SAFETY DATA SHEET
PicoMaxx High Fidelity PCR System, Part Number 600422

Section 1. Identification

Product identifier : PicoMaxx High Fidelity PCR System, Part Number 600422
Part no. (chemical kit) : 600422
Part no. : PicoMaxx High Fidelity PCR System 600422-51
10X PicoMaxx Reaction Buffer 600420-52

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

Identified uses : Not available.

PicoMaxx High Fidelity PCR System 0.2 ml (500 U  2.5 U/µl)
10X PicoMaxx Reaction Buffer 1 ml

Section 2. Hazard identification

Classification of the substance or mixture

PicoMaxx High Fidelity PCR System
H320 EYE IRRITATION - Category 2B
H412 AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements

Signal word : Warning
No signal word.

Hazard statements : PicoMaxx High Fidelity PCR System
H320 - Causes eye irritation.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : PicoMaxx High Fidelity PCR System
P273 - Avoid release to the environment.

Response : PicoMaxx High Fidelity PCR System
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 advice or attention.

Not applicable.
Section 2. Hazard identification

Storage: PicoMaxx High Fidelity PCR System  
10X PicoMaxx Reaction Buffer  
Not applicable.

Disposal: PicoMaxx High Fidelity PCR System  
10X PicoMaxx Reaction Buffer  
P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements: PicoMaxx High Fidelity PCR System  
10X PicoMaxx Reaction Buffer  
None known.

Other hazards which do not result in classification: PicoMaxx High Fidelity PCR System  
10X PicoMaxx Reaction Buffer  
Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 2%

Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>10X PicoMaxx Reaction Buffer</td>
<td>Mixture</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Synonyms</th>
<th>% (w/w)</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>PicoMaxx High Fidelity PCR System</td>
<td>Glycerol</td>
<td>≥30 - ≤60</td>
<td>56-81-5</td>
</tr>
<tr>
<td></td>
<td>Poly(oxy-1,2-ethanediyl), .alpha.-[</td>
<td>≥0.1 - ≤1</td>
<td>9036-19-5</td>
</tr>
<tr>
<td></td>
<td>(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10X PicoMaxx Reaction Buffer</td>
<td>Tris</td>
<td>≥5 - ≤10</td>
<td>77-86-1</td>
</tr>
<tr>
<td>Potassium chloride</td>
<td>Potassium Chloride</td>
<td>≥1 - ≤5</td>
<td>7447-40-7</td>
</tr>
</tbody>
</table>

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.
## Description of necessary first aid measures

### Eye contact

- **PicoMaxx High Fidelity PCR System**
  - 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. If irritation persists, get medical attention.

- **10X PicoMaxx Reaction Buffer**
  - Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

### Inhalation

- **PicoMaxx High Fidelity PCR System**
  - Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

- **10X PicoMaxx Reaction Buffer**
  - 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

- **PicoMaxx High Fidelity PCR System**
  - Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

- **10X PicoMaxx Reaction Buffer**
  - Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

### Ingestion

- **PicoMaxx High Fidelity PCR System**
  - 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. 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.

- **10X PicoMaxx Reaction Buffer**
  - 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.

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

- **Potential acute health effects**

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**Date of previous issue**: 11/24/2019  
**Version**: 6
## Section 4. First-aid measures

### Eye contact
- **PicoMaxx High Fidelity PCR System**
- **10X PicoMaxx Reaction Buffer**
  - No known significant effects or critical hazards.
- **PicoMaxx High Fidelity PCR System**
- **10X PicoMaxx Reaction Buffer**
  - Causes eye irritation.

### Inhalation
- **PicoMaxx High Fidelity PCR System**
- **10X PicoMaxx Reaction Buffer**
  - No known significant effects or critical hazards.

### Skin contact
- **PicoMaxx High Fidelity PCR System**
- **10X PicoMaxx Reaction Buffer**
  - No known significant effects or critical hazards.

### Ingestion
- **PicoMaxx High Fidelity PCR System**
- **10X PicoMaxx Reaction Buffer**
  - No known significant effects or critical hazards.

### Over-exposure signs/symptoms

#### Eye contact
- **PicoMaxx High Fidelity PCR System**
  - Adverse symptoms may include the following:
    - irritation
    - watering
    - redness
- **10X PicoMaxx Reaction Buffer**
  - No specific data.

#### Inhalation
- **PicoMaxx High Fidelity PCR System**
  - No specific data.
- **10X PicoMaxx Reaction Buffer**
  - No specific data.

