTP Mix	7.5
DpnI	7.5	
Melting point/freezing point	: 5X SureSolution	18.5°C (65.3°F)
	SureVector AmpR	0°C (32°F)
	Selectable Marker	
	SureVector KanR Selectable	0°C (32°F)
	Marker	
	SureVector ChIR Selectable	0°C (32°F)
	Marker	
	SureVector pUC Origin	0°C (32°F)
	SureVector XP1 Linker	0°C (32°F)
	SureVector LacI Repressor	0°C (32°F)
	SureVector T7-HIS6 E. coli	0°C (32°F)
	Promoter	
	SureVector LacZ Control (N-term)	0°C (32°F)
	SureVector Enzyme Mix	Not available.
	10X SureVector Buffer	Not available.
	dNTP Mix	0°C (32°F)
DpnI	Not available.	

Section 9. Physical and chemical properties and safety characteristics

Boiling point, initial boiling point, and boiling range	5X SureSolution	189°C (372.2°F)	
	SureVector AmpR Selectable Marker	100°C (212°F)	
	SureVector KanR Selectable Marker	100°C (212°F)	
	SureVector ChIR Selectable Marker	100°C (212°F)	
	SureVector pUC Origin	100°C (212°F)	
	SureVector XP1 Linker	100°C (212°F)	
	SureVector LacI Repressor	100°C (212°F)	
	SureVector T7-HIS6 E. coli Promoter	100°C (212°F)	
	SureVector LacZ Control (N-term)	100°C (212°F)	
	SureVector Enzyme Mix	Not available.	
	10X SureVector Buffer	Not available.	
	dNTP Mix	100°C (212°F)	
	DpnI	Not available.	
	Flash point	5X SureSolution	Closed cup: 87°C (188.6°F) [ASTM D 93] Open cup: 87°C (188.6°F)
		SureVector AmpR Selectable Marker	Not available.
SureVector KanR Selectable Marker		Not available.	
SureVector ChIR Selectable Marker		Not available.	
SureVector pUC Origin		Not available.	
SureVector XP1 Linker		Not available.	
SureVector LacI Repressor		Not available.	
SureVector T7-HIS6 E. coli Promoter		Not available.	
SureVector LacZ Control (N-term)		Not available.	
SureVector Enzyme Mix		Not available.	
10X SureVector Buffer		Not available.	
dNTP Mix		Not available.	
DpnI		Not available.	

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
SureVector AmpR Selectable Marker						
Edetic acid	>100	>212	DIN 51758			
SureVector KanR Selectable Marker						
Edetic acid	>100	>212	DIN 51758			
SureVector ChIR Selectable Marker						
Edetic acid	>100	>212	DIN 51758			
SureVector pUC Origin						
Edetic acid	>100	>212	DIN 51758			
SureVector XP1 Linker						

Section 9. Physical and chemical properties and safety characteristics

Edetic acid	>100	>212	DIN 51758			
SureVector LacI Repressor						
Edetic acid	>100	>212	DIN 51758			
SureVector T7-HIS6 E. coli Promoter						
Edetic acid	>100	>212	DIN 51758			
SureVector LacZ Control (N-term)						
Edetic acid	>100	>212	DIN 51758			
SureVector Enzyme Mix						
Edetic acid	>100	>212	DIN 51758			
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy-	>109.85	>229.7				
10X SureVector Buffer						
Polyoxyethylene octyl phenyl ether	>109.85	>229.7				
dNTP Mix						
Edetic acid	>100	>212	DIN 51758			
Dpnl						
Edetic acid	>100	>212	DIN 51758			
(R*,R*)-1,4-Dimercaptobutane-2,3-diol	>110	>230				

Evaporation rate	: 5X SureSolution	0.026 (butyl acetate = 1)
	SureVector AmpR	Not available.
	Selectable Marker	
	SureVector KanR Selectable Marker	Not available.
	SureVector ChIR Selectable Marker	Not available.
	SureVector pUC Origin	Not available.
	SureVector XP1 Linker	Not available.
	SureVector LacI Repressor	Not available.
	SureVector T7-HIS6 E. coli Promoter	Not available.
	SureVector LacZ Control (N-term)	Not available.
	SureVector Enzyme Mix	Not available.
	10X SureVector Buffer	Not available.
	dNTP Mix	Not available.
	Dpnl	Not available.

