

SAFETY DATA SHEET

SureSelect Target Enrichment Box 1, Part Number 5190-8645

Section 1. Identification

1.1 Product identifier

Product name	: SureSelect Target Enrichment Box 1, Part Number 5190-8645	
Part no. (chemical kit)	: 5190-8645	
Part no.	SureSelect Hyb 1	5190-4396
	SureSelect Hyb 2	5190-4397
	SureSelect Hyb 4	5190-4406
	SureSelect Binding Buffer	5190-4399
	SureSelect Wash Buffer 1	5190-4400
	SureSelect Wash Buffer 2	5190-4401
Validation date	: 5/7/2018	

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

Material uses	: Analytical reagent.	
	SureSelect Hyb 1	0.4 ml
	SureSelect Hyb 2	1.5 ml
	SureSelect Hyb 4	1.25 ml
	SureSelect Binding Buffer	13.2 ml
	SureSelect Wash Buffer 1	8 ml
	SureSelect Wash Buffer 2	24 ml

1.3 Details of the supplier of the safety data sheet

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

In case of emergency	: CHEMTREC®: 1-800-424-9300
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Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status	: SureSelect Hyb 1	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	SureSelect Hyb 2	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	SureSelect Hyb 4	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
	SureSelect Binding Buffer	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
	SureSelect Wash Buffer 1	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Section 2. Hazards identification

1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

SureSelect Wash Buffer 2

While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture

SureSelect Hyb 1

H319 EYE IRRITATION - Category 2A

SureSelect Hyb 2

H319 EYE IRRITATION - Category 2A
 H373 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) - Category 2

Ingredients of unknown toxicity

: SureSelect Hyb 1	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 10 - 30%
SureSelect Hyb 2	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 10 - 30%
SureSelect Hyb 4	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 10 - 30%
SureSelect Binding Buffer	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10%
	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10%
	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10%
	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10%

2.2 GHS label elements

Hazard pictograms

: SureSelect Hyb 1



SureSelect Hyb 2



Signal word

: SureSelect Hyb 1	Warning
SureSelect Hyb 2	Warning
SureSelect Hyb 4	No signal word.
SureSelect Binding Buffer	No signal word.
SureSelect Wash Buffer 1	No signal word.
SureSelect Wash Buffer 2	No signal word.

Section 2. Hazards identification

Hazard statements	: SureSelect Hyb 1 SureSelect Hyb 2	H319 - Causes serious eye irritation. H319 - Causes serious eye irritation. H373 - May cause damage to organs through prolonged or repeated exposure. (respiratory tract)
	SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<u>Precautionary statements</u>		
Prevention	: SureSelect Hyb 1	P280 - Wear eye or face protection.
	SureSelect Hyb 2	P264 - Wash hands thoroughly after handling. P280 - Wear eye or face protection. P260 - Do not breathe vapor. P264 - Wash hands thoroughly after handling.
	SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	Not applicable. Not applicable. Not applicable. Not applicable.
Response	: SureSelect Hyb 1	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
	SureSelect Hyb 2	P314 - Get medical attention if you feel unwell. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
	SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	Not applicable. Not applicable. Not applicable. Not applicable.
Storage	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Disposal	: SureSelect Hyb 1 SureSelect Hyb 2	Not applicable. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	Not applicable. Not applicable. Not applicable. Not applicable.
Supplemental label elements	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	None known. None known. None known. None known. None known. None known.

2.3 Other hazards

Section 2. Hazards identification

Hazards not otherwise classified	: SureSelect Hyb 1	None known.
	SureSelect Hyb 2	None known.
	SureSelect Hyb 4	None known.
	SureSelect Binding Buffer	None known.
	SureSelect Wash Buffer 1	None known.
	SureSelect Wash Buffer 2	None known.