#### Skin contact
- **PicoMaxx High Fidelity PCR System**
  - No specific data.
- **10X PicoMaxx Reaction Buffer**
  - No specific data.

#### Ingestion
- **PicoMaxx High Fidelity PCR System**
  - No specific data.
- **10X PicoMaxx Reaction Buffer**
  - No specific data.

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

#### Notes to physician
- **PicoMaxx High Fidelity PCR System**
  - Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- **10X PicoMaxx Reaction 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.

#### Specific treatments
- **PicoMaxx High Fidelity PCR System**
  - No specific treatment.
- **10X PicoMaxx Reaction Buffer**
  - No specific treatment.

#### Protection of first-aiders
- **PicoMaxx High Fidelity PCR System**
  - No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
- **10X PicoMaxx Reaction Buffer**
  - No action shall be taken involving any personal risk or without suitable training.
## Section 4. First-aid measures

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

<table>
<thead>
<tr>
<th>Extinguishing media</th>
<th>PicoMaxx High Fidelity PCR System</th>
<th>Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suitable extinguishing media</td>
<td>10X PicoMaxx Reaction Buffer</td>
<td>None known.</td>
</tr>
<tr>
<td>Unsuitable extinguishing media</td>
<td>PicoMaxx High Fidelity PCR System</td>
<td>None known.</td>
</tr>
<tr>
<td>10X PicoMaxx Reaction Buffer</td>
<td>None known.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Specific hazards arising from the chemical</th>
<th>PicoMaxx High Fidelity PCR System</th>
<th>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. In a fire or if heated, a pressure increase will occur and the container may burst.</th>
</tr>
</thead>
<tbody>
<tr>
<td>10X PicoMaxx Reaction Buffer</td>
<td>Decomposition products may include the following materials: carbon dioxide carbon monoxide</td>
<td>Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides halogenated compounds metal oxide/oxides</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous thermal decomposition products</th>
<th>PicoMaxx High Fidelity PCR System</th>
<th>None known.</th>
</tr>
</thead>
<tbody>
<tr>
<td>10X PicoMaxx Reaction Buffer</td>
<td>None known.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Special protective actions for fire-fighters</th>
<th>PicoMaxx High Fidelity PCR System</th>
<th>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. 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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>10X PicoMaxx Reaction Buffer</td>
<td>None known.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Special protective equipment for fire-fighters</th>
<th>PicoMaxx High Fidelity PCR System</th>
<th>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</th>
</tr>
</thead>
<tbody>
<tr>
<td>10X PicoMaxx Reaction Buffer</td>
<td>None known.</td>
<td></td>
</tr>
</tbody>
</table>
Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:
- PicoMaxx High Fidelity PCR System
  - No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

- 10X PicoMaxx Reaction Buffer
  - No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders:
- PicoMaxx High Fidelity PCR System
  - 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 PicoMaxx Reaction 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".

Environmental precautions:
- PicoMaxx High Fidelity PCR System
  - 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.

- 10X PicoMaxx Reaction 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).

Methods and materials for containment and cleaning up

Methods for cleaning up:
- PicoMaxx High Fidelity PCR System
  - 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 PicoMaxx Reaction 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.
Section 7. Handling and storage

### Precautions for safe handling

**Protective measures**

- PicoMaxx High Fidelity PCR System
- 10X PicoMaxx Reaction Buffer

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. 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**

- PicoMaxx High Fidelity PCR System
- 10X PicoMaxx Reaction 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.

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

- PicoMaxx High Fidelity PCR System
- 10X PicoMaxx Reaction 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. 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.

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Section 8. Exposure controls/personal protection

### Control parameters

### Occupational exposure limits

**Date of issue/Date of revision** : 10/05/2022  
**Date of previous issue** : 11/24/2019  
**Version** : 6
## Section 8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PicoMaxx High Fidelity PCR System</td>
<td>CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 10 mg/m³ 8 hours. Form: Mist</td>
</tr>
<tr>
<td>Glycerol</td>
<td>CA Quebec Provincial (Canada, 6/2021). TWAEV: 10 mg/m³ 8 hours. Form: mist</td>
</tr>
<tr>
<td></td>
<td>CA Saskatchewan Provincial (Canada, 7/2013). STEL: 20 mg/m³ 15 minutes. Form: mist</td>
</tr>
<tr>
<td></td>
<td>CA British Columbia Provincial (Canada, 6/2021). TWA: 3 mg/m³ 8 hours. Form: respirable mist</td>
</tr>
<tr>
<td></td>
<td>TWA: 10 mg/m³ 8 hours. Form: total mist</td>
</tr>
</tbody>
</table>

### Biological exposure indices

None known.

### Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

### Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

#### Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

#### Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

#### Skin protection

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

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

- **Other skin protection**: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Section 8. Exposure controls/personal protection

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**

<table>
<thead>
<tr>
<th>Property</th>
<th>PicoMaxx High Fidelity PCR System</th>
<th>10X PicoMaxx Reaction Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid.</td>
<td>Liquid.</td>
</tr>
<tr>
<td>Color</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odor</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH</td>
<td>8</td>
<td>8.83</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Boiling point, initial boiling point, and boiling range</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Flash point**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Closed cup</th>
<th>Open cup</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>°C</td>
<td>°F</td>
</tr>
<tr>
<td>PicoMaxx High Fidelity PCR System</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10X PicoMaxx Reaction Buffer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sorbitan monolaurate, ethoxylated</td>
<td>275</td>
<td>527</td>
</tr>
<tr>
<td></td>
<td>177</td>
<td>350.6</td>
</tr>
</tbody>
</table>
Section 9. Physical and chemical properties and safety characteristics

Evaporation rate:
- PicoMaxx High Fidelity PCR System: Not available.
- 10X PicoMaxx Reaction Buffer: Not available.

Flammability:
- PicoMaxx High Fidelity PCR System: Not applicable.
- 10X PicoMaxx Reaction Buffer: Not applicable.

Lower and upper explosion limit/flammability limit:
- PicoMaxx High Fidelity PCR System: Not available.
- 10X PicoMaxx Reaction Buffer: Not available.

Vapor pressure:

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Vapor Pressure at 20°C mm Hg</th>
<th>kPa</th>
<th>Method</th>
<th>Vapor Pressure at 50°C mm Hg</th>
<th>kPa</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>PicoMaxx High Fidelity PCR System</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>water</td>
<td>23.8</td>
<td>3.2</td>
<td></td>
<td>92.258</td>
<td>12.3</td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>0.000075</td>
<td>0.00001</td>
<td></td>
<td>0.0025</td>
<td>0.00033</td>
<td></td>
</tr>
<tr>
<td>10X PicoMaxx Reaction Buffer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>water</td>
<td>23.8</td>
<td>3.2</td>
<td></td>
<td>92.258</td>
<td>12.3</td>
<td></td>
</tr>
<tr>
<td>Sorbitan monolaurate, ethoxylated</td>
<td>&lt;1</td>
<td>&lt;0.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Relative density:
- PicoMaxx High Fidelity PCR System: Not available.
- 10X PicoMaxx Reaction Buffer: Not available.

Relative vapor density:
- PicoMaxx High Fidelity PCR System: Not available.
- 10X PicoMaxx Reaction Buffer: Not available.

Solubility(ies):
- Media: water
  - PicoMaxx High Fidelity PCR System: Soluble
  - 10X PicoMaxx Reaction Buffer: Soluble

Partition coefficient: n-octanol/water:
- PicoMaxx High Fidelity PCR System: Not applicable.
- 10X PicoMaxx Reaction Buffer: Not applicable.

Auto-ignition temperature:
Section 9. Physical and chemical properties and safety characteristics

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>°C</th>
<th>°F</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td>370</td>
<td>698</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Decomposition temperature
PicoMaxx High Fidelity PCR System
10X PicoMaxx Reaction Buffer
Not available.

Viscosity
PicoMaxx High Fidelity PCR System
10X PicoMaxx Reaction Buffer
Not available.

Particle characteristics
Median particle size
PicoMaxx High Fidelity PCR System
10X PicoMaxx Reaction Buffer
Not applicable.

Section 10. Stability and reactivity

Reactivity
PicoMaxx High Fidelity PCR System
10X PicoMaxx Reaction Buffer
No specific test data related to reactivity available for this product or its ingredients.

Chemical stability
PicoMaxx High Fidelity PCR System
10X PicoMaxx Reaction Buffer
The product is stable.

Possibility of hazardous reactions
PicoMaxx High Fidelity PCR System
10X PicoMaxx Reaction Buffer
Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid
PicoMaxx High Fidelity PCR System
10X PicoMaxx Reaction Buffer
No specific data.

