

# SAFETY DATA SHEET

GenetiSure Dx Hybridization Kit, Part Number K1201-64200

## Section 1. Identification

### 1.1 Product identifier

**Product name** : GenetiSure Dx Hybridization Kit, Part Number K1201-64200  
**Part No. (Chemical Kit)** : K1201-64200  
**Part No.** : 2X CGH Hybridization Buffer 5190-7320  
 10X Oligo aCGH Blocking Agent Lyophilized 5190-7319  
**Validation date** : 11/8/2017

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

**Material uses** :  For In Vitro Diagnostic Use  
 2X CGH Hybridization Buffer 1.4 ml  
 10X Oligo aCGH Blocking Agent Lyophilized RCNS X 1.35 ml water

### 1.3 Details of the supplier of the safety data sheet

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

### 1.4 Emergency telephone number

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

## Section 2. Hazards identification

### 2.1 Classification of the substance or mixture

**OSHA/HCS status** : 2X CGH Hybridization Buffer This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).  
 10X Oligo aCGH Blocking Agent Lyophilized This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

### Classification of the substance or mixture

#### 2X CGH Hybridization Buffer

H315 SKIN IRRITATION - Category 2  
 H319 EYE IRRITATION - Category 2A  
 H373 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (central nervous system (CNS)) - Category 2

#### 10X Oligo aCGH Blocking Agent Lyophilized

H315 SKIN IRRITATION - Category 2  
 H319 EYE IRRITATION - Category 2A  
 H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

**Ingredients of unknown toxicity** :  2X CGH Hybridization Buffer Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 10 - 30%  
 Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 10 - 30%  
 Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%  
 10X Oligo aCGH Blocking Agent Lyophilized Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 30 - 60%

## Section 2. Hazards identification

Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: > 60%  
Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 30 - 60%

### 2.2 GHS label elements

#### Hazard pictograms

: 2X CGH Hybridization Buffer



10X Oligo aCGH Blocking Agent  
Lyophilized



#### Signal word

: 2X CGH Hybridization Buffer  
10X Oligo aCGH Blocking Agent  
Lyophilized

Warning  
Warning

#### Hazard statements

: 2X CGH Hybridization Buffer

H319 - Causes serious eye irritation.  
H315 - Causes skin irritation.  
H373 - May cause damage to organs through prolonged or repeated exposure. (central nervous system (CNS))

10X Oligo aCGH Blocking Agent  
Lyophilized

H319 - Causes serious eye irritation.

H315 - Causes skin irritation.  
H335 - May cause respiratory irritation.

#### Precautionary statements

##### Prevention

: 2X CGH Hybridization Buffer

P280 - Wear protective gloves. Wear eye or face protection.

P260 - Do not breathe vapor.

P264 - Wash hands thoroughly after handling.

P280 - Wear protective gloves. Wear eye or face protection.

P271 - Use only outdoors or in a well-ventilated area.

P261 - Avoid breathing dust.

P264 - Wash hands thoroughly after handling.

10X Oligo aCGH Blocking Agent  
Lyophilized

P314 - Get medical attention if you feel unwell.  
P302 + P352 + P362+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.  
P332 + P313 - If skin irritation occurs: Get medical attention.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 - If eye irritation persists: Get medical attention.

10X Oligo aCGH Blocking Agent  
Lyophilized

P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.

P302 + P352 + P362+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off

## Section 2. Hazards identification

contaminated clothing and wash it before reuse.  
 P332 + P313 - If skin irritation occurs: Get medical attention.  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P337 + P313 - If eye irritation persists: Get medical attention.

**Storage** : 2X CGH Hybridization Buffer  
 10X Oligo aCGH Blocking Agent  
 Lyophilized

Not applicable.  
 P405 - Store locked up.

**Disposal** : 2X CGH Hybridization Buffer  
  
 10X Oligo aCGH Blocking Agent  
 Lyophilized

P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.  
 P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Supplemental label elements** : 2X CGH Hybridization Buffer  
 10X Oligo aCGH Blocking Agent  
 Lyophilized

None known.  
 None known.