Section 3. Composition/information on ingredients

Substance/mixture	: SureSelect Hyb 1	Mixture
	SureSelect Hyb 2	Mixture
	SureSelect Hyb 4	Mixture
	SureSelect Binding Buffer	Mixture
	SureSelect Wash Buffer 1	Mixture
	SureSelect Wash Buffer 2	Mixture

Ingredient name	%	CAS number
SureSelect Hyb 1 Sodium chloride Sodium dihydrogenorthophosphate	$\geq 10 - \leq 25$ ≤ 3	7647-14-5 7558-80-7
SureSelect Hyb 2 Disodium dihydrogen ethylenediaminetetraacetate	$\geq 10 - \leq 25$	139-33-3
SureSelect Hyb 4 Sulfuric acid monododecyl ester sodium salt (1:1)	≤ 3	8012-56-4
SureSelect Binding Buffer Sodium chloride	<10	7647-14-5

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

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

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

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact	: SureSelect Hyb 1	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.
	SureSelect Hyb 2	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.
	SureSelect Hyb 4	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.
	SureSelect Binding Buffer	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.
	SureSelect Wash Buffer 1	Immediately flush eyes with plenty of water,

Section 4. First aid measures

		occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. 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.
	SureSelect Wash Buffer 2	
Inhalation	: SureSelect Hyb 1	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.
	SureSelect Hyb 2	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 following exposure or if feeling unwell. 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.
	SureSelect Hyb 4	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	SureSelect Binding Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	SureSelect Wash Buffer 1	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	SureSelect Wash Buffer 2	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	: SureSelect Hyb 1	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.
	SureSelect Hyb 2	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	SureSelect Hyb 4	Flush contaminated skin with plenty of water.

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		Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	SureSelect Binding Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	SureSelect Wash Buffer 1	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	SureSelect Wash Buffer 2	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: SureSelect Hyb 1	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if 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.
	SureSelect Hyb 2	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention following exposure or if feeling unwell. 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.
	SureSelect Hyb 4	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	SureSelect Binding Buffer	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	SureSelect Wash Buffer 1	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable

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SureSelect Wash Buffer 2

for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
 Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	Causes serious eye irritation. Causes serious eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Inhalation	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: SureSelect Hyb 1	Adverse symptoms may include the following: pain or irritation watering redness
	SureSelect Hyb 2	Adverse symptoms may include the following: pain or irritation watering redness
	SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	No specific data. No specific data. No specific data. No specific data.

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Inhalation	: SureSelect Hyb 1	No specific data.
	SureSelect Hyb 2	No specific data.
	SureSelect Hyb 4	No specific data.
	SureSelect Binding Buffer	No specific data.
	SureSelect Wash Buffer 1	No specific data.
	SureSelect Wash Buffer 2	No specific data.
Skin contact	: SureSelect Hyb 1	No specific data.
	SureSelect Hyb 2	No specific data.
	SureSelect Hyb 4	No specific data.
	SureSelect Binding Buffer	No specific data.
	SureSelect Wash Buffer 1	No specific data.
	SureSelect Wash Buffer 2	No specific data.
Ingestion	: SureSelect Hyb 1	No specific data.
	SureSelect Hyb 2	No specific data.
	SureSelect Hyb 4	No specific data.
	SureSelect Binding Buffer	No specific data.
	SureSelect Wash Buffer 1	No specific data.
	SureSelect Wash Buffer 2	No specific data.

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

Notes to physician	: SureSelect Hyb 1	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	SureSelect Hyb 2	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.
	SureSelect Hyb 4	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	SureSelect Binding Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	SureSelect Wash Buffer 1	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	SureSelect Wash Buffer 2	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: SureSelect Hyb 1	No specific treatment.
	SureSelect Hyb 2	No specific treatment.
	SureSelect Hyb 4	No specific treatment.
	SureSelect Binding Buffer	No specific treatment.
	SureSelect Wash Buffer 1	No specific treatment.
	SureSelect Wash Buffer 2	No specific treatment.
Protection of first-aiders	: SureSelect Hyb 1	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.
	SureSelect Hyb 2	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.
	SureSelect Hyb 4	No action shall be taken involving any personal risk or without suitable training.
	SureSelect Binding Buffer	No action shall be taken involving any personal risk or without suitable training.