Section 9. Physical and chemical properties and safety characteristics

Flammability	: 5X SureSolution	Not applicable.	
	SureVector AmpR	Not applicable.	
	Selectable Marker		
	SureVector KanR Selectable Marker	Not applicable.	
	SureVector ChIR Selectable Marker	Not applicable.	
	SureVector pUC Origin	Not applicable.	
	SureVector XP1 Linker	Not applicable.	
	SureVector LacI Repressor	Not applicable.	
	SureVector T7-HIS6 E. coli Promoter	Not applicable.	
	SureVector LacZ Control (N-term)	Not applicable.	
	SureVector Enzyme Mix	Not applicable.	
	10X SureVector Buffer	Not applicable.	
	dNTP Mix	Not applicable.	
	DpnI	Not applicable.	
	Lower and upper explosion limit/flammability limit	: 5X SureSolution	Lower: 2.6% Upper: 28.5%
		SureVector AmpR	Not available.
Selectable Marker			
SureVector KanR Selectable Marker		Not available.	
SureVector ChIR Selectable Marker		Not available.	
SureVector pUC Origin		Not available.	
SureVector XP1 Linker		Not available.	
SureVector LacI Repressor		Not available.	
SureVector T7-HIS6 E. coli Promoter		Not available.	
SureVector LacZ Control (N-term)		Not available.	
SureVector Enzyme Mix		Not available.	
10X SureVector Buffer		Not available.	
dNTP Mix		Not available.	
DpnI		Not available.	
Vapor pressure		: 5X SureSolution	0.056 kPa (0.42 mm Hg) [EU A.4]
		SureVector AmpR	Not available.
	Selectable Marker		
	SureVector KanR Selectable Marker	Not available.	
	SureVector ChIR Selectable Marker	Not available.	
	SureVector pUC Origin	Not available.	
	SureVector XP1 Linker	Not available.	
	SureVector LacI Repressor	Not available.	
	SureVector T7-HIS6 E. coli Promoter	Not available.	
	SureVector LacZ Control (N-term)	Not available.	
	SureVector Enzyme Mix	Not available.	
	10X SureVector Buffer	Not available.	
	dNTP Mix	Not available.	
	DpnI	Not available.	

Section 9. Physical and chemical properties and safety characteristics

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
SureVector AmpR Selectable Marker						
water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
SureVector KanR Selectable Marker						
water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
SureVector ChIR Selectable Marker						
water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
SureVector pUC Origin						
water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
SureVector XP1 Linker						
water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
SureVector LacI Repressor						
water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
SureVector T7-HIS6 E. coli Promoter						
water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
SureVector LacZ Control (N-term)						

Section 9. Physical and chemical properties and safety characteristics

water	23.8	3.2		92.258	12.3
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001
SureVector Enzyme Mix					
water	23.8	3.2		92.258	12.3
Sorbitan monolaurate, ethoxylated	<1	<0.13			
10X SureVector Buffer					
water	23.8	3.2		92.258	12.3
Polyoxyethylene octyl phenyl ether	<1	<0.13			
dNTP Mix					
water	23.8	3.2		92.258	12.3
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001
Dpnl					
water	23.8	3.2		92.258	12.3
Glycerol	0.000075	0.00001		0.0025	0.00033

Relative vapor density : 5X SureSolution 2.7 [Air = 1]
 SureVector AmpR Selectable Marker Not available.
 SureVector KanR Selectable Marker Not available.
 SureVector ChIR Selectable Marker Not available.
 SureVector pUC Origin Not available.
 SureVector XP1 Linker Not available.
 SureVector LacI Repressor Not available.
 SureVector T7-HIS6 E. coli Promoter Not available.
 SureVector LacZ Control (N-term) Not available.
 SureVector Enzyme Mix Not available.
 10X SureVector Buffer Not available.
 dNTP Mix Not available.
 Dpnl Not available.

Relative density : 5X SureSolution 1.1
 SureVector AmpR Selectable Marker Not available.
 SureVector KanR Selectable Marker Not available.
 SureVector ChIR Selectable Marker Not available.
 SureVector pUC Origin Not available.
 SureVector XP1 Linker Not available.
 SureVector LacI Repressor Not available.
 SureVector T7-HIS6 E. coli Not available.