### 2.3 Other hazards

**Hazards not otherwise classified** : 2X CGH Hybridization Buffer  
 10X Oligo aCGH Blocking Agent  
 Lyophilized

None known.  
 None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : 2X CGH Hybridization Buffer Mixture  
 10X Oligo aCGH Blocking Agent Mixture  
 Lyophilized

Ingredient name	%	CAS number
<b>2X CGH Hybridization Buffer</b>		
4-Morpholineethanesulfonic acid, hydrate (1:1)	≤8.7	145224-94-8
Lithium chloride	≤7.1	7447-41-8
Lithium dodecyl sulphate	≤3.6	2044-56-6
Polyoxyethylene octyl phenyl ether	≤2.4	9002-93-1
Oxirane, 2-methyl-, polymer with oxirane, mono[3-[1,3,3,3-tetramethyl-1-(trimethylsilyloxy)-1-disiloxanyl]propyl] ether	≤3	134180-76-0
<b>10X Oligo aCGH Blocking Agent Lyophilized</b>		
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	≥25 - ≤50	1185-53-1

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

<b>Eye contact</b>	: 2X CGH Hybridization 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.
	10X Oligo aCGH Blocking Agent Lyophilized	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.
<b>Inhalation</b>	: 2X CGH Hybridization 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 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.
	10X Oligo aCGH Blocking Agent Lyophilized	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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.
<b>Skin contact</b>	: 2X CGH Hybridization Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	10X Oligo aCGH Blocking Agent Lyophilized	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

## Section 4. First aid measures

<b>Ingestion</b>	: <input checked="" type="checkbox"/> CGH Hybridization Buffer  10X Oligo aCGH Blocking Agent Lyophilized	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.  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.
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### 4.2 Most important symptoms/effects, acute and delayed

#### Potential acute health effects

<b>Eye contact</b>	: <input checked="" type="checkbox"/> CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	Causes serious eye irritation. Causes serious eye irritation.
<b>Inhalation</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	No known significant effects or critical hazards. May cause respiratory irritation.
<b>Skin contact</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	Causes skin irritation. Causes skin irritation.
<b>Ingestion</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	No known significant effects or critical hazards. No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

<b>Eye contact</b>	: <input checked="" type="checkbox"/> CGH Hybridization Buffer  10X Oligo aCGH Blocking Agent Lyophilized	Adverse symptoms may include the following: pain or irritation watering redness  Adverse symptoms may include the following:  pain or irritation watering
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## Section 4. First aid measures

<b>Inhalation</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	redness No specific data. Adverse symptoms may include the following:  respiratory tract irritation coughing
<b>Skin contact</b>	: <del>2</del> X CGH Hybridization Buffer  10X Oligo aCGH Blocking Agent Lyophilized	Adverse symptoms may include the following: irritation redness Adverse symptoms may include the following:  irritation redness
<b>Ingestion</b>	: <del>2</del> X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	No specific data. No specific data.

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

<b>Notes to physician</b>	: 2X CGH Hybridization Buffer  10X Oligo aCGH Blocking Agent Lyophilized	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. 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.
<b>Specific treatments</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	No specific treatment. No specific treatment.
<b>Protection of first-aiders</b>	: <del>2</del> X CGH Hybridization Buffer  10X Oligo aCGH Blocking Agent Lyophilized	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. No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	: 2X CGH Hybridization Buffer  10X Oligo aCGH Blocking Agent Lyophilized	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	None known. None known.

### 5.2 Special hazards arising from the substance or mixture

## Section 5. Fire-fighting measures

<b>Specific hazards arising from the chemical</b>	: 2X CGH Hybridization Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	10X Oligo aCGH Blocking Agent Lyophilized	No specific fire or explosion hazard.
<b>Hazardous thermal decomposition products</b>	: 2X CGH Hybridization Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides halogenated compounds metal oxide/oxides
	10X Oligo aCGH Blocking Agent Lyophilized	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides halogenated compounds

### 5.3 Advice for firefighters

<b>Special protective actions for fire-fighters</b>	: 2X CGH Hybridization 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.
	10X Oligo aCGH Blocking Agent Lyophilized	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.
<b>Special protective equipment for fire-fighters</b>	: 2X CGH Hybridization Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	10X Oligo aCGH Blocking Agent Lyophilized	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

<b>For non-emergency personnel</b>	: 2X CGH Hybridization 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.
	10X Oligo aCGH Blocking Agent Lyophilized	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. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.




