Conforms to US OSHA Hazard Communication 29CFR1910.1200

SAFETY DATA SHEET

Agilent Technologies

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

Section 1. Identification

1.1 Product identifier

Product name : Agilent Oligo aCGH Hybridization Kit (100), Part Number 5188-5380

Part no. (chemical kit) : 5188-5380

Part no. : 2X Hi-RPM Hybridization Buffer 5188-6420
10X aCGH Blocking Agent 5190-0405

Validation date : 11/29/2023

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

Identified uses : Analytical reagent.

2X Hi-RPM Hybridization Buffer 25 ml
10X aCGH Blocking Agent 100 reactions

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 Hi-RPM Hybridization Buffer
10X aCGH Blocking Agent

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). 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

2X Hi-RPM Hybridization Buffer

H315 SKIN IRRITATION - Category 2
H318 SERIOUS EYE DAMAGE - Category 1
H373 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
H400 AQUATIC HAZARD (ACUTE) - Category 1
H411 AQUATIC HAZARD (LONG-TERM) - Category 2

2X Hi-RPM Hybridization Buffer — Percentage of the mixture consisting of ingredient (s) of unknown hazards to the aquatic environment: 15.9%

2.2 GHS label elements

Hazard pictograms : 2X Hi-RPM Hybridization Buffer

Signal word :

Section 2. Hazards identification

		2X Hi-RPM Hybridization Buffer	Danger
		10X aCGH Blocking Agent	No signal word.
Hazard statements	:	2X Hi-RPM Hybridization Buffer	H315 - Causes skin irritation. H318 - Causes serious eye damage. H373 - May cause damage to organs through prolonged or repeated exposure. H400 - Very toxic to aquatic life. H411 - Toxic to aquatic life with long lasting effects.
		10X aCGH Blocking Agent	No known significant effects or critical hazards.

Precautionary statements

Prevention	:	2X Hi-RPM Hybridization Buffer	P280 - Wear protective gloves. Wear eye or face protection. P273 - Avoid release to the environment. P260 - Do not breathe vapor. P264 - Wash thoroughly after handling.
		10X aCGH Blocking Agent	Not applicable.
Response	:	2X Hi-RPM Hybridization Buffer	P391 - Collect spillage. P314 - Get medical advice or attention if you feel unwell. P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water. 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 doctor.
		10X aCGH Blocking Agent	Not applicable.
Storage	:	2X Hi-RPM Hybridization Buffer	Not applicable.
		10X aCGH Blocking Agent	Not applicable.
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	Not applicable.
Supplemental label elements	:	2X Hi-RPM Hybridization Buffer	None known.
		10X aCGH Blocking Agent	None known.

2.3 Other hazards

Hazards not otherwise classified	:	2X Hi-RPM Hybridization Buffer	None known.
		10X aCGH Blocking Agent	None known.

Section 3. Composition/information on ingredients

Substance/mixture	:	2X Hi-RPM Hybridization Buffer	Mixture
		10X aCGH Blocking Agent	Mixture

Ingredient name	%	CAS number
2X Hi-RPM Hybridization Buffer		
Lithium chloride	≤12	7447-41-8
Lithium dodecyl sulphate	≤6.4	2044-56-6
Polyoxyethylene octyl phenyl ether	≤6.4	9002-93-1
Oxirane, 2-methyl-, polymer with oxirane, mono[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]-1-disiloxanyl]propyl] ether	≤3	134180-76-0

Section 3. Composition/information on ingredients

10X aCGH Blocking Agent		
Trometamol	<10	77-86-1

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 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 : 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.

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. Get medical attention if irritation occurs.

Inhalation : 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.

10X aCGH Blocking Agent

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. 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.

Section 4. First aid measures

		10X aCGH Blocking Agent	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
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. 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. 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	:	2X Hi-RPM Hybridization Buffer	Causes serious eye damage.
		10X aCGH Blocking Agent	No known significant effects or critical hazards.
Inhalation	:	2X Hi-RPM Hybridization Buffer	No known significant effects or critical hazards.
		10X aCGH Blocking Agent	No known significant effects or critical hazards.
Skin contact	:	2X Hi-RPM Hybridization Buffer	Causes skin irritation.
		10X aCGH Blocking Agent	No known significant effects or critical hazards.
Ingestion	:	2X Hi-RPM Hybridization Buffer	No known significant effects or critical hazards.
		10X aCGH Blocking Agent	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	:	2X Hi-RPM Hybridization Buffer	Adverse symptoms may include the following: pain watering redness
		10X aCGH Blocking Agent	No specific data.
Inhalation	:	2X Hi-RPM Hybridization Buffer	No specific data.
		10X aCGH Blocking Agent	No specific data.
Skin contact	:	2X Hi-RPM Hybridization Buffer	Adverse symptoms may include the following: pain or irritation redness blistering may occur
		10X aCGH Blocking Agent	No specific data.
Ingestion	:	2X Hi-RPM Hybridization Buffer	Adverse symptoms may include the following: stomach pains
		10X aCGH Blocking Agent	No specific data.