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SureSelect Wash Buffer 1	No action shall be taken involving any personal risk or without suitable training.
SureSelect Wash Buffer 2	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	: SureSelect Hyb 1	Use an extinguishing agent suitable for the surrounding fire.
	SureSelect Hyb 2	Use an extinguishing agent suitable for the surrounding fire.
	SureSelect Hyb 4	Use an extinguishing agent suitable for the surrounding fire.
	SureSelect Binding Buffer	Use an extinguishing agent suitable for the surrounding fire.
	SureSelect Wash Buffer 1	Use an extinguishing agent suitable for the surrounding fire.
	SureSelect Wash Buffer 2	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: SureSelect Hyb 1	None known.
	SureSelect Hyb 2	None known.
	SureSelect Hyb 4	None known.
	SureSelect Binding Buffer	None known.
	SureSelect Wash Buffer 1	None known.
	SureSelect Wash Buffer 2	None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	: SureSelect Hyb 1	In a fire or if heated, a pressure increase will occur and the container may burst.
	SureSelect Hyb 2	In a fire or if heated, a pressure increase will occur and the container may burst.
	SureSelect Hyb 4	In a fire or if heated, a pressure increase will occur and the container may burst.
	SureSelect Binding Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	SureSelect Wash Buffer 1	In a fire or if heated, a pressure increase will occur and the container may burst.
	SureSelect Wash Buffer 2	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: SureSelect Hyb 1	Decomposition products may include the following materials: phosphorus oxides halogenated compounds metal oxide/oxides
	SureSelect Hyb 2	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides metal oxide/oxides
	SureSelect Hyb 4	Decomposition products may include the following materials: carbon dioxide carbon monoxide

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sulfur oxides
 metal oxide/oxides
 Decomposition products may include the following materials:
 halogenated compounds
 metal oxide/oxides
 No specific data.
 No specific data.

5.3 Advice for firefighters

Special protective actions for fire-fighters

: SureSelect Hyb 1

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.

SureSelect Hyb 2

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.

SureSelect Hyb 4

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.

SureSelect Binding 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.

SureSelect Wash Buffer 1

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.

SureSelect Wash Buffer 2

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

: SureSelect Hyb 1

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

SureSelect Hyb 2

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

SureSelect Hyb 4

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

SureSelect Binding Buffer

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

SureSelect Wash Buffer 1

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

SureSelect Wash Buffer 2

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

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: SureSelect Hyb 1	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.
	SureSelect Hyb 2	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.
	SureSelect Hyb 4	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.
	SureSelect Binding 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. Put on appropriate personal protective equipment.
	SureSelect Wash Buffer 1	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.
	SureSelect Wash Buffer 2	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.
For emergency responders	: SureSelect Hyb 1	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".
	SureSelect Hyb 2	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".
	SureSelect Hyb 4	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".
	SureSelect Binding Buffer	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

Section 6. Accidental release measures

SureSelect Wash Buffer 1	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".
SureSelect Wash Buffer 2	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
6.2 Environmental precautions	
: SureSelect Hyb 1	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).
SureSelect Hyb 2	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).
SureSelect Hyb 4	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).
SureSelect Binding 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).
SureSelect Wash Buffer 1	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).
SureSelect Wash Buffer 2	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	: SureSelect Hyb 1	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.
	SureSelect Hyb 2	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.
	SureSelect Hyb 4	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

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SureSelect Binding Buffer	inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
SureSelect Wash Buffer 1	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.
SureSelect Wash Buffer 2	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures	: SureSelect Hyb 1	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.
	SureSelect Hyb 2	Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. 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.
	SureSelect Hyb 4	Put on appropriate personal protective equipment (see Section 8).
	SureSelect Binding Buffer	Put on appropriate personal protective equipment (see Section 8).
	SureSelect Wash Buffer 1	Put on appropriate personal protective equipment (see Section 8).
	SureSelect Wash Buffer 2	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	: SureSelect Hyb 1	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.
	SureSelect Hyb 2	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face

Section 7. Handling and storage

SureSelect Hyb 4	before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
SureSelect Binding 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.
SureSelect Wash Buffer 1	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.
SureSelect Wash Buffer 2	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

: SureSelect Hyb 1	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.
SureSelect Hyb 2	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.
SureSelect Hyb 4	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

Section 7. Handling and storage

SureSelect Binding Buffer

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.

SureSelect Wash Buffer 1

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.

SureSelect Wash Buffer 2

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

7.3 Specific end use(s)

Recommendations

- : SureSelect Hyb 1
Industrial applications, Professional applications.
- : SureSelect Hyb 2
Industrial applications, Professional applications.
- : SureSelect Hyb 4
Industrial applications, Professional applications.
- : SureSelect Binding Buffer
Industrial applications, Professional applications.
- : SureSelect Wash Buffer 1
Industrial applications, Professional applications.
- : SureSelect Wash Buffer 2
Industrial applications, Professional applications.