## Section 6. Accidental release measures

<p><b>For emergency responders</b> : 2X CGH Hybridization Buffer</p> <p>10X Oligo aCGH Blocking Agent Lyophilized</p>	<p>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".</p> <p>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".</p>
<p><b>6.2 Environmental precautions</b> : 2X CGH Hybridization Buffer</p> <p>10X Oligo aCGH Blocking Agent Lyophilized</p>	<p>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).</p> <p>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).</p>
<p><b>6.3 Methods and materials for containment and cleaning up</b></p> <p><b>Methods for cleaning up</b> : 2X CGH Hybridization Buffer</p> <p>10X Oligo aCGH Blocking Agent Lyophilized</p>	<p>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.</p> <p>Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.</p>

## Section 7. Handling and storage

### 7.1 Precautions for safe handling

<p><b>Protective measures</b> :  2X CGH Hybridization Buffer</p> <p>10X Oligo aCGH Blocking Agent Lyophilized</p>	<p>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.</p> <p>Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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.</p>
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## Section 7. Handling and storage

<b>Advice on general occupational hygiene</b>	: 2X CGH Hybridization Buffer  10X Oligo aCGH Blocking Agent Lyophilized	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. 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.
<b>7.2 Conditions for safe storage, including any incompatibilities</b>	: 2X CGH Hybridization Buffer  10X Oligo aCGH Blocking Agent Lyophilized	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. Store locked up. 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.
<b>7.3 Specific end use(s)</b>		
<b>Recommendations</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	Industrial applications, Professional applications. Industrial applications, Professional applications.
<b>Industrial sector specific solutions</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	Not applicable. Not applicable.

## Section 8. Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

## Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
<b>2X CGH Hybridization Buffer</b> 4-Morpholineethanesulfonic acid, hydrate (1:1) Lithium chloride Lithium dodecyl sulphate Polyoxyethylene octyl phenyl ether Oxirane, 2-methyl-, polymer with oxirane, mono[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]-1-disiloxanyl]propyl] ether	None. None. None. None. None.
<b>10X Oligo aCGH Blocking Agent Lyophilized</b> 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	None.

### 8.2 Exposure controls

- Appropriate engineering controls** :  Use only with adequate ventilation. 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

<b>Physical state</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	Liquid. Solid. [lyophilized]
<b>Color</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	Not available. Not available.
<b>Odor</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	Not available. Not available.
<b>Odor threshold</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	Not available. Not available.
<b>pH</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	6.1 Not available.
<b>Melting point</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	Not available. Not available.
<b>Boiling point</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	Not available. Not available.
<b>Flash point</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	Not available. Not available.
<b>Evaporation rate</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	Not available. Not available.
<b>Flammability (solid, gas)</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	Not applicable. Not available.
<b>Lower and upper explosive (flammable) limits</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	Not available. Not available.
<b>Vapor pressure</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	Not available. Not available.
<b>Vapor density</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	Not available. Not available.
<b>Relative density</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	Not available. Not available.
<b>Solubility</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	Soluble in the following materials: cold water. Not available.
<b>Partition coefficient: n-octanol/water</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	Not available. Not available.
<b>Auto-ignition temperature</b>	: 2X CGH Hybridization Buffer 10X Oligo aCGH Blocking Agent Lyophilized	Not available. Not available.

## Section 9. Physical and chemical properties

<b>Decomposition temperature</b>	: 2X CGH Hybridization Buffer	Not available.
	10X Oligo aCGH Blocking Agent Lyophilized	Not available.
<b>Viscosity</b>	: 2X CGH Hybridization Buffer	Not available.
	10X Oligo aCGH Blocking Agent Lyophilized	Not available.

## Section 10. Stability and reactivity

<b>10.1 Reactivity</b>	: 2X CGH Hybridization Buffer	No specific test data related to reactivity available for this product or its ingredients.
	10X Oligo aCGH Blocking Agent Lyophilized	No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: 2X CGH Hybridization Buffer	The product is stable.
	10X Oligo aCGH Blocking Agent Lyophilized	The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: 2X CGH Hybridization Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
	10X Oligo aCGH Blocking Agent Lyophilized	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: 2X CGH Hybridization Buffer	No specific data.
	10X Oligo aCGH Blocking Agent Lyophilized	No specific data.
<b>10.5 Incompatible materials</b>	: 2X CGH Hybridization Buffer	May react or be incompatible with oxidizing materials.
	10X Oligo aCGH Blocking Agent Lyophilized	May react or be incompatible with oxidizing materials.
<b>10.6 Hazardous decomposition products</b>	: 2X CGH Hybridization Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	10X Oligo aCGH Blocking Agent Lyophilized	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
<b>2X CGH Hybridization Buffer</b>				
Lithium chloride	LD50 Dermal	Rabbit	1629 mg/kg	-
	LD50 Dermal	Rat	1488 mg/kg	-
	LD50 Oral	Rat	526 mg/kg	-
Lithium dodecyl sulphate	LD50 Oral	Rat	>5000 mg/kg	-
Polyoxyethylene octyl phenyl ether	LD50 Oral	Rat	1800 mg/kg	-
Oxirane, 2-methyl-, polymer with oxirane, mono[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]	LC50 Inhalation Dusts and mists	Rat	1.08 mg/l	4 hours