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

Section 4. First aid measures

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.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	2X Hi-RPM Hybridization Buffer	Use an extinguishing agent suitable for the surrounding fire.
		10X aCGH Blocking Agent	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	:	2X Hi-RPM Hybridization Buffer	None known.
		10X aCGH Blocking Agent	None known.

5.2 Special hazards arising from the substance or mixture

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 very toxic to aquatic life. This material is toxic 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	No specific fire or explosion hazard.
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

Section 5. Fire-fighting measures

5.3 Advice for firefighters

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

6.1 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 spilled material. Do not breathe vapor 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 spilled material. Put on appropriate personal protective equipment.
For emergency responders	:	2X Hi-RPM Hybridization 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 the information in "For non-emergency personnel".
		10X aCGH Blocking Agent	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	:	2X Hi-RPM Hybridization 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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.
		10X aCGH Blocking Agent	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Section 6. Accidental release measures

6.3 Methods and materials for containment and cleaning up

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. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

7.1 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 vapor or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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).
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.

7.2 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 unlabeled 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

Section 7. Handling and storage

incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations	:	2X Hi-RPM Hybridization Buffer 10X aCGH Blocking Agent	Industrial applications, Professional applications. Industrial applications, Professional applications.
Industrial sector specific solutions	:	2X Hi-RPM Hybridization Buffer 10X aCGH Blocking Agent	Not available. Not available.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
2X Hi-RPM Hybridization Buffer	
Lithium chloride	None.
Lithium dodecyl sulphate	None.
Polyoxyethylene octyl phenyl ether	None.
Oxirane, 2-methyl-, polymer with oxirane, mono[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]-1-disiloxanyl]propyl] ether	None.
10X aCGH Blocking Agent	
Trometamol	None.

Biological exposure indices

No exposure indices known.

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

Section 8. Exposure controls/personal protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

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

Appearance

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

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

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

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

pH :
2X Hi-RPM Hybridization Buffer — 6 to 6.2
10X aCGH Blocking Agent — 7.5 [Conc. (% w/w): 100%]

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

Boiling point, initial boiling point, and boiling range :
2X Hi-RPM Hybridization Buffer — Not available.
10X aCGH Blocking Agent — Not available.

Flash point :

	Closed cup			Open cup		
Ingredient name	**°C**	**°F**	**Method**	**°C**	**°F**	**Method**
2X Hi-RPM Hybridization Buffer						
Polyoxyethylene octyl phenyl ether	>109.85	>229.7	-	-	-	-

Evaporation rate :
2X Hi-RPM Hybridization Buffer — Not available.
10X aCGH Blocking Agent — Not available.

Flammability :
2X Hi-RPM Hybridization Buffer — Not applicable.
10X aCGH Blocking Agent — Not available.

Lower and upper explosion limit/flammability limit :
2X Hi-RPM Hybridization Buffer — Not available.
10X aCGH Blocking Agent — Not applicable.

Vapor pressure :

Section 9. Physical and chemical properties and safety characteristics

Ingredient name	Vapor Pressure at 20˚C			Vapor pressure at 50˚C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
2X Hi-RPM Hybridization Buffer						
water	17.5	2.3	-	92.258	12.3	-
Polyoxyethylene octyl phenyl ether	0.997581	0.13	-	-	-	-

Relative vapor density :
2X Hi-RPM Hybridization Buffer — Not available.
10X aCGH Blocking Agent — Not applicable.

Relative density :
2X Hi-RPM Hybridization Buffer — Not available.
10X aCGH Blocking Agent — Not available.

Solubility(ies) :

Media	Result
2X Hi-RPM Hybridization Buffer	
water	Soluble
10X aCGH Blocking Agent	
water	Soluble

Partition coefficient: n-octanol/water :
2X Hi-RPM Hybridization Buffer — Not applicable.
10X aCGH Blocking Agent — Not applicable.

