**Section 1. Identification**

<table>
<thead>
<tr>
<th>Product identifier</th>
<th>Agilent Oligo aCGH Hybridization Kit (100), Part Number 5188-5380</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part no. (chemical kit)</td>
<td>5188-5380</td>
</tr>
<tr>
<td>Part no.</td>
<td>2X Hi-RPM Hybridization Buffer 5188-6420</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Material uses</th>
<th>2X Hi-RPM Hybridization Buffer 25 ml</th>
<th>10X aCGH Blocking Agent 5 x 1.4 ml</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplier/Manufacturer</td>
<td>Agilent Technologies Australia Pty Ltd 679 Springvale Road Mulgrave Victoria 3170, Australia 1800 802 402</td>
<td></td>
</tr>
<tr>
<td>Emergency telephone number (with hours of operation)</td>
<td>CHEMTREC®: +(61)-290372994</td>
<td></td>
</tr>
</tbody>
</table>

**Section 2. Hazard(s) identification**

**Classification of the substance or mixture**

**2X Hi-RPM Hybridization Buffer**
- H315 SKIN CORROSION/IRRITATION - Category 2
- H318 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
- H335 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3
- H373 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE (cardiovascular system, central nervous system (CNS), kidneys, thyroid) - Category 2
- H402 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 3
- H412 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3

**10X aCGH Blocking Agent**
- H315 SKIN CORROSION/IRRITATION - Category 2
- H319 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A
- H335 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3

**Percentage of the mixture consisting of ingredient(s)**

- 2X Hi-RPM Hybridization Buffer
  - of unknown dermal toxicity: 10 - 30%
  - of unknown inhalation toxicity: 10 - 30%
  - of unknown oral toxicity: 10 - 30%

- 10X aCGH Blocking Agent
  - of unknown dermal toxicity: > 60%
  - of unknown inhalation toxicity: > 60%
  - of unknown oral toxicity: > 60%
Section 2. Hazard(s) identification

<table>
<thead>
<tr>
<th>Product</th>
<th>Hazard statements</th>
<th>GHS label elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Hi-RPM Hybridization Buffer</td>
<td>Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 17.9%</td>
<td>Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 17.9%</td>
</tr>
<tr>
<td>10X aCGH Blocking Agent</td>
<td>Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 83.2%</td>
<td>Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 83.2%</td>
</tr>
</tbody>
</table>

**GHS label elements**

**Hazard pictograms**

- 2X Hi-RPM Hybridization Buffer
- 10X aCGH Blocking Agent

**Signal word**

- 2X Hi-RPM Hybridization Buffer: DANGER
- 10X aCGH Blocking Agent: WARNING

**Hazard statements**

- **2X Hi-RPM Hybridization Buffer**
  - H318 - Causes serious eye damage.
  - H315 - Causes skin irritation.
  - H335 - May cause respiratory irritation.
  - H373 - May cause damage to organs through prolonged or repeated exposure. (cardiovascular system, central nervous system (CNS), kidneys, thyroid)
  - H412 - Harmful to aquatic life with long lasting effects.

- **10X aCGH Blocking Agent**
  - H319 - Causes serious eye irritation.
  - H315 - Causes skin irritation.
  - H335 - May cause respiratory irritation.

**Precautionary statements**

**Prevention**

- **2X Hi-RPM Hybridization Buffer**
  - P280 - Wear protective gloves. Wear eye or face protection.
  - P271 - Use only outdoors or in a well-ventilated area.
  - P273 - Avoid release to the environment.
  - P260 - Do not breathe vapour.
  - P264 - Wash hands thoroughly after handling.

- **10X aCGH Blocking Agent**
  - P271 - Use only outdoors or in a well-ventilated area.
  - P260 - Do not breathe vapour.
  - P264 - Wash hands thoroughly after handling.

