

SAFETY DATA SHEET

2X Hi-RPM Hybridization Buffer, 25 ml

Section 1. Identification

Product identifier : 2X Hi-RPM Hybridization Buffer, 25 ml

Part no. : 5190-0403

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

Identified uses : Analytical reagent.
25 ml 2X Hi-RPM Hybridization Buffer 5188-6420

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

Emergency telephone number (with hours of operation) : CHEMTREC®: 1-800-424-9300

Section 2. Hazard identification

Classification of the substance or mixture

H315 SKIN IRRITATION - Category 2
H318 SERIOUS EYE DAMAGE - Category 1
H360 TOXIC TO REPRODUCTION - Category 1A
H372 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
H412 AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements

Hazard pictograms



Signal word : Danger

Hazard statements : H315 - Causes skin irritation.
H318 - Causes serious eye damage.
H360 - May damage fertility or the unborn child.
H372 - Causes 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.

Precautionary statements

Prevention

P201 - Obtain special instructions before use.
P280 - Wear protective gloves, protective clothing and eye or face protection.
P273 - Avoid release to the environment.
P260 - Do not breathe vapor.
P270 - Do not eat, drink or smoke when using this product.
P264 - Wash thoroughly after handling.

Response

P308 + P313 - IF exposed or concerned: Get medical advice or attention.
P302 + P352 - IF ON SKIN: Wash with plenty of water.
P362 + P364 - Take off contaminated clothing and wash it before reuse.
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.

Section 2. Hazard identification

- Storage** : Not applicable.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements** :

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	Synonyms	% (w/w)	Identifiers	
Morpholineethanesulfonic acid, hydrate (1:1)	Morpholinoethanesulfonic acid	≥3 - ≤7	CAS: 145224-94-8	-
Lithium chloride	Lithium chloride	≥3 - ≤7	CAS: 7447-41-8	-
Lithium dodecyl sulphate	sulfuric acid, monododecyl ester, lithium salt	≥1 - ≤5	CAS: 2044-56-6	-
Polyoxyethylene octyl phenyl ether	Triton X-100	≥1 - ≤5	CAS: 9002-93-1	-
Oxirane, 2-methyl-, polymer with oxirane, mono[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]-1-disiloxanyl]propyl] ether	Methyloxirane	≥1 - ≤5	CAS: 134180-76-0	-
Lithium hydroxide monohydrate	Lithium hydroxide	≥0.5 - ≤1.5	CAS: 1310-66-3	-

Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

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

Description of necessary first aid measures

- Eye contact** : 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.
- Inhalation** : 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.

Section 4. First-aid measures

- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash contaminated skin with soap and 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.
- Ingestion** : 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
stomach pains
reduced fetal weight
increase in fetal deaths
skeletal malformations

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

- Notes to physician** : 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** : No specific treatment.
- Protection of first-aiders** : 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.

Section 4. First-aid measures

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : 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.

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

Special protective actions for fire-fighters : 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 : 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 : 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.

For emergency responders : 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".

Environmental precautions : 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.

Methods and materials for containment and cleaning up

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

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. 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.

Advice on general occupational hygiene : 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 : 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.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Lithium hydroxide monohydrate	CA Ontario Provincial (Canada, 6/2019) STEL 15 minutes: 1 mg/m ³ .

Biological exposure indices

No exposure indices known.

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.

Section 8. Exposure controls/personal protection

- 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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- 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

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

Appearance

- Physical state** : Liquid.
- Color** : Yellow. [Light]
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : 6.1
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : Not available.
- Flash point** :

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
Polyoxyethylene octyl phenyl ether	>109.85	>229.7	-	-	-	-

- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not applicable.
- Upper/lower flammability or explosive limits** : Not available.
- Vapor pressure** :

Section 9. Physical and chemical properties

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Water	17.5	2.3	-	92.258	12.3	-
Polyoxyethylene octyl phenyl ether	0.997581	0.13	-	-	-	-

Vapor density : Not available.

Relative density : Not available.

Solubility :

Media	Result
water	Soluble

Miscible with water : Yes.

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature :

Ingredient name	°C	°F	Method
Lithium dodecyl sulphate	366	690.8	-

Decomposition temperature : Not available.

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): Not available.

Particle characteristics

Median particle size : Not applicable.

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 oxidizing materials.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result
<input checked="" type="checkbox"/> Lithium chloride	Rat - Oral - LD50 526 mg/kg Rat - Male, Female - Inhalation - LC50 Dusts and mists >5.57 mg/l [4 hours]
Lithium dodecyl sulphate	Rat - Oral - LD50 >5000 mg/kg
Polyoxyethylene octyl phenyl ether	Rat - Oral - LD50 1800 mg/kg

Section 11. Toxicological information

Conclusion/Summary : Not available.
[Product]

Skin corrosion/irritation

Product/ingredient name

Result

Lithium chloride

Rabbit - Skin - Severe irritant

Duration of treatment/
 exposure: 24 hours
 Amount/concentration
 applied: 500 mg
 Duration of treatment/
 exposure: 24 hours
 Amount/concentration
 applied: 500 uL

Polyoxyethylene octyl phenyl ether

Rabbit - Skin - Mild irritant

Conclusion/Summary : Not available.
[Product]

Serious eye damage/eye irritation

Product/ingredient name

Result

Lithium chloride

Rabbit - Eyes - Moderate irritant

Duration of treatment/
 exposure: 24 hours
 Amount/concentration
 applied: 100 mg

Conclusion/Summary : Not available.
[Product]

Respiratory corrosion/irritation

Conclusion/Summary : Not available.
[Product]

Respiratory corrosion/irritation

Not available.