Auto-ignition temperature :

Ingredient name	°C	°F	Method
2X Hi-RPM Hybridization Buffer			
Lithium dodecyl sulphate	366	690.8	-

Decomposition temperature :
2X Hi-RPM Hybridization Buffer — Not available.
10X aCGH Blocking Agent — Not available.

Viscosity :
2X Hi-RPM Hybridization Buffer — Not available.
10X aCGH Blocking Agent — Not applicable.

Particle characteristics

Median particle size :
2X Hi-RPM Hybridization Buffer — Not applicable.
10X aCGH Blocking Agent — Not available.

Section 10. Stability and reactivity

10.1 Reactivity :
2X Hi-RPM Hybridization Buffer — No specific test data related to reactivity available for this product or its ingredients.
10X aCGH Blocking Agent — No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability :
2X Hi-RPM Hybridization Buffer — The product is stable.
10X aCGH Blocking Agent — The product is stable.

10.3 Possibility of hazardous reactions :
2X Hi-RPM Hybridization Buffer — Under normal conditions of storage and use, hazardous reactions will not occur.
10X aCGH Blocking Agent — Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid :
2X Hi-RPM Hybridization Buffer — No specific data.
10X aCGH Blocking Agent — No specific data.

Section 10. Stability and reactivity

10.5 Incompatible materials : 2X Hi-RPM Hybridization Buffer — May react or be incompatible with oxidizing materials.

10X aCGH Blocking Agent — May react or be incompatible with oxidizing materials.

10.6 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

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2X Hi-RPM Hybridization Buffer				
Lithium chloride	LC50 Inhalation Dusts and mists	Rat - Male, Female	>5.57 mg/l	4 hours
	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	-
10X aCGH Blocking Agent				
Trometamol	LD50 Dermal	Rat	>5000 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2X Hi-RPM Hybridization Buffer					
Lithium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Skin - Severe irritant	Rabbit	-	24 hours 500 mg	-
Polyoxyethylene octyl phenyl ether	Skin - Mild irritant	Rabbit	-	24 hours 500 uL	-
10X aCGH Blocking Agent					
Trometamol	Skin - Moderate irritant	Rabbit	-	25 %	-
	Skin - Severe irritant	Rabbit	-	500 mg	-

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Section 11. Toxicological information

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
2X Hi-RPM Hybridization Buffer			
Lithium chloride	Category 3	-	Respiratory tract irritation
Lithium dodecyl sulphate	Category 3	-	Respiratory tract irritation
10X aCGH Blocking Agent			
Trometamol	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
2X Hi-RPM Hybridization Buffer			
Lithium chloride	Category 2	-	cardiovascular system, central nervous system (CNS), kidneys, thyroid

Aspiration hazard

Not available.

Information on the likely routes of exposure : 2X Hi-RPM Hybridization Buffer — Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
10X aCGH Blocking Agent — Not available.

Potential acute health effects

Eye contact : 2X Hi-RPM Hybridization Buffer — Causes serious eye damage.
10X aCGH Blocking Agent — No known significant effects or critical hazards.

Inhalation : 2X Hi-RPM Hybridization Buffer — No known significant effects or critical hazards.
10X aCGH Blocking Agent — No known significant effects or critical hazards.

Skin contact : 2X Hi-RPM Hybridization Buffer — Causes skin irritation.
10X aCGH Blocking Agent — No known significant effects or critical hazards.

Ingestion : 2X Hi-RPM Hybridization Buffer — No known significant effects or critical hazards.
10X aCGH Blocking Agent — No known significant effects or critical hazards.

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 — No specific data.

Inhalation : 2X Hi-RPM Hybridization Buffer — No specific data.
10X aCGH Blocking Agent — No specific data.

Skin contact : 2X Hi-RPM Hybridization Buffer — Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
10X aCGH Blocking Agent — No specific data.

Section 11. Toxicological information

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 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 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.

Reproductive toxicity : 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

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
2X Hi-RPM Hybridization Buffer					
2X Hi-RPM Hybridization Buffer	2598.7	10804.4	N/A	565.6	23.1
Lithium chloride	526	1488	N/A	N/A	N/A
Lithium dodecyl sulphate	500	N/A	N/A	N/A	1.5
Polyoxyethylene octyl phenyl ether	1800	N/A	N/A	N/A	N/A
Oxirane, 2-methyl-, polymer with oxirane, mono[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]-1-disiloxanyl] propyl] ether	N/A	N/A	N/A	11	N/A

Other information : 2X Hi-RPM Hybridization Buffer — Adverse symptoms may include the following: May cause skin sensitization.