**Response**

- **2X Hi-RPM Hybridization Buffer**
  - P314 - Get medical attention if you feel unwell.
  - P304 + P340 + P312 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
  - P302 + P352 + P362 + P363 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse.
  - P332 + P313 - If skin irritation occurs: Get medical attention.
  - P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.
Section 2. Hazard(s) identification

10X aCGH Blocking Agent

- P304 + P340 + P312 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
- P302 + P352 + P362 + P363 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing 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 Hi-RPM Hybridization Buffer
  - P405 - Store locked up.
- 10X aCGH Blocking Agent
  - P405 - Store locked up.

Disposal:

- 2X Hi-RPM Hybridization Buffer
  - P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- 10X aCGH Blocking Agent
  - P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements:

Additional warning phrases:

- 2X Hi-RPM Hybridization Buffer
  - Not applicable.
- 10X aCGH Blocking Agent
  - Not applicable.

Other hazards which do not result in classification:

- 2X Hi-RPM Hybridization Buffer
  - None known.
- 10X aCGH Blocking Agent
  - None known.

Section 3. Composition and ingredient information

Substance/mixture:

- 2X Hi-RPM Hybridization Buffer
  - Mixture
- 10X aCGH Blocking Agent
  - Mixture

CAS number/other identifiers:

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>% (w/w)</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Hi-RPM Hybridization Buffer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium chloride</td>
<td>≤12</td>
<td>7447-41-8</td>
</tr>
<tr>
<td>Lithium dodecyl sulphate</td>
<td>≤6.4</td>
<td>2044-56-6</td>
</tr>
<tr>
<td>Polyoxyethylene octyl phenyl ether</td>
<td>≤6.4</td>
<td>9002-93-1</td>
</tr>
<tr>
<td>10X aCGH Blocking Agent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-Amino-2-((hydroxymethyl)propane-1,3-diol hydrochloride</td>
<td>≥10 - ≤30</td>
<td>1185-53-1</td>
</tr>
<tr>
<td>Trometamol</td>
<td>≥10 - ≤30</td>
<td>77-86-1</td>
</tr>
</tbody>
</table>

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

Occupational exposure limits, if available, are listed in Section 8.
Section 4. First aid measures

**Description of necessary first aid measures**

| Eye contact | 2X Hi-RPM Hybridization Buffer | Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.

| Inhalaion | 2X Hi-RPM Hybridization Buffer | Get medical attention immediately. Call a poison center or physician. 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. 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.

| Skin contact | 2X Hi-RPM Hybridization Buffer | Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

| 10X aCGH Blocking Agent | | 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 aCGH Blocking Agent | | 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.

| 10X aCGH Blocking Agent | | 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

**Agilent Oligo aCGH Hybridization Kit (100), Part Number 5188-5380**

### Ingestion

**2X Hi-RPM Hybridization Buffer**
- Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**10X aCGH Blocking Agent**
- 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.

#### Most important symptoms/effects, acute and delayed

**Potential acute health effects**

**Eye contact**
- 2X Hi-RPM Hybridization Buffer
- 10X aCGH Blocking Agent

Causes serious eye damage.

**Inhalation**
- 2X Hi-RPM Hybridization Buffer
- 10X aCGH Blocking Agent

Causes serious eye irritation.

**Skin contact**
- 2X Hi-RPM Hybridization Buffer
- 10X aCGH Blocking Agent

Causes skin irritation.

**Ingestion**
- 2X Hi-RPM Hybridization Buffer
- 10X aCGH Blocking Agent

No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

**Eye contact**
- 2X Hi-RPM Hybridization Buffer
- 10X aCGH Blocking Agent

Adverse symptoms may include the following:
- pain
- watering
- redness

Adverse symptoms may include the following:
- pain or irritation
- watering
- redness
Section 4. First aid measures

Inhalation:
- 2X Hi-RPM Hybridization Buffer
  - Adverse symptoms may include the following:
    - respiratory tract irritation
    - coughing
- 10X aCGH Blocking Agent
  - Adverse symptoms may include the following:
    - respiratory tract irritation
    - coughing

Skin contact:
- 2X Hi-RPM Hybridization Buffer
  - Adverse symptoms may include the following:
    - pain or irritation
    - redness
    - blistering may occur
- 10X aCGH Blocking Agent
  - Adverse symptoms may include the following:
    - irritation
    - redness

Ingestion:
- 2X Hi-RPM Hybridization Buffer
  - Adverse symptoms may include the following:
    - stomach pains
- 10X aCGH Blocking Agent
  - No specific data.