Incompatible materials
PicoMaxx High Fidelity PCR System
10X PicoMaxx Reaction Buffer
May react or be incompatible with oxidizing materials.

Hazardous decomposition products
PicoMaxx High Fidelity PCR System
10X PicoMaxx Reaction Buffer
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>Glycerol</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50 Oral</td>
<td>Rat</td>
<td>12600 mg/kg</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2800 mg/kg</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Poly(oxy-1,2-ethanediyl), (\alpha)-(1,1,3,3-tetramethylbutyl)phenyl)-(\omega)-hydroxy-</strong></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td><strong>10X PicoMaxx Reaction Buffer</strong></td>
<td>LD50 Dermal</td>
<td>Rat</td>
<td>2600 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td><strong>Trometamol</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>24 hours 500 mg</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>24 hours 500 mg</td>
<td>1 %</td>
<td></td>
</tr>
<tr>
<td><strong>Potassium chloride</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>25 %</td>
<td>500 mg</td>
<td>-</td>
</tr>
<tr>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>24 hours 500 mg</td>
<td>-</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>Glycerol</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 mg</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 mg</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>1 %</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Poly(oxy-1,2-ethanediyl), (\alpha)-(1,1,3,3-tetramethylbutyl)phenyl)-(\omega)-hydroxy-</strong></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>25 %</td>
<td>500 mg</td>
</tr>
<tr>
<td><strong>10X PicoMaxx Reaction Buffer</strong></td>
<td>Skin - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td><strong>Trometamol</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>25 %</td>
<td>500 mg</td>
<td>-</td>
</tr>
<tr>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 mg</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Potassium chloride</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Sensitization

Not available.

### Mutagenicity

**Conclusion/Summary**: Not available.

### Carcinogenicity

**Conclusion/Summary**: Not available.

### Reproductive toxicity

**Conclusion/Summary**: Not available.

### Teratogenicity

**Conclusion/Summary**: Not available.

### Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>10X PicoMaxx Reaction Buffer</strong></td>
<td>Category 3</td>
<td>-</td>
<td>Respiratory tract irritation</td>
</tr>
</tbody>
</table>
Section 11. Toxicological information

Not available.

Aspiration hazard
Not available.

Information on the likely routes of exposure

<table>
<thead>
<tr>
<th></th>
<th>PicoMaxx High Fidelity PCR System</th>
<th>10X PicoMaxx Reaction Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>No known significant effects or critical hazards.</td>
<td></td>
</tr>
<tr>
<td>Ingestion</td>
<td>No known significant effects or critical hazards.</td>
<td></td>
</tr>
<tr>
<td>Skin contact</td>
<td>No known significant effects or critical hazards.</td>
<td></td>
</tr>
</tbody>
</table>

Potential acute health effects

**Eye contact**

<table>
<thead>
<tr>
<th></th>
<th>PicoMaxx High Fidelity PCR System</th>
<th>10X PicoMaxx Reaction Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Inhalation**

<table>
<thead>
<tr>
<th></th>
<th>PicoMaxx High Fidelity PCR System</th>
<th>10X PicoMaxx Reaction Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Skin contact**

<table>
<thead>
<tr>
<th></th>
<th>PicoMaxx High Fidelity PCR System</th>
<th>10X PicoMaxx Reaction Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Ingestion**

<table>
<thead>
<tr>
<th></th>
<th>PicoMaxx High Fidelity PCR System</th>
<th>10X PicoMaxx Reaction Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact**

<table>
<thead>
<tr>
<th></th>
<th>PicoMaxx High Fidelity PCR System</th>
<th>10X PicoMaxx Reaction Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adverse symptoms may include the following: irritation watering redness</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>PicoMaxx High Fidelity PCR System</th>
<th>10X PicoMaxx Reaction Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Inhalation**

<table>
<thead>
<tr>
<th></th>
<th>PicoMaxx High Fidelity PCR System</th>
<th>10X PicoMaxx Reaction Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>No specific data.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Skin contact**

<table>
<thead>
<tr>
<th></th>
<th>PicoMaxx High Fidelity PCR System</th>
<th>10X PicoMaxx Reaction Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>No specific data.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Ingestion**

<table>
<thead>
<tr>
<th></th>
<th>PicoMaxx High Fidelity PCR System</th>
<th>10X PicoMaxx Reaction Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>No specific data.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

**Short term exposure**

**Potential immediate effects**

<table>
<thead>
<tr>
<th></th>
<th>Not available.</th>
</tr>
</thead>
</table>

**Potential delayed effects**

<table>
<thead>
<tr>
<th></th>
<th>Not available.</th>
</tr>
</thead>
</table>

**Long term exposure**
Section 11. Toxicological information

Potential immediate effects: Not available.
Potential delayed effects: Not available.
Potential chronic health effects:

General: PicoMaxx High Fidelity PCR System
10X PicoMaxx Reaction Buffer
No known significant effects or critical hazards.