Section 12. Ecological information

12.1 Toxicity

Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
2X Hi-RPM Hybridization Buffer			
Lithium chloride	Acute EC50 112 mg/l Fresh water	Algae - *Desmodesmus subspicatus*	72 hours
	Acute EC50 249 mg/l Fresh water	Daphnia - *Daphnia magna*	48 hours
	Acute LC50 17000 µg/l Fresh water	Fish - *Ptychocheilus lucius* - Swim-up	96 hours
	Acute NOEC 25 mg/l Fresh water	Algae - *Desmodesmus subspicatus*	72 hours
	Acute NOEC 63.4 mg/l Fresh water	Daphnia - *Daphnia magna*	48 hours
	Acute NOEC 59.4 mg/l Fresh water	Fish - *Oncorhynchus mykiss*	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
	Chronic NOEC 0.004 mg/l Fresh water	Fish - *Gambusia holbrooki*	28 days
10X aCGH Blocking Agent			
Trometamol	Acute EC50 >980 mg/l Fresh water	Daphnia	48 hours
	Acute NOEC 520 mg/l Fresh water	Daphnia	48 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
10X aCGH Blocking Agent				
Trometamol	OECD 301F Ready Biodegradability - Manometric Respirometry Test	97.1 % - Readily - 28 days	30 mg/l	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
2X Hi-RPM Hybridization Buffer			
Lithium chloride	-	-	Readily
Lithium dodecyl sulphate	-	-	Readily
Polyoxyethylene octyl phenyl ether	-	-	Readily
10X aCGH Blocking Agent			
Trometamol	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
2X Hi-RPM Hybridization Buffer			
Polyoxyethylene octyl phenyl ether	4.86	-	High
10X aCGH Blocking Agent			
Trometamol	-2.31	-	Low

Section 12. Ecological information

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

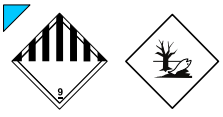
Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. 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.

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 Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	Not regulated.	UN3082	UN3082	UN3082	UN3082
UN proper shipping name	-	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Polyoxyethylene octyl phenyl ether)	SUBSTANCIA LIQUIDA POTENCIALMENTE PELIGROSA PARA EL MEDIO AMBIENTE, N.E.P. (Polyoxyethylene octyl phenyl ether)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Polyoxyethylene octyl phenyl ether)	Environmentally hazardous substance, liquid, n. o.s. (Polyoxyethylene octyl phenyl ether)
Transport hazard class(es)	-	9 	9 	9 	9 
Packing group	-	III	III	III	III
Environmental hazards	No.	Yes.	Yes.	Yes.	Yes.

Additional information

Section 14. Transport information

Remarks: Excepted Quantity

TDG Classification : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.43-2.45 (Class 9), 2.7 (Marine pollutant mark).
Non-bulk packages of this product are not regulated as dangerous goods when transported by road or rail.
Explosive Limit and Limited Quantity Index 5
Special provisions 16, 99

Mexico Classification : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Special provisions 274, 331, 335

IMDG : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
Emergency schedules F-A, S-F
Special provisions 274, 335, 969

IATA : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.
Quantity limitation Passenger and Cargo Aircraft: 450 L. Packaging instructions: 964. Cargo Aircraft Only: 450 L. Packaging instructions: 964. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y964.
Special provisions A97, A158, A197, A215

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

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

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 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 :

2X Hi-RPM Hybridization Buffer	SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
10X aCGH Blocking Agent	Not applicable.

Composition/information on ingredients

Name	%	Classification
2X Hi-RPM Hybridization Buffer		
Lithium chloride	≤12	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
Dilithium N,N'-ethylenebis[N-(carboxymethyl)aminoacetate]	≤10	COMBUSTIBLE DUSTS
Lithium dodecyl sulphate	≤6.4	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	≤6.4	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 (inhalation) - Category 4 EYE IRRITATION - Category 2A
10X aCGH Blocking Agent		
Trometamol	<10	COMBUSTIBLE DUSTS SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

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.

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

Section 15. Regulatory information

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : Not determined.

Canada : Not determined.

China : Not determined.

Japan : **Japan inventory (CSCL)**: Not determined.
Japan inventory (ISHL): 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

Procedure used to derive the classification

Classification	Justification
2X Hi-RPM Hybridization Buffer	
SKIN IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE - Category 1	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
AQUATIC HAZARD (ACUTE) - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 2	Calculation method

History

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Version : 5

Key to abbreviations : 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
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

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