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

Notes to physician:
- 2X Hi-RPM Hybridization Buffer
  - In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- 10X aCGH Blocking Agent
  - 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.

Specific treatments:
- 2X Hi-RPM Hybridization Buffer
  - No specific treatment.
- 10X aCGH Blocking Agent
  - No specific treatment.

Protection of first-aiders:
- 2X Hi-RPM Hybridization Buffer
  - 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
- 10X aCGH Blocking Agent
  - 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. Firefighting measures

Extinguishing media:

Suitable extinguishing media:
- 2X Hi-RPM Hybridization Buffer
- 10X aCGH Blocking Agent
  - Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media:
- 2X Hi-RPM Hybridization Buffer
- 10X aCGH Blocking Agent
  - None known.
Section 5. Firefighting measures

Specific hazards arising from the chemical : 2X Hi-RPM Hybridization Buffer

In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

10X aCGH Blocking Agent

Hazardous thermal decomposition products : 2X Hi-RPM Hybridization Buffer

Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide
- nitrogen oxides
- sulfur oxides
- halogenated compounds
- metal oxide/oxides

10X aCGH Blocking Agent

Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide
- nitrogen oxides
- phosphorus oxides
- halogenated compounds

Special protective actions for fire-fighters : 2X Hi-RPM 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 aCGH Blocking Agent

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 : 2X Hi-RPM 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 aCGH Blocking Agent

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

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : 2X Hi-RPM 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 spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

10X aCGH Blocking Agent

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 spilt material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Section 6. Accidental release measures

For emergency responders:

- **2X Hi-RPM Hybridization Buffer**
  - If specialised 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".

- **10X aCGH Blocking Agent**
  - If specialised 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".

Environmental precautions:

- **2X Hi-RPM Hybridization Buffer**
  - Avoid dispersal of spilt 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). Water polluting material. May be harmful to the environment if released in large quantities.

- **10X aCGH Blocking Agent**
  - Avoid dispersal of spilt 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).

Methods for cleaning up:

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

- **10X aCGH Blocking Agent**
  - 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.

Section 7. Handling and storage

Precautions for safe handling:

- **Protective measures**
  - **2X Hi-RPM Hybridization Buffer**
    - Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. 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.

- **10X aCGH Blocking Agent**
  - 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.
### Section 7. Handling and storage

**Advice on general occupational hygiene**

- **2X Hi-RPM Hybridization 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.

- **10X aCGH Blocking Agent**
  - 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.

**Conditions for safe storage, including any incompatibilities**

- **2X Hi-RPM Hybridization Buffer**
  - Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

- **10X aCGH Blocking Agent**
  - 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### Section 8. Exposure controls and personal protection

**Control parameters**

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2X Hi-RPM Hybridization Buffer</strong></td>
<td>DFG MAC-values list (Germany, 7/2017). TWA: 0.2 mg/m³, (as Li) 8 hours. Form: Inhalable fraction PEAK: 0.2 mg/m³, (as Li), 4 times per shift, 15 minutes. Form: Inhalable fraction</td>
</tr>
<tr>
<td>Lithium chloride</td>
<td></td>
</tr>
</tbody>
</table>

**Appropriate engineering controls**

- Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour 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**

<table>
<thead>
<tr>
<th>Date of issue/Date of revision</th>
<th>Date of previous issue</th>
<th>Version</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>23/10/2018</td>
<td>21/05/2018</td>
<td>5.1</td>
<td>9/17</td>
</tr>
</tbody>
</table>
Section 8. Exposure controls and personal protection

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

Appearance

Physical state: 2X Hi-RPM Hybridization Buffer
10X aCGH Blocking Agent Solid. [lyophilised]

Colour: 2X Hi-RPM Hybridization Buffer
10X aCGH Blocking Agent Not available.