Industrial sector specific solutions

- : SureSelect Hyb 1
Not applicable.
- : SureSelect Hyb 2
Not applicable.
- : SureSelect Hyb 4
Not applicable.
- : SureSelect Binding Buffer
Not applicable.
- : SureSelect Wash Buffer 1
Not applicable.
- : SureSelect Wash Buffer 2
Not applicable.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
SureSelect Hyb 1 Sodium chloride Sodium dihydrogenorthophosphate	None. None.
SureSelect Hyb 2 Disodium dihydrogen ethylenediaminetetraacetate	None.
SureSelect Hyb 4 Sulfuric acid monododecyl ester sodium salt (1:1)	None.
SureSelect Binding Buffer Sodium chloride	None.

8.2 Exposure controls

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

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

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: SureSelect Hyb 1	Liquid.
	SureSelect Hyb 2	Liquid.
	SureSelect Hyb 4	Liquid.
	SureSelect Binding Buffer	Liquid.
	SureSelect Wash Buffer 1	Liquid.
	SureSelect Wash Buffer 2	Liquid.
Color	: SureSelect Hyb 1	Not available.
	SureSelect Hyb 2	Not available.
	SureSelect Hyb 4	Not available.
	SureSelect Binding Buffer	Not available.
	SureSelect Wash Buffer 1	Not available.
	SureSelect Wash Buffer 2	Not available.
Odor	: SureSelect Hyb 1	Not available.
	SureSelect Hyb 2	Not available.
	SureSelect Hyb 4	Not available.
	SureSelect Binding Buffer	Not available.
	SureSelect Wash Buffer 1	Not available.
	SureSelect Wash Buffer 2	Not available.
Odor threshold	: SureSelect Hyb 1	Not available.
	SureSelect Hyb 2	Not available.
	SureSelect Hyb 4	Not available.
	SureSelect Binding Buffer	Not available.
	SureSelect Wash Buffer 1	Not available.
	SureSelect Wash Buffer 2	Not available.
pH	: SureSelect Hyb 1	7.4
	SureSelect Hyb 2	8
	SureSelect Hyb 4	5.2 to 6.2
	SureSelect Binding Buffer	7.5
	SureSelect Wash Buffer 1	7
	SureSelect Wash Buffer 2	7
Melting point	: SureSelect Hyb 1	Not available.
	SureSelect Hyb 2	Not available.
	SureSelect Hyb 4	0°C (32°F)
	SureSelect Binding Buffer	Not available.
	SureSelect Wash Buffer 1	0°C (32°F)
	SureSelect Wash Buffer 2	0°C (32°F)
Boiling point	: SureSelect Hyb 1	Not available.
	SureSelect Hyb 2	Not available.
	SureSelect Hyb 4	100°C (212°F)
	SureSelect Binding Buffer	Not available.
	SureSelect Wash Buffer 1	100°C (212°F)
	SureSelect Wash Buffer 2	100°C (212°F)
Flash point	: SureSelect Hyb 1	Not available.
	SureSelect Hyb 2	Not available.
	SureSelect Hyb 4	Not available.
	SureSelect Binding Buffer	Not available.
	SureSelect Wash Buffer 1	Not available.
	SureSelect Wash Buffer 2	Not available.

Section 9. Physical and chemical properties

Evaporation rate	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	Not available. Not available. Not available. Not available. Not available. Not available.
Flammability (solid, gas)	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Lower and upper explosive (flammable) limits	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	Not available. Not available. Not available. Not available. Not available. Not available.
Vapor pressure	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	Not available. Not available. Not available. Not available. Not available. Not available.
Vapor density	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	Not available. Not available. Not available. Not available. Not available. Not available.
Relative density	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	Not available. Not available. Not available. Not available. Not available. Not available.
Solubility	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	Not available. Not available. Not available. Not available. Not available. Not available.

Section 9. Physical and chemical properties

Auto-ignition temperature	: SureSelect Hyb 1	Not available.
	SureSelect Hyb 2	Not available.
	SureSelect Hyb 4	Not available.
	SureSelect Binding Buffer	Not available.
	SureSelect Wash Buffer 1	Not available.
	SureSelect Wash Buffer 2	Not available.
Decomposition temperature	: SureSelect Hyb 1	Not available.
	SureSelect Hyb 2	Not available.
	SureSelect Hyb 4	Not available.
	SureSelect Binding Buffer	Not available.
	SureSelect Wash Buffer 1	Not available.
	SureSelect Wash Buffer 2	Not available.
Viscosity	: SureSelect Hyb 1	Not available.
	SureSelect Hyb 2	Not available.
	SureSelect Hyb 4	Not available.
	SureSelect Binding Buffer	Not available.
	SureSelect Wash Buffer 1	Not available.
	SureSelect Wash Buffer 2	Not available.