## Section 11. Toxicological information

-1-disiloxanyl]propyl] ether	LD50 Dermal LD50 Oral	Rabbit Rat	1550 mg/kg 3200 mg/kg	- -
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### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>2X CGH Hybridization Buffer</b> Lithium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 500 milligrams	-
Polyoxyethylene octyl phenyl ether	Eyes - Moderate irritant	Rabbit	-	24 hours 10 microliters	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 microliters	-
Oxirane, 2-methyl-, polymer with oxirane, mono[3-[1,3,3,3-tetramethyl-1-(trimethylsilyl)oxy]-1-disiloxanyl]propyl] ether	Skin - Mild irritant	Rabbit	-	-	-
	Eyes - Severe irritant	Rabbit	-	-	-

### Sensitization

Product/ingredient name	Route of exposure	Species	Result
<b>2X CGH Hybridization Buffer</b> Oxirane, 2-methyl-, polymer with oxirane, mono[3-[1,3,3,3-tetramethyl-1-(trimethylsilyl)oxy]-1-disiloxanyl]propyl] ether	skin	Guinea pig	Not sensitizing

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
<b>2X CGH Hybridization Buffer</b> 4-Morpholineethanesulfonic acid, hydrate (1:1)	Category 3	Not applicable.	Respiratory tract irritation
Lithium chloride	Category 3	Not applicable.	Respiratory tract irritation
Lithium dodecyl sulphate	Category 3	Not applicable.	Respiratory tract irritation

## Section 11. Toxicological information

<b>10X Oligo aCGH Blocking Agent Lyophilized</b> 10X Oligo aCGH Blocking Agent Lyophilized	Category 3	Not applicable.	Respiratory tract irritation
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	Category 3	Not applicable.	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
<b>2X CGH Hybridization Buffer</b> Lithium chloride	Category 2	Oral	central nervous system (CNS)

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : 2X CGH Hybridization Buffer Routes of entry anticipated: Oral, Dermal, Inhalation.  
10X Oligo aCGH Blocking Agent Lyophilized Routes of entry anticipated: Oral, Dermal, Inhalation.

### Potential acute health effects

**Eye contact** : 2X CGH Hybridization Buffer Causes serious eye irritation.  
10X Oligo aCGH Blocking Agent Lyophilized Causes serious eye irritation.

**Inhalation** : 2X CGH Hybridization Buffer No known significant effects or critical hazards.  
10X Oligo aCGH Blocking Agent Lyophilized May cause respiratory irritation.

**Skin contact** : 2X CGH Hybridization Buffer Causes skin irritation.  
10X Oligo aCGH Blocking Agent Lyophilized Causes skin irritation.

**Ingestion** : 2X CGH Hybridization Buffer No known significant effects or critical hazards.  
10X Oligo aCGH Blocking Agent Lyophilized No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : 2X CGH Hybridization Buffer Adverse symptoms may include the following:  
pain or irritation  
watering  
redness  
10X Oligo aCGH Blocking Agent Lyophilized Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

**Inhalation** : 2X CGH Hybridization Buffer No specific data.  
10X Oligo aCGH Blocking Agent Lyophilized Adverse symptoms may include the following:  
respiratory tract irritation  
coughing

**Skin contact** : 2X CGH Hybridization Buffer Adverse symptoms may include the following:  
irritation  
redness  
10X Oligo aCGH Blocking Agent Lyophilized Adverse symptoms may include the following:  
irritation  
redness

## Section 11. Toxicological information

**Ingestion** : 2X CGH Hybridization Buffer No specific data.  
 10X Oligo aCGH Blocking Agent No specific data.  
 Lyophilized

### 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** : 2X CGH Hybridization Buffer May cause damage to organs through prolonged or repeated exposure.  
 10X Oligo aCGH Blocking Agent No known significant effects or critical hazards.  
 Lyophilized

**Carcinogenicity** : 2X CGH Hybridization Buffer No known significant effects or critical hazards.  
 10X Oligo aCGH Blocking Agent No known significant effects or critical hazards.  
 Lyophilized

**Mutagenicity** : 2X CGH Hybridization Buffer No known significant effects or critical hazards.  
 10X Oligo aCGH Blocking Agent No known significant effects or critical hazards.  
 Lyophilized