Odour: 2X Hi-RPM Hybridization Buffer
10X aCGH Blocking Agent Not available.

Odour threshold: 2X Hi-RPM Hybridization Buffer
10X aCGH Blocking Agent Not available.

pH: 2X Hi-RPM Hybridization Buffer
10X aCGH Blocking Agent 6 to 6.2

Melting point: 2X Hi-RPM Hybridization Buffer
10X aCGH Blocking Agent Not available.

Boiling point: 2X Hi-RPM Hybridization Buffer
10X aCGH Blocking Agent Not available.

Flash point: 2X Hi-RPM Hybridization Buffer
10X aCGH Blocking Agent Not available.

Evaporation rate: 2X Hi-RPM Hybridization Buffer
10X aCGH Blocking Agent Not available.
Section 9. Physical and chemical properties

**Flammability (solid, gas)**
- 2X Hi-RPM Hybridization Buffer
- 10X aCGH Blocking Agent

**Lower and upper explosive (flammable) limits**
- 2X Hi-RPM Hybridization Buffer
- 10X aCGH Blocking Agent

**Vapour pressure**
- 2X Hi-RPM Hybridization Buffer
- 10X aCGH Blocking Agent

**Vapour density**
- 2X Hi-RPM Hybridization Buffer
- 10X aCGH Blocking Agent

**Relative density**
- 2X Hi-RPM Hybridization Buffer
- 10X aCGH Blocking Agent

**Solubility**
- Easily soluble in the following materials: cold water and hot water.

**Partition coefficient: n-octanol/water**
- Not available.

**Auto-ignition temperature**
- Not available.

**Decomposition temperature**
- Not available.

**Viscosity**
- Not available.

Section 10. Stability and reactivity

**Reactivity**
- No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability**
- The product is stable.

**Possibility of hazardous reactions**
- Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid**
- No specific data.

**Incompatible materials**
- May react or be incompatible with oxidising materials.
Section 10. Stability and reactivity

**Hazardous decomposition products**
- **2X Hi-RPM Hybridization Buffer**
  - Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- **10X aCGH Blocking Agent**
  - Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2X Hi-RPM Hybridization Buffer</strong></td>
<td>Lithium chloride</td>
<td>LC50 Inhalation Dusts and mists</td>
<td>Rat</td>
<td>&gt;5.57 mg/l</td>
</tr>
<tr>
<td></td>
<td>D50 Dermal</td>
<td></td>
<td>1629 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D50 Dermal</td>
<td></td>
<td>1488 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D50 Oral</td>
<td></td>
<td>526 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D50 Oral</td>
<td></td>
<td>&gt;5000 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lithium dodecyl sulphate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Polyoxyethylene octyl</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>phenyl ether</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>10X aCGH Blocking Agent</strong></td>
<td>Trometamol</td>
<td>LD50 Dermal</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td></td>
<td>5000 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

#### Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2X Hi-RPM Hybridization Buffer</strong></td>
<td>Lithium chloride</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 100 milligrams</td>
</tr>
<tr>
<td></td>
<td>Skin - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 10 microliters</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 microliters</td>
<td>-</td>
</tr>
<tr>
<td><strong>Polyoxyethylene octyl phenyl ether</strong></td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 10 microliters</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 microliters</td>
<td>-</td>
</tr>
<tr>
<td><strong>10X aCGH Blocking Agent</strong></td>
<td>Trometamol</td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>25 Percent 500 milligrams</td>
</tr>
<tr>
<td></td>
<td>Skin - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Sensitisation

Not available.