Section 10. Stability and reactivity

10.1 Reactivity	: SureSelect Hyb 1	No specific test data related to reactivity available for this product or its ingredients.
	SureSelect Hyb 2	No specific test data related to reactivity available for this product or its ingredients.
	SureSelect Hyb 4	No specific test data related to reactivity available for this product or its ingredients.
	SureSelect Binding Buffer	No specific test data related to reactivity available for this product or its ingredients.
	SureSelect Wash Buffer 1	No specific test data related to reactivity available for this product or its ingredients.
	SureSelect Wash Buffer 2	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: SureSelect Hyb 1	The product is stable.
	SureSelect Hyb 2	The product is stable.
	SureSelect Hyb 4	The product is stable.
	SureSelect Binding Buffer	The product is stable.
	SureSelect Wash Buffer 1	The product is stable.
	SureSelect Wash Buffer 2	The product is stable.
10.3 Possibility of hazardous reactions	: SureSelect Hyb 1	Under normal conditions of storage and use, hazardous reactions will not occur.
	SureSelect Hyb 2	Under normal conditions of storage and use, hazardous reactions will not occur.
	SureSelect Hyb 4	Under normal conditions of storage and use, hazardous reactions will not occur.
	SureSelect Binding Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
	SureSelect Wash Buffer 1	Under normal conditions of storage and use, hazardous reactions will not occur.
	SureSelect Wash Buffer 2	Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

10.4 Conditions to avoid	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
10.5 Incompatible materials	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials.
10.6 Hazardous decomposition products	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
SureSelect Hyb 1 Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-
Sodium dihydrogenorthophosphate	LD50 Oral	Rat	8290 mg/kg	-
SureSelect Hyb 2 Disodium dihydrogen ethylenediaminetetraacetate	LD50 Oral	Rat	2 g/kg	-
SureSelect Hyb 4 Sulfuric acid monododecyl ester sodium salt (1:1)	LD50 Oral	Rat	1288 mg/kg	-

Section 11. Toxicological information

SureSelect Binding Buffer Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-
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Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
SureSelect Hyb 1 Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Sodium dihydrogenorthophosphate	Eyes - Mild irritant	Rabbit	-	150 milligrams	-
SureSelect Binding Buffer Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

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)

Not available.

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
SureSelect Hyb 2 Disodium dihydrogen ethylenediaminetetraacetate	Category 2	Inhalation	respiratory tract

Aspiration hazard

Not available.

Information on the likely routes of exposure

: SureSelect Hyb 1

SureSelect Hyb 2

SureSelect Hyb 4

SureSelect Binding Buffer

SureSelect Wash Buffer 1

SureSelect Wash Buffer 2

Routes of entry anticipated: Oral, Dermal, Inhalation.

Routes of entry anticipated: Oral, Dermal, Inhalation.

Not available.

Not available.

Not available.

Not available.

Potential acute health effects

Section 11. Toxicological information

Eye contact	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	Causes serious eye irritation. Causes serious eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Inhalation	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	Adverse symptoms may include the following: pain or irritation watering redness Adverse symptoms may include the following: pain or irritation watering redness No specific data. No specific data. No specific data. No specific data.
Inhalation	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Skin contact	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Ingestion	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.

Section 11. Toxicological information

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	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	No known significant effects or critical hazards. May cause damage to organs through prolonged or repeated exposure. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Teratogenicity	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Developmental effects	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Fertility effects	: SureSelect Hyb 1 SureSelect Hyb 2 SureSelect Hyb 4 SureSelect Binding Buffer SureSelect Wash Buffer 1 SureSelect Wash Buffer 2	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

Route	ATE value
SureSelect Hyb 1 Oral	17142.9 mg/kg
SureSelect Hyb 2 Oral Inhalation (dusts and mists)	13698.6 mg/kg 10.27 mg/l
SureSelect Hyb 4 Oral	128800 mg/kg
SureSelect Binding Buffer Oral	51369.9 mg/kg