Section 9. Physical and chemical properties and safety characteristics

	Promoter	
	SureVector LacZ Control (N-term)	Not available.
	SureVector Enzyme Mix	Not available.
	10X SureVector Buffer	Not available.
	dNTP Mix	Not available.
	DpnI	Not available.
Solubility	: 5X SureSolution	Easily soluble in the following materials: cold water and hot water.
	SureVector AmpR Selectable Marker	Easily soluble in the following materials: cold water and hot water.
	SureVector KanR Selectable Marker	Easily soluble in the following materials: cold water and hot water.
	SureVector ChIR Selectable Marker	Easily soluble in the following materials: cold water and hot water.
	SureVector pUC Origin	Easily soluble in the following materials: cold water and hot water.
	SureVector XP1 Linker	Easily soluble in the following materials: cold water and hot water.
	SureVector LacI Repressor	Easily soluble in the following materials: cold water and hot water.
	SureVector T7-HIS6 E. coli Promoter	Easily soluble in the following materials: cold water and hot water.
	SureVector LacZ Control (N-term)	Easily soluble in the following materials: cold water and hot water.
	SureVector Enzyme Mix	Soluble in the following materials: cold water and hot water.
	10X SureVector Buffer	Easily soluble in the following materials: cold water and hot water.
	dNTP Mix	Easily soluble in the following materials: cold water and hot water.
	DpnI	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: 5X SureSolution	-1.35
	SureVector AmpR Selectable Marker	Not applicable.
	SureVector KanR Selectable Marker	Not applicable.
	SureVector ChIR Selectable Marker	Not applicable.
	SureVector pUC Origin	Not applicable.
	SureVector XP1 Linker	Not applicable.
	SureVector LacI Repressor	Not applicable.
	SureVector T7-HIS6 E. coli Promoter	Not applicable.
	SureVector LacZ Control (N-term)	Not applicable.
	SureVector Enzyme Mix	Not applicable.
	10X SureVector Buffer	Not applicable.
	dNTP Mix	Not applicable.
	DpnI	Not applicable.
Auto-ignition temperature	: 5X SureSolution	300 to 302°C (572 to 575.6°F)
	SureVector AmpR Selectable Marker	Not available.
	SureVector KanR Selectable Marker	Not available.
	SureVector ChIR Selectable Marker	Not available.

Section 9. Physical and chemical properties and safety characteristics

SureVector pUC Origin	Not available.
SureVector XP1 Linker	Not available.
SureVector LacI Repressor	Not available.
SureVector T7-HIS6 E. coli Promoter	Not available.
SureVector LacZ Control (N-term)	Not available.
SureVector Enzyme Mix	Not available.
10X SureVector Buffer	Not available.
dNTP Mix	Not available.
DpnI	Not available.

Ingredient name	°C	°F	Method
SureVector AmpR Selectable Marker			
Edetic acid	>400	>752	VDI 2263
SureVector KanR Selectable Marker			
Edetic acid	>400	>752	VDI 2263
SureVector ChlR Selectable Marker			
Edetic acid	>400	>752	VDI 2263
SureVector pUC Origin			
Edetic acid	>400	>752	VDI 2263
SureVector XP1 Linker			
Edetic acid	>400	>752	VDI 2263
SureVector LacI Repressor			
Edetic acid	>400	>752	VDI 2263
SureVector T7-HIS6 E. coli Promoter			
Edetic acid	>400	>752	VDI 2263
SureVector LacZ Control (N-term)			
Edetic acid	>400	>752	VDI 2263
SureVector Enzyme Mix			
Glycerol	370	698	
Edetic acid	>400	>752	VDI 2263
dNTP Mix			
Edetic acid	>400	>752	VDI 2263
DpnI			
Glycerol	370	698	
Edetic acid	>400	>752	VDI 2263

Section 9. Physical and chemical properties and safety characteristics

Decomposition temperature	: 5X SureSolution	140 to 189°C (284 to 372.2°F)
	SureVector AmpR Selectable Marker	Not available.
	SureVector KanR Selectable Marker	Not available.
	SureVector ChIR Selectable Marker	Not available.
	SureVector pUC Origin	Not available.
	SureVector XP1 Linker	Not available.
	SureVector LacI Repressor	Not available.
	SureVector T7-HIS6 E. coli Promoter	Not available.
	SureVector LacZ Control (N-term)	Not available.
	SureVector Enzyme Mix	Not available.
	10X SureVector Buffer	Not available.
	dNTP Mix	Not available.
	DpnI	Not available.

Viscosity	: <input checked="" type="checkbox"/> 5X SureSolution	Dynamic: 2.14 mPa·s (2.14 cP)
	SureVector AmpR Selectable Marker	Not available.
	SureVector KanR Selectable Marker	Not available.
	SureVector ChIR Selectable Marker	Not available.
	SureVector pUC Origin	Not available.
	SureVector XP1 Linker	Not available.
	SureVector LacI Repressor	Not available.
	SureVector T7-HIS6 E. coli Promoter	Not available.
	SureVector LacZ Control (N-term)	Not available.
	SureVector Enzyme Mix	Not available.
	10X SureVector Buffer	Not available.
	dNTP Mix	Not available.
	DpnI	Not available.