Carcinogenicity: PicoMaxx High Fidelity PCR System
10X PicoMaxx Reaction Buffer
No known significant effects or critical hazards.

Mutagenicity: PicoMaxx High Fidelity PCR System
10X PicoMaxx Reaction Buffer
No known significant effects or critical hazards.

Reproductive toxicity: PicoMaxx High Fidelity PCR System
10X PicoMaxx Reaction Buffer
No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Oral (mg/kg)</th>
<th>Dermal (mg/kg)</th>
<th>Inhalation (gases) (ppm)</th>
<th>Inhalation (vapors) (mg/l)</th>
<th>Inhalation (dusts and mists) (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PicoMaxx High Fidelity PCR System</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>12600</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl].omega.-hydroxy-</td>
<td>500</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>10X PicoMaxx Reaction Buffer</td>
<td>115555.6</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Potassium chloride</td>
<td>2600</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

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>PicoMaxx High Fidelity PCR System</td>
<td>Acute LC50 54000 mg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td>Glycerol</td>
<td>Acute EC50 210 µg/l Fresh water</td>
<td>Algae - Selenastrum sp.</td>
<td>96 hours</td>
</tr>
<tr>
<td>Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl].omega.-hydroxy-</td>
<td>Acute LC50 10800 µg/l Marine water</td>
<td>Crustaceans - Pandalus montagui - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td>10X PicoMaxx Reaction Buffer</td>
<td>Acute LC50 8600 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td>Potassium chloride</td>
<td>Acute LC50 7200 µg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
</tbody>
</table>
## Section 12. Ecological information

### 10X PicoMaxx Reaction Buffer

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
<th>Dose</th>
<th>Inoculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trometamol</td>
<td>301D Ready Biodegradability - Closed Bottle Test</td>
<td>93 % - 30 days</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Potassium chloride</td>
<td>OECD 301F Ready Biodegradability - Manometric Respirometry Test</td>
<td>97.1 % - Readily - 28 days</td>
<td>30 mg/l</td>
<td>-</td>
</tr>
</tbody>
</table>

### Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogPow</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>PicoMaxx High Fidelity PCR System</td>
<td>Glycerol</td>
<td>-1.76</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-</td>
<td>2.7</td>
<td>78.67</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>10X PicoMaxx Reaction Buffer</td>
<td>Trometamol</td>
<td>-</td>
<td>Readily</td>
</tr>
<tr>
<td></td>
<td>Potassium chloride</td>
<td>-</td>
<td>Readily</td>
</tr>
</tbody>
</table>

### Soil/water partition coefficient (KOC)

| Soil/water partition coefficient (KOC) | Not available. |
Section 12. Ecological information

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.

Transport in bulk according to IMO instruments: Not available.

Section 15. Regulatory information

Canadian lists

Canadian NPRI: None of the components are listed.
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

Australia: Not determined.
Canada: Not determined.
China: Not determined.
Eurasian Economic Union: Russian Federation inventory: Not determined.
Japan: Japan inventory (CSCL): Not determined.
Japan inventory (ISHL): Not determined.
Section 15. Regulatory information

- **New Zealand**: Not determined.
- **Philippines**: Not determined.
- **Republic of Korea**: Not determined.
- **Taiwan**: All components are listed or exempted.
- **Thailand**: Not determined.
- **Turkey**: Not determined.
- **United States**: All components are active or exempted.
- **Viet Nam**: Not determined.

Section 16. Other information

**History**
- **Date of issue/Date of revision**: 10/05/2022
- **Date of previous issue**: 11/24/2019
- **Version**: 6

**Key to abbreviations**
- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- 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
- LogPow = logarithm of the octanol/water partition coefficient
- N/A = Not available
- UN = United Nations

**Procedure used to derive the classification**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>EYE IRRITATION - Category 2B</td>
<td>Calculation method</td>
</tr>
<tr>
<td>AQUATIC HAZARD (LONG-TERM) - Category 3</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

*Indicates information that has changed from previously issued version.*

**Notice to reader**

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