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
SureSelect Hyb 1 Sodium chloride	Acute EC50 4.74 g/L Fresh water	Algae - Chlamydomonas reinhardtii	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute EC50 402600 µg/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
	Acute LC50 720 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours
SureSelect Binding Buffer Sodium chloride	Acute EC50 4.74 g/L Fresh water	Algae - Chlamydomonas reinhardtii	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute EC50 402600 µg/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
	SureSelect Wash Buffer 1 Sodium dodecyl sulphate	Acute EC50 1200 µg/l Marine water	Algae - Skeletonema costatum
Acute LC50 900 µg/l Marine water		Crustaceans - Artemia salina - Adult	48 hours
Acute LC50 1400 µg/l Fresh water		Daphnia - Daphnia pulex - Neonate	48 hours
Acute LC50 590 µg/l Fresh water		Fish - Cirrhinus mrigala - Larvae	96 hours

Section 12. Ecological information

SureSelect Wash Buffer 2 Sodium dodecyl sulphate	Chronic NOEC 1.25 mg/l Marine water	Algae - Ulva fasciata - Zoea	96 hours
	Chronic NOEC 1 mg/l Fresh water	Crustaceans - Pseudosida ramosa - Neonate	21 days
	Chronic NOEC 3.2 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC >1357 µg/l Fresh water	Fish - Pimephales promelas	42 days
	Acute EC50 1200 µg/l Marine water	Algae - Skeletonema costatum	96 hours
	Acute LC50 900 µg/l Marine water	Crustaceans - Artemia salina - Adult	48 hours
	Acute LC50 1400 µg/l Fresh water	Daphnia - Daphnia pulex - Neonate	48 hours
	Acute LC50 590 µg/l Fresh water	Fish - Cirrhinus mrigala - Larvae	96 hours
Chronic NOEC 1.25 mg/l Marine water	Algae - Ulva fasciata - Zoea	96 hours	
Chronic NOEC 1 mg/l Fresh water	Crustaceans - Pseudosida ramosa - Neonate	21 days	
Chronic NOEC 3.2 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days	
Chronic NOEC >1357 µg/l Fresh water	Fish - Pimephales promelas	42 days	

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
SureSelect Hyb 2 Disodium dihydrogen ethylenediaminetetraacetate	-4.3	1.8	low

12.4 Mobility in soil

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

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

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. 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 13. Disposal considerations

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

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

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

Section 14. Transport information

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

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

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

Section 15. Regulatory information

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

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

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

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Section 15. Regulatory information

Classification	: SureSelect Hyb 1	EYE IRRITATION - Category 2A
	SureSelect Hyb 2	EYE IRRITATION - Category 2A
	SureSelect Hyb 4	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) - Category 2
	SureSelect Binding Buffer	Not applicable.
	SureSelect Wash Buffer 1	Not applicable.
	SureSelect Wash Buffer 2	Not applicable.

Composition/information on ingredients

Name	%	Classification
SureSelect Hyb 1		
Sodium chloride	≥10 - ≤25	EYE IRRITATION - Category 2A
Sodium dihydrogenorthophosphate	≤3	EYE IRRITATION - Category 2A
SureSelect Hyb 2		
Disodium dihydrogen ethylenediaminetetraacetate	≥10 - ≤25	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) (inhalation) - Category 2
SureSelect Hyb 4		
Sulfuric acid monododecyl ester sodium salt (1:1)	≤3	ACUTE TOXICITY (oral) - Category 4
SureSelect Binding Buffer		
Sodium chloride	<10	EYE IRRITATION - Category 2A

State regulations

Massachusetts	: None of the components are listed.
New York	: None of the components are listed.
New Jersey	: None of the components are listed.
Pennsylvania	: None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

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

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia	: Not determined.
Canada	: Not determined.
China	: Not determined.

Section 15. Regulatory information

Europe	: Not determined.
Japan	: Japan inventory (ENCS) : All components are listed or exempted. Japan inventory (ISHL) : All components are listed or exempted.
Malaysia	: Not determined.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: Not determined.
Viet Nam	: Not determined.

Section 16. Other information

History

Date of issue	: 05/07/2018
Date of previous issue	: 05/07/2018
Version	: 4

Procedure used to derive the classification

Classification	Justification
SureSelect Hyb 1 EYE IRRITATION - Category 2A	Calculation method
SureSelect Hyb 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) - Category 2	Calculation method Calculation method

✔ Indicates information that has changed from previously issued version.

Notice to reader

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