Particle characteristics

Median particle size	: <input checked="" type="checkbox"/> 5X SureSolution	Not applicable.
	SureVector AmpR Selectable Marker	Not applicable.
	SureVector KanR Selectable Marker	Not applicable.
	SureVector ChIR Selectable Marker	Not applicable.
	SureVector pUC Origin	Not applicable.
	SureVector XP1 Linker	Not applicable.
	SureVector LacI Repressor	Not applicable.
	SureVector T7-HIS6 E. coli Promoter	Not applicable.
	SureVector LacZ Control (N-term)	Not applicable.
	SureVector Enzyme Mix	Not applicable.
	10X SureVector Buffer	Not applicable.
	dNTP Mix	Not applicable.
	DpnI	Not applicable.

Section 10. Stability and reactivity

Reactivity	: 5X SureSolution	No specific test data related to reactivity available for this product or its ingredients.
	SureVector AmpR Selectable Marker	No specific test data related to reactivity available for this product or its ingredients.
	SureVector KanR Selectable Marker	No specific test data related to reactivity available for this product or its ingredients.
	SureVector ChIR Selectable Marker	No specific test data related to reactivity available for this product or its ingredients.
	SureVector pUC Origin	No specific test data related to reactivity available for this product or its ingredients.
	SureVector XP1 Linker	No specific test data related to reactivity available for this product or its ingredients.
	SureVector LacI Repressor	No specific test data related to reactivity available for this product or its ingredients.
	SureVector T7-HIS6 E. coli Promoter	No specific test data related to reactivity available for this product or its ingredients.
	SureVector LacZ Control (N-term)	No specific test data related to reactivity available for this product or its ingredients.
	SureVector Enzyme Mix	No specific test data related to reactivity available for this product or its ingredients.
	10X SureVector Buffer	No specific test data related to reactivity available for this product or its ingredients.
	dNTP Mix	No specific test data related to reactivity available for this product or its ingredients.
	DpnI	No specific test data related to reactivity available for this product or its ingredients.

Chemical stability	: 5X SureSolution	The product is stable.
	SureVector AmpR Selectable Marker	The product is stable.
	SureVector KanR Selectable Marker	The product is stable.
	SureVector ChIR Selectable Marker	The product is stable.
	SureVector pUC Origin	The product is stable.
	SureVector XP1 Linker	The product is stable.
	SureVector LacI Repressor	The product is stable.
	SureVector T7-HIS6 E. coli Promoter	The product is stable.
	SureVector LacZ Control (N-term)	The product is stable.
	SureVector Enzyme Mix	The product is stable.
	10X SureVector Buffer	The product is stable.
	dNTP Mix	The product is stable.
	DpnI	The product is stable.

Possibility of hazardous reactions	: 5X SureSolution	Under normal conditions of storage and use, hazardous reactions will not occur.
	SureVector AmpR Selectable Marker	Under normal conditions of storage and use, hazardous reactions will not occur.
	SureVector KanR Selectable Marker	Under normal conditions of storage and use, hazardous reactions will not occur.
	SureVector ChIR Selectable Marker	Under normal conditions of storage and use, hazardous reactions will not occur.
	SureVector pUC Origin	Under normal conditions of storage and use, hazardous reactions will not occur.
	SureVector XP1 Linker	Under normal conditions of storage and use, hazardous reactions will not occur.
	SureVector LacI Repressor	Under normal conditions of storage and use,

Section 10. Stability and reactivity

SureVector T7-HIS6 E. coli Promoter	Under normal conditions of storage and use, hazardous reactions will not occur.
SureVector LacZ Control (N-term)	Under normal conditions of storage and use, hazardous reactions will not occur.
SureVector Enzyme Mix	Under normal conditions of storage and use, hazardous reactions will not occur.
10X SureVector Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
dNTP Mix	Under normal conditions of storage and use, hazardous reactions will not occur.
DpnI	Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid	: 5X SureSolution	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. Do not allow vapor to accumulate in low or confined areas.
	SureVector AmpR Selectable Marker	No specific data.
	SureVector KanR Selectable Marker	No specific data.
	SureVector ChIR Selectable Marker	No specific data.
	SureVector pUC Origin	No specific data.
	SureVector XP1 Linker	No specific data.
	SureVector LacI Repressor	No specific data.
	SureVector T7-HIS6 E. coli Promoter	No specific data.
	SureVector LacZ Control (N-term)	No specific data.
	SureVector Enzyme Mix	No specific data.
	10X SureVector Buffer	No specific data.
	dNTP Mix	No specific data.
	DpnI	No specific data.