#### Mutagenicity

**Conclusion/Summary**: Not available.

#### Carcinogenicity

**Conclusion/Summary**: Not available.

#### Reproductive toxicity

**Conclusion/Summary**: Not available.

#### Teratogenicity

**Conclusion/Summary**: Not available.

### Specific target organ toxicity (single exposure)
Section 11. Toxicological information

### Information on likely routes of exposure

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Hi-RPM Hybridization Buffer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium chloride</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>Lithium dodecyl sulphate</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>Polyoxymethylene octyl phenyl ether</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>10X aCGH Blocking Agent</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>Trometamol</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
</tbody>
</table>

### Specific target organ toxicity (repeated exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Hi-RPM Hybridization Buffer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium chloride</td>
<td>Category 2</td>
<td>Not determined</td>
<td>cardiovascular system, central nervous system (CNS), kidneys and thyroid</td>
</tr>
</tbody>
</table>

### Aspiration hazard
Not available.

### Information on likely routes of exposure

- **2X Hi-RPM Hybridization Buffer**
  - Routes of entry anticipated: Oral, Dermal, Inhalation.
- **10X aCGH Blocking Agent**
  - Routes of entry anticipated: Oral, Dermal, Inhalation.

### Potential acute health effects

<table>
<thead>
<tr>
<th>Route of exposure</th>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
<td>2X Hi-RPM Hybridization Buffer</td>
<td>Category 2</td>
<td>Not determined</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td></td>
<td>10X aCGH Blocking Agent</td>
<td></td>
<td></td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>2X Hi-RPM Hybridization Buffer</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td></td>
<td>10X aCGH Blocking Agent</td>
<td></td>
<td></td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>2X Hi-RPM Hybridization Buffer</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td></td>
<td>10X aCGH Blocking Agent</td>
<td></td>
<td></td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>2X Hi-RPM Hybridization Buffer</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>10X aCGH Blocking Agent</td>
<td></td>
<td></td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

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

- **Eye contact**
  - 2X Hi-RPM Hybridization Buffer
    - Adverse symptoms may include the following:
      - pain
      - watering
      - redness
  - 10X aCGH Blocking Agent
    - Adverse symptoms may include the following:
      - pain or irritation
      - watering
      - redness
### Section 11. Toxicological information

#### Inhalation
- **2X Hi-RPM Hybridization Buffer**
  - Adverse symptoms may include the following: respiratory tract irritation, coughing
- **10X aCGH Blocking Agent**
  - Adverse symptoms may include the following: respiratory tract irritation, coughing

#### Skin contact
- **2X Hi-RPM Hybridization Buffer**
  - Adverse symptoms may include the following: pain or irritation, redness, blistering may occur
- **10X aCGH Blocking Agent**
  - Adverse symptoms may include the following: irritation, redness

#### Ingestion
- **2X Hi-RPM Hybridization Buffer**
  - Adverse symptoms may include the following: stomach pains
- **10X aCGH Blocking Agent**
  - No specific data.

### Delayed and immediate effects as well as 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 Hi-RPM Hybridization Buffer
    - May cause damage to organs through prolonged or repeated exposure.
  - 10X aCGH Blocking Agent
    - No known significant effects or critical hazards.
- **Carcinogenicity**
  - 2X Hi-RPM Hybridization Buffer
    - No known significant effects or critical hazards.
  - 10X aCGH Blocking Agent
    - No known significant effects or critical hazards.
- **Mutagenicity**
  - 2X Hi-RPM Hybridization Buffer
    - No known significant effects or critical hazards.
  - 10X aCGH Blocking Agent
    - No known significant effects or critical hazards.
- **Teratogenicity**
  - 2X Hi-RPM Hybridization Buffer
    - No known significant effects or critical hazards.
  - 10X aCGH Blocking Agent
    - No known significant effects or critical hazards.
- **Developmental effects**
  - 2X Hi-RPM Hybridization Buffer
    - No known significant effects or critical hazards.
  - 10X aCGH Blocking Agent
    - No known significant effects or critical hazards.
- **Fertility effects**
  - 2X Hi-RPM Hybridization Buffer
    - No known significant effects or critical hazards.
  - 10X aCGH Blocking Agent
    - No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Hi-RPM Hybridization Buffer</td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>2583.6 mg/kg</td>
</tr>
<tr>
<td>Dermal</td>
<td>9381.9 mg/kg</td>
</tr>
<tr>
<td>Inhalation (dusts and mists)</td>
<td>16.33 mg/l</td>
</tr>
</tbody>
</table>

**Date of issue/Date of revision**: 23/10/2018  **Date of previous issue**: 21/05/2018  **Version**: 5.1
Section 11. Toxicological information