**Teratogenicity** : 2X CGH Hybridization Buffer No known significant effects or critical hazards.  
 10X Oligo aCGH Blocking Agent No known significant effects or critical hazards.  
 Lyophilized

**Developmental effects** : 2X CGH Hybridization Buffer No known significant effects or critical hazards.  
 10X Oligo aCGH Blocking Agent No known significant effects or critical hazards.  
 Lyophilized

**Fertility effects** : 2X CGH Hybridization Buffer No known significant effects or critical hazards.  
 10X Oligo aCGH Blocking Agent No known significant effects or critical hazards.  
 Lyophilized

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
2X CGH Hybridization Buffer	
Oral	5725.5 mg/kg
Dermal	19854.9 mg/kg
Inhalation (dusts and mists)	25.5 mg/l

## Section 12. Ecological information

### 12.1 Toxicity



## Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
<b>2X CGH Hybridization Buffer</b>			
Lithium chloride	Acute LC50 17000 µg/l Fresh water	Fish - Ptychocheilus lucius - Swim-up	96 hours
Polyoxyethylene octyl phenyl ether	Acute LC50 5.85 mg/l Fresh water	Crustaceans - Ceriodaphnia rigaudi - Neonate	48 hours
	Acute LC50 11.2 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4500 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Oxirane, 2-methyl-, polymer with oxirane, mono[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]-1-disiloxanyl]propyl] ether	EC50 28.2 mg/l	Algae	72 hours
	EC50 1.1 mg/l	Daphnia	48 hours

### 12.2 Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<b>2X CGH Hybridization Buffer</b>			
Lithium chloride	-	-	Readily
Polyoxyethylene octyl phenyl ether	-	-	Readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>2X CGH Hybridization Buffer</b>			
Polyoxyethylene octyl phenyl ether	4.86	-	high

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : 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) PAIR: Polyoxyethylene octyl phenyl ether  
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

<b>Classification</b>	: <b>2X CGH Hybridization Buffer</b>	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (central nervous system (CNS)) - Category 2 SKIN IRRITATION - Category 2
	<b>10X Oligo aCGH Blocking Agent Lyophilized</b>	EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

### Composition/information on ingredients

Name	%	Classification
<b>2X CGH Hybridization Buffer</b> 4-Morpholineethanesulfonic acid, hydrate (1:1)	≤8.7	COMBUSTIBLE DUSTS SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Lithium chloride	≤7.1	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (central nervous system (CNS)) (oral) - Category 2
Lithium dodecyl sulphate	≤3.6	FLAMMABLE SOLIDS - Category 1 COMBUSTIBLE DUSTS ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Polyoxyethylene octyl phenyl ether	≤2.4	ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1
Oxirane, 2-methyl-, polymer with oxirane, mono[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]-1-disiloxanyl]propyl] ether	≤3	ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A
<b>10X Oligo aCGH Blocking Agent Lyophilized</b> 2-Amino-2-(hydroxymethyl) propane-1,3-diol hydrochloride	≥25 - ≤50	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

### State regulations

<b>Massachusetts</b>	: None of the components are listed.
<b>New York</b>	: None of the components are listed.
<b>New Jersey</b>	: None of the components are listed.
<b>Pennsylvania</b>	: 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

## Section 15. Regulatory information

Not listed.

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

Not listed.

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

Not listed.

### [Inventory list](#)

<b>Australia</b>	:	Not determined.
<b>Canada</b>	:	Not determined.
<b>China</b>	:	Not determined.
<b>Europe</b>	:	Not determined.
<b>Japan</b>	:	<input checked="" type="checkbox"/> <b>Japan inventory (ENCS):</b> Not determined. <b>Japan inventory (ISHL):</b> Not determined.
<b>Malaysia</b>	:	Not determined.
<b>New Zealand</b>	:	Not determined.
<b>Philippines</b>	:	Not determined.
<b>Republic of Korea</b>	:	Not determined.
<b>Taiwan</b>	:	Not determined.
<b>Thailand</b>	:	<input checked="" type="checkbox"/> Not determined.
<b>Turkey</b>	:	<input checked="" type="checkbox"/> Not determined.
<b>United States</b>	:	<input checked="" type="checkbox"/> Not determined.
<b>Viet Nam</b>	:	<input checked="" type="checkbox"/> Not determined.

## Section 16. Other information

### [History](#)

<b>Date of issue</b>	:	11/08/2017
<b>Date of previous issue</b>	:	08/21/2015.
<b>Version</b>	:	2

Indicates information that has changed from previously issued version.

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