Incompatible materials	: 5X SureSolution	Reactive or incompatible with the following materials: oxidizing materials
	SureVector AmpR Selectable Marker	May react or be incompatible with oxidizing materials.
	SureVector KanR Selectable Marker	May react or be incompatible with oxidizing materials.
	SureVector ChIR Selectable Marker	May react or be incompatible with oxidizing materials.
	SureVector pUC Origin	May react or be incompatible with oxidizing materials.
	SureVector XP1 Linker	May react or be incompatible with oxidizing materials.
	SureVector LacI Repressor	May react or be incompatible with oxidizing materials.
	SureVector T7-HIS6 E. coli Promoter	May react or be incompatible with oxidizing materials.
	SureVector LacZ Control (N-term)	May react or be incompatible with oxidizing materials.
	SureVector Enzyme Mix	May react or be incompatible with oxidizing materials.
	10X SureVector Buffer	May react or be incompatible with oxidizing materials.
	dNTP Mix	May react or be incompatible with oxidizing materials.
	DpnI	May react or be incompatible with oxidizing materials.

Section 10. Stability and reactivity

Hazardous decomposition products	: 5X SureSolution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	SureVector AmpR Selectable Marker	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	SureVector KanR Selectable Marker	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	SureVector ChIR Selectable Marker	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	SureVector pUC Origin	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	SureVector XP1 Linker	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	SureVector LacI Repressor	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	SureVector T7-HIS6 E. coli Promoter	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	SureVector LacZ Control (N-term)	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	SureVector Enzyme Mix	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	10X SureVector Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	dNTP Mix	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	DpnI	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
5X SureSolution Dimethyl sulfoxide	LD50 Dermal LD50 Oral	Rat Rat	40000 mg/kg 14500 mg/kg	- -
SureVector Enzyme Mix Glycerol Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy-	LD50 Oral LD50 Oral	Rat Rat	12600 mg/kg 2800 mg/kg	- -
10X SureVector Buffer Potassium chloride Ammonium sulphate	LD50 Oral LD50 Oral	Rat Rat	2600 mg/kg 2840 mg/kg	- -

Section 11. Toxicological information

Polyoxyethylene octyl phenyl ether	LD50 Oral	Rat	1800 mg/kg	-
Dpnl Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
5X SureSolution Dimethyl sulfoxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Mild irritant	Rabbit	-	100 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	100 mg	-
SureVector Enzyme Mix Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy-	Eyes - Severe irritant	Rabbit	-	1 %	-
10X SureVector Buffer Potassium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
Polyoxyethylene octyl phenyl ether	Skin - Mild irritant	Rabbit	-	24 hours 500 uL	-
Dpnl Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
10X SureVector Buffer Polyoxyethylene octyl phenyl ether	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

5X SureSolution	Routes of entry anticipated: Oral, Dermal, Inhalation.
SureVector AmpR Selectable Marker	Not available.
SureVector KanR Selectable Marker	Not available.
SureVector ChIR Selectable Marker	Not available.
SureVector pUC Origin	Not available.
SureVector XP1 Linker	Not available.
SureVector LacI Repressor	Not available.
SureVector T7-HIS6 E. coli Promoter	Not available.
SureVector LacZ Control (N-term)	Not available.
SureVector Enzyme Mix	Routes of entry anticipated: Oral, Dermal, Inhalation.
10X SureVector Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
dNTP Mix	Not available.
DpnI	Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact

5X SureSolution	Causes eye irritation.
SureVector AmpR Selectable Marker	No known significant effects or critical hazards.
SureVector KanR Selectable Marker	No known significant effects or critical hazards.
SureVector ChIR Selectable Marker	No known significant effects or critical hazards.
SureVector pUC Origin	No known significant effects or critical hazards.
SureVector XP1 Linker	No known significant effects or critical hazards.
SureVector LacI Repressor	No known significant effects or critical hazards.
SureVector T7-HIS6 E. coli Promoter	No known significant effects or critical hazards.
SureVector LacZ Control (N-term)	No known significant effects or critical hazards.
SureVector Enzyme Mix	Causes eye irritation.
10X SureVector Buffer	Causes serious eye irritation.
dNTP Mix	No known significant effects or critical hazards.
DpnI	Causes serious eye irritation.