Section 12. Ecological information

### Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Hi-RPM Hybridization Buffer</td>
<td>Acute EC50 112 mg/l Fresh water</td>
<td>Algae</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 249 mg/l Fresh water</td>
<td>Daphnia</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 17000 μg/l Fresh water</td>
<td>Fish - Picrocheilus lucius - Swim-up</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute NOEC 25 mg/l Fresh water</td>
<td>Algae</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute NOEC 63.4 mg/l Fresh water</td>
<td>Daphnia</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute NOEC 59.4 mg/l Fresh water</td>
<td>Fish</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 5.85 mg/l Fresh water</td>
<td>Crustaceans - Ceriodaphnia rigaudi - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 11.2 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 4500 μg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
<tr>
<td>Polyoxyethylene octyl phenyl ether</td>
<td>Acute LC50 11.2 mg/l Fresh water</td>
<td>Daphnia</td>
<td>48 hours</td>
</tr>
<tr>
<td>10X aCGH Blocking Agent</td>
<td>Acute EC50 &gt;980 mg/l Fresh water</td>
<td>Daphnia</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute NOEC 520 mg/l Fresh water</td>
<td>Daphnia</td>
<td>48 hours</td>
</tr>
</tbody>
</table>

### Persistence and degradability

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Hi-RPM Hybridization Buffer</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
<tr>
<td>Lithium chloride</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
<tr>
<td>Polyoxyethylene octyl phenyl ether</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

### Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP_{ow}</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X Hi-RPM Hybridization Buffer</td>
<td>4.86</td>
<td>-</td>
<td>high</td>
</tr>
<tr>
<td>Polyoxyethylene octyl phenyl ether</td>
<td>-1.56</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

### Mobility in soil

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

### Other adverse effects

No known significant effects or critical hazards.
Section 13. Disposal considerations

**Disposal methods**

The generation of waste should be avoided or minimised 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

**ADG / IMDG / IATA**

Not regulated as Dangerous Goods according to the ADG Code.

**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

**Standard Uniform Schedule of Medicine and Poisons**

Not regulated.

**Model Work Health and Safety Regulations - Scheduled Substances**

No listed substance

**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.

- **Europe**
  Not determined.

- **Japan**
  - Japan inventory (ENCS): Not determined.
  - Japan inventory (ISHL): Not determined.

- **Malaysia**
  Not determined.

- **New Zealand**
  Not determined.

- **Philippines**
  Not determined.

**Date of issue/Date of revision**: 23/10/2018

**Date of previous issue**: 21/05/2018

**Version**: 5.1
Agilent Oligo aCGH Hybridization Kit (100), Part Number 5188-5380

Section 15. Regulatory information

Republic of Korea  :  Not determined.
Taiwan  :  Not determined.
Thailand  :  Not determined.
Turkey  :  Not determined.
United States  :  Not determined.
Viet Nam  :  Not determined.

Section 16. Any other relevant information

History

Date of issue/Date of revision  :  23/10/2018
Date of previous issue  :  21/05/2018
Version  :  5.1

Key to abbreviations  :   ADG = Australian Dangerous Goods
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
NOHSC = National Occupational Health and Safety Commission
SUSMP = Standard Uniform Schedule of Medicine and Poisons
UN = United Nations

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2X Hi-RPM Hybridization Buffer</strong></td>
<td></td>
</tr>
<tr>
<td>Skin Irrit. 2, H315</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Eye Dam. 1, H318</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT SE 3, H335</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT RE 2, H373 (cardiovascular system, central nervous system (CNS), kidneys, thyroid)</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Aquatic Acute 3, H402</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Aquatic Chronic 3, H412</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

| **10X aCGH Blocking Agent**     |                          |
| Skin Irrit. 2, H315             | Calculation method       |
| Eye Irrit. 2A, H319             | Calculation method       |
| STOT SE 3, H335                 | Calculation method       |

References  :  Not available.

✿ Indicates information that has changed from previously issued version.

Notice to reader

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