

# SAFETY DATA SHEET



PicoMaxx High Fidelity PCR System, Part Number 600420

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

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

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

**Identified uses** : Analytical reagent.  
PicoMaxx High Fidelity PCR System 0.04 ml (100 U 2.5 U/μl)  
10X PicoMaxx Reaction Buffer 1 ml  
**Uses advised against** : None known.

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

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000  
**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +(44)-870-8200418

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : PicoMaxx High Fidelity PCR System Mixture  
10X PicoMaxx Reaction Buffer Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

**PicoMaxx High Fidelity PCR System**

H412 LONG-TERM (CHRONIC) AQUATIC HAZARD Category 3

PicoMaxx High Fidelity PCR System The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.  
10X PicoMaxx Reaction Buffer The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** : PicoMaxx High Fidelity PCR System Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 30 - 60%  
10X PicoMaxx Reaction Buffer Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 1 - 10%  
Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%  
Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 1 - 10%

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## SECTION 2: Hazards identification

**Ingredients of unknown ecotoxicity** : 10X PicoMaxx Reaction Buffer Contains 2% of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

<b>Signal word</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	No signal word. No signal word.
<b>Hazard statements</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	H412 - Harmful to aquatic life with long lasting effects. No known significant effects or critical hazards.
<b><u>Precautionary statements</u></b>		
<b>Prevention</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	P273 - Avoid release to the environment. Not applicable.
<b>Response</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not applicable. Not applicable.
<b>Storage</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not applicable. Not applicable.
<b>Disposal</b>	: 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. Not applicable.
<b>Supplemental label elements</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not applicable. Safety data sheet available on request.
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not applicable. Not applicable.
<b><u>Special packaging requirements</u></b>		
<b>Tactile warning of danger</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not applicable. Not applicable.

### 2.3 Other hazards

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : PicoMaxx High Fidelity PCR System  
10X PicoMaxx Reaction Buffer  
This mixture does not contain any substances that are assessed to be a PBT or a vPvB.  
This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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SECTION 2: Hazards identification

Other hazards which do not result in classification	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Contains one or more substances considered to have endocrine-disrupting properties. None known.				
Substances identified as having endocrine disruptor properties	: <table><tr><th>Ingredient name</th><th>Impact</th></tr><tr><td><b>PicoMaxx High Fidelity PCR System</b> Poly(oxy-1,2-ethanediyl), .alpha.-[ (1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-</td><td>Environment</td></tr></table>	Ingredient name	Impact	<b>PicoMaxx High Fidelity PCR System</b> Poly(oxy-1,2-ethanediyl), .alpha.-[ (1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Environment	
Ingredient name	Impact					
<b>PicoMaxx High Fidelity PCR System</b> Poly(oxy-1,2-ethanediyl), .alpha.-[ (1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Environment					

SECTION 3: Composition/information on ingredients

3.1 Substances	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Mixture Mixture
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Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
PicoMaxx High Fidelity PCR System					
Glycerol	EC: 200-289-5 CAS: 56-81-5	≥50 - ≤75	Not classified.	-	[2]
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	CAS: 9036-19-5	<1	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	ATE [Oral] = 500 mg/kg M [Acute] = 10 M [Chronic] = 1	[1] [3]
10X PicoMaxx Reaction Buffer					
Trometamol	EC: 201-064-4 CAS: 77-86-1	<10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 <b>See Section 16 for the full text of the H statements declared above.</b>	-	[1]

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type	
PicoMaxx High Fidelity PCR System	[1] Substance classified with a health or environmental hazard [2] Substance with a workplace exposure limit [3] Substance of equivalent concern
10X PicoMaxx Reaction Buffer	[1] Substance classified with a health or environmental hazard
Occupational exposure limits, if available, are listed in Section 8.	

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

<b>Eye contact</b>	: 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. Get medical attention if irritation occurs.
	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.
<b>Inhalation</b>	: PicoMaxx High Fidelity PCR System	Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	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.
<b>Skin contact</b>	: PicoMaxx High Fidelity PCR System	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	10X PicoMaxx Reaction Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	: PicoMaxx High Fidelity PCR System	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.