Inhalation

5X SureSolution	No known significant effects or critical hazards.
SureVector AmpR Selectable Marker	No known significant effects or critical hazards.
SureVector KanR Selectable Marker	No known significant effects or critical hazards.
SureVector ChIR Selectable Marker	No known significant effects or critical hazards.
SureVector pUC Origin	No known significant effects or critical hazards.

Section 11. Toxicological information

	SureVector XP1 Linker	No known significant effects or critical hazards.
	SureVector LacI Repressor	No known significant effects or critical hazards.
	SureVector T7-HIS6 E. coli Promoter	No known significant effects or critical hazards.
	SureVector LacZ Control (N-term)	No known significant effects or critical hazards.
	SureVector Enzyme Mix	No known significant effects or critical hazards.
	10X SureVector Buffer	No known significant effects or critical hazards.
	dNTP Mix	No known significant effects or critical hazards.
	DpnI	No known significant effects or critical hazards.
Skin contact	: 5X SureSolution	No known significant effects or critical hazards.
	SureVector AmpR Selectable Marker	No known significant effects or critical hazards.
	SureVector KanR Selectable Marker	No known significant effects or critical hazards.
	SureVector ChIR Selectable Marker	No known significant effects or critical hazards.
	SureVector pUC Origin	No known significant effects or critical hazards.
	SureVector XP1 Linker	No known significant effects or critical hazards.
	SureVector LacI Repressor	No known significant effects or critical hazards.
	SureVector T7-HIS6 E. coli Promoter	No known significant effects or critical hazards.
	SureVector LacZ Control (N-term)	No known significant effects or critical hazards.
	SureVector Enzyme Mix	No known significant effects or critical hazards.
	10X SureVector Buffer	No known significant effects or critical hazards.
	dNTP Mix	No known significant effects or critical hazards.
	DpnI	No known significant effects or critical hazards.
Ingestion	: 5X SureSolution	No known significant effects or critical hazards.
	SureVector AmpR Selectable Marker	No known significant effects or critical hazards.
	SureVector KanR Selectable Marker	No known significant effects or critical hazards.
	SureVector ChIR Selectable Marker	No known significant effects or critical hazards.
	SureVector pUC Origin	No known significant effects or critical hazards.
	SureVector XP1 Linker	No known significant effects or critical hazards.
	SureVector LacI Repressor	No known significant effects or critical hazards.
	SureVector T7-HIS6 E. coli Promoter	No known significant effects or critical hazards.
	SureVector LacZ Control (N-term)	No known significant effects or critical hazards.
	SureVector Enzyme Mix	No known significant effects or critical hazards.
	10X SureVector Buffer	No known significant effects or critical hazards.
	dNTP Mix	No known significant effects or critical hazards.
	DpnI	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: 5X SureSolution	Adverse symptoms may include the following: irritation watering redness
	SureVector AmpR Selectable Marker	No specific data.
	SureVector KanR Selectable Marker	No specific data.
	SureVector ChIR Selectable Marker	No specific data.
	SureVector pUC Origin	No specific data.

Section 11. Toxicological information

SureVector XP1 Linker	No specific data.
SureVector LacI Repressor	No specific data.
SureVector T7-HIS6 E. coli Promoter	No specific data.
SureVector LacZ Control (N-term)	No specific data.
SureVector Enzyme Mix	Adverse symptoms may include the following: irritation watering redness
10X SureVector Buffer	Adverse symptoms may include the following: pain or irritation watering redness
dNTP Mix	No specific data.
DpnI	Adverse symptoms may include the following: pain or irritation watering redness

Inhalation

: 5X SureSolution	No specific data.
SureVector AmpR Selectable Marker	No specific data.
SureVector KanR Selectable Marker	No specific data.
SureVector ChIR Selectable Marker	No specific data.
SureVector pUC Origin	No specific data.
SureVector XP1 Linker	No specific data.
SureVector LacI Repressor	No specific data.
SureVector T7-HIS6 E. coli Promoter	No specific data.
SureVector LacZ Control (N-term)	No specific data.
SureVector Enzyme Mix	No specific data.
10X SureVector Buffer	No specific data.
dNTP Mix	No specific data.
DpnI	No specific data.

Skin contact

: 5X SureSolution	No specific data.
SureVector AmpR Selectable Marker	No specific data.
SureVector KanR Selectable Marker	No specific data.
SureVector ChIR Selectable Marker	No specific data.
SureVector pUC Origin	No specific data.
SureVector XP1 Linker	No specific data.
SureVector LacI Repressor	No specific data.
SureVector T7-HIS6 E. coli Promoter	No specific data.
SureVector LacZ Control (N-term)	No specific data.
SureVector Enzyme Mix	No specific data.
10X SureVector Buffer	No specific data.
dNTP Mix	No specific data.
DpnI	No specific data.

Section 11. Toxicological information

Ingestion	: 5X SureSolution	No specific data.
	SureVector AmpR	No specific data.
	Selectable Marker	
	SureVector KanR Selectable Marker	No specific data.
	SureVector ChIR Selectable Marker	No specific data.
	SureVector pUC Origin	No specific data.
	SureVector XP1 Linker	No specific data.
	SureVector LacI Repressor	No specific data.
	SureVector T7-HIS6 E. coli Promoter	No specific data.
	SureVector LacZ Control (N-term)	No specific data.
	SureVector Enzyme Mix	No specific data.
	10X SureVector Buffer	No specific data.
	dNTP Mix	No specific data.
	DpnI	No specific data.

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	: 5X SureSolution	No known significant effects or critical hazards.
	SureVector AmpR	No known significant effects or critical hazards.
	Selectable Marker	
	SureVector KanR Selectable Marker	No known significant effects or critical hazards.
	SureVector ChIR Selectable Marker	No known significant effects or critical hazards.
	SureVector pUC Origin	No known significant effects or critical hazards.
	SureVector XP1 Linker	No known significant effects or critical hazards.
	SureVector LacI Repressor	No known significant effects or critical hazards.
	SureVector T7-HIS6 E. coli Promoter	No known significant effects or critical hazards.
	SureVector LacZ Control (N-term)	No known significant effects or critical hazards.
	SureVector Enzyme Mix	No known significant effects or critical hazards.
	10X SureVector Buffer	No known significant effects or critical hazards.
	dNTP Mix	No known significant effects or critical hazards.
	DpnI	No known significant effects or critical hazards.
Carcinogenicity	: 5X SureSolution	No known significant effects or critical hazards.
	SureVector AmpR	No known significant effects or critical hazards.
	Selectable Marker	
	SureVector KanR Selectable Marker	No known significant effects or critical hazards.
	SureVector ChIR Selectable Marker	No known significant effects or critical hazards.
	SureVector pUC Origin	No known significant effects or critical hazards.
	SureVector XP1 Linker	No known significant effects or critical hazards.
	SureVector LacI Repressor	No known significant effects or critical hazards.

Section 11. Toxicological information

	SureVector T7-HIS6 E. coli Promoter	No known significant effects or critical hazards.
	SureVector LacZ Control (N-term)	No known significant effects or critical hazards.
	SureVector Enzyme Mix	No known significant effects or critical hazards.
	10X SureVector Buffer	No known significant effects or critical hazards.
	dNTP Mix	No known significant effects or critical hazards.
	DpnI	No known significant effects or critical hazards.
Mutagenicity	: 5X SureSolution	No known significant effects or critical hazards.
	SureVector AmpR Selectable Marker	No known significant effects or critical hazards.
	SureVector KanR Selectable Marker	No known significant effects or critical hazards.
	SureVector ChIR Selectable Marker	No known significant effects or critical hazards.
	SureVector pUC Origin	No known significant effects or critical hazards.
	SureVector XP1 Linker	No known significant effects or critical hazards.
	SureVector LacI Repressor	No known significant effects or critical hazards.
	SureVector T7-HIS6 E. coli Promoter	No known significant effects or critical hazards.
	SureVector LacZ Control (N-term)	No known significant effects or critical hazards.
	SureVector Enzyme Mix	No known significant effects or critical hazards.
	10X SureVector Buffer	No known significant effects or critical hazards.
	dNTP Mix	No known significant effects or critical hazards.
	DpnI	No known significant effects or critical hazards.
Reproductive toxicity	: <input checked="" type="checkbox"/> 5X SureSolution	No known significant effects or critical hazards.
	SureVector AmpR Selectable Marker	No known significant effects or critical hazards.
	SureVector KanR Selectable Marker	No known significant effects or critical hazards.
	SureVector ChIR Selectable Marker	No known significant effects or critical hazards.
	SureVector pUC Origin	No known significant effects or critical hazards.
	SureVector XP1 Linker	No known significant effects or critical hazards.
	SureVector LacI Repressor	No known significant effects or critical hazards.
	SureVector T7-HIS6 E. coli Promoter	No known significant effects or critical hazards.
	SureVector LacZ Control (N-term)	No known significant effects or critical hazards.
	SureVector Enzyme Mix	No known significant effects or critical hazards.
	10X SureVector Buffer	No known significant effects or critical hazards.
	dNTP Mix	No known significant effects or critical hazards.
	DpnI	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)

Section 11. Toxicological information

5X SureSolution Dimethyl sulfoxide	14500	40000	N/A	N/A	N/A
SureVector Enzyme Mix Glycerol	12600	N/A	N/A	N/A	N/A
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	2800	N/A	N/A	N/A	N/A
10X SureVector Buffer 10X SureVector Buffer	41044.5	N/A	N/A	N/A	N/A
Potassium chloride	2600	N/A	N/A	N/A	N/A
Ammonium sulphate	2840	N/A	N/A	N/A	N/A
Polyoxyethylene octyl phenyl ether	1800	N/A	N/A	N/A	N/A
Dpnl Dpnl	128314.8	N/A	N/A	N/A	N/A
Glycerol	12600	N/A	N/A	N/A	N/A
Sodium chloride	3000	N/A	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
5X SureSolution Dimethyl sulfoxide	Acute LC50 25000 ppm Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 34000000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 100 µl/L Marine water	Algae - Ulva lactuca	72 hours
	Chronic NOEC 100 µl/L Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	21 days
SureVector Enzyme Mix Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Acute EC50 210 µg/l Fresh water	Algae - Selenastrum sp.	96 hours
	Acute LC50 10800 µg/l Marine water	Crustaceans - Pandalus montagui - Adult	48 hours
	Acute LC50 8600 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 7200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
10X SureVector Buffer Potassium chloride	Acute EC50 1337000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 9.24 g/L Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 83000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 9.68 mg/l Fresh water	Crustaceans - Pseudosida ramosa - Neonate	48 hours
Ammonium sulphate	Acute LC50 509.65 mg/l Fresh water	Fish - Danio rerio	96 hours
	Chronic NOEC 7.5 mg/l Marine water	Algae - Phaeodactylum tricornutum - Exponential growth phase	96 hours
Polyoxyethylene octyl phenyl	Acute LC50 5.85 mg/l Fresh water	Crustaceans - Ceriodaphnia	48 hours

Section 12. Ecological information

ether	Acute LC50 11.2 mg/l Fresh water	rigaudi - Neonate	48 hours
	Acute LC50 4500 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	96 hours
		Fish - Pimephales promelas	96 hours
Dpnl			
Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
Sodium chloride	Acute EC50 2430000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute EC50 402.6 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
	Chronic LC10 781 mg/l Fresh water	Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	3 weeks
	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days
	Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
5X SureSolution Dimethyl sulfoxide	OECD 301D Ready Biodegradability - Closed Bottle Test	31 % - Not readily - 28 days	-	-
SureVector Enzyme Mix Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
Dpnl Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
5X SureSolution Dimethyl sulfoxide	-	-	Not readily
10X SureVector Buffer Potassium chloride	-	-	Readily
Ammonium sulphate	-	-	Readily
Polyoxyethylene octyl phenyl ether	-	-	Readily

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
5X SureSolution Dimethyl sulfoxide	-1.35	3.16	low
SureVector Enzyme Mix Glycerol	-1.76	-	low
Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy-	3.77	78.67	low
10X SureVector Buffer Potassium chloride	-0.46	-	low
Ammonium sulphate	-5.1	-	low
Polyoxyethylene octyl phenyl ether	4.86	-	high
Dpnl Glycerol	-1.76	-	low

Mobility in soil

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

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

Section 13. Disposal considerations

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. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

TDG / 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 IMO instruments : Not available.

Section 15. Regulatory information

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

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

Section 16. Other information

History

Date of issue/Date of revision : 04/05/2022

Date of previous issue : 08/14/2019

Version : 4

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HPR = Hazardous Products Regulations
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available

Section 16. Other information

UN = United Nations

[Procedure used to derive the classification](#)

Classification	Justification
5X SureSolution FLAMMABLE LIQUIDS - Category 4 EYE IRRITATION - Category 2B	On basis of test data On basis of test data
SureVector Enzyme Mix EYE IRRITATION - Category 2B	Calculation method
10X SureVector Buffer EYE IRRITATION - Category 2A	Calculation method
Dpnl EYE IRRITATION - Category 2A	Calculation method

References : Not available.

✔ Indicates information that has changed from previously issued version.

[Notice to reader](#)

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