Conclusion/Summary : Not available.
[Product]

Respiratory or skin sensitization

Skin

Conclusion/Summary : May cause skin sensitization.
[Product]

Respiratory

Conclusion/Summary : Not available.
[Product]

Germ cell mutagenicity

Conclusion/Summary : Not available.
[Product]

Carcinogenicity

Conclusion/Summary : Not available.
[Product]

Section 11. Toxicological information

Reproductive toxicity

Conclusion/Summary : Not available.
[Product]

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
<input checked="" type="checkbox"/> Morpholineethanesulfonic acid, hydrate (1:1)	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
<input checked="" type="checkbox"/> Lithium dodecyl sulphate	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
<input checked="" type="checkbox"/> Lithium hydroxide monohydrate	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (cardiovascular system, central nervous system (CNS), kidneys, thyroid) - Category 1

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact : Causes serious eye damage.
Inhalation : No known significant effects or critical hazards.
Skin contact : Causes skin irritation.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
 pain
 watering
 redness

Inhalation : Adverse symptoms may include the following:
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

Skin contact : Adverse symptoms may include the following:
 pain or irritation
 redness
 blistering may occur
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

Ingestion : Adverse symptoms may include the following:
 stomach pains
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

Section 11. Toxicological information

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary : Not available.

[Product]

General : Causes damage to organs through prolonged or repeated exposure.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : May damage fertility or the unborn child.

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)
Hi-RPM Hybridization Buffer, 25 ml	5264.0	N/A	N/A	733.3	50
Lithium chloride	526	N/A	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
Lithium hydroxide monohydrate	500	N/A	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name

Result

Morpholineethanesulfonic acid, hydrate (1:1)	Acute - LC50 - Fresh water	>108 mg/l [96 hours]	Fish - <i>Danio rerio</i>
	Acute - NOEC - Fresh water	108 mg/l [96 hours]	Fish - <i>Danio rerio</i>
	Acute - EC50 - Fresh water	>108 mg/l [48 hours]	Daphnia - <i>Daphni magna</i>
	Acute - NOEC - Fresh water	108 mg/l [48 hours]	Daphnia - <i>Daphni magna</i>
	Acute - EC50 - Fresh water	>108 mg/l [72 hours]	Algae - <i>Pseudokirchneriella subcapitata</i>
	Acute - NOEC - Fresh water	108 mg/l [72 hours]	Algae - <i>Pseudokirchneriella subcapitata</i>
Lithium chloride	Acute - NOEC - Fresh water	59.4 mg/l [96 hours]	Fish - <i>Oncorhynchus mykiss</i>

Section 12. Ecological information

Polyoxyethylene octyl phenyl ether	Acute - EC50 - Fresh water	249 mg/l [48 hours]	Daphnia - <i>Daphnia magna</i>
	Acute - NOEC - Fresh water	63.4 mg/l [48 hours]	Daphnia - <i>Daphnia magna</i>
	Acute - EC50 - Fresh water	112 mg/l [72 hours]	Algae - <i>Desmodesmus subspicatus</i>
	Acute - NOEC - Fresh water	25 mg/l [72 hours]	Algae - <i>Desmodesmus subspicatus</i>
	Acute - LC50 - Fresh water	4500 µg/l [96 hours]	Fish - Fathead minnow - <i>Pimephales promelas</i>
	Acute - LC50 - Fresh water	5.85 mg/l [48 hours]	Crustaceans - Water flea - <i>Ceriodaphnia rigaudi</i> - Neonate
Lithium hydroxide monohydrate	Chronic - NOEC - Fresh water	0.004 mg/l [28 days]	Fish - Eastern mosquitofish - <i>Gambusia holbrooki</i>
	Acute - LC50 - Fresh water	62.2 mg/l [96 hours]	Fish - <i>Danio rerio</i>
	Chronic - NOEC - Fresh water	9.9 mg/l [34 days]	Fish - <i>Danio rerio</i>
	Acute - EC50 - Fresh water	23.75 mg/l [72 hours]	Algae - <i>Pseudokirchneriella subcapitata</i>
	Acute - NOEC - Fresh water	5.71 mg/l [72 hours]	Algae - <i>Pseudokirchneriella subcapitata</i>
	Acute - EC50 - Fresh water	19.1 mg/l [48 hours]	Daphnia - <i>Daphnia magna</i>
	Chronic - NOEC - Fresh water	2.3 mg/l [21 days]	Daphnia - <i>Daphnia magna</i>

Conclusion/Summary [Product] : Not available.

Persistence and degradability

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Lithium chloride	-	-	Readily
Lithium dodecyl sulphate	-	-	Readily
Polyoxyethylene octyl phenyl ether	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Polyoxyethylene octyl phenyl ether	4.86	-	High

Mobility in soil

Soil/Water partition coefficient : Not available.

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

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

TDG / IMDG / IATA : Not regulated.

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

Section 15. Regulatory information

Canadian lists

Canadian NPRI : The following components are listed: octylphenol and its ethoxylates

CEPA Toxic substances : None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Canada : Not determined.

United States : Not determined.

Section 16. Other information

History

Date of issue/Date of revision : 01/30/2026

Date of previous issue : 12/27/2022

Version : 4

Section 16. Other information

Key to abbreviations

: ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 DOT = Department of Transportation
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 HPR = Hazardous Products Regulations
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 IMO = International Maritime Organization
 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
 SGG = Segregation Group
 TDG = Transportation of Dangerous Goods
 UN = United Nations

Procedure used to derive the classification

Classification	Justification
SKIN IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE - Category 1	Calculation method
TOXIC TO REPRODUCTION - Category 1A	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 3	Calculation method

Indicates information that has changed from previously issued version.

Notice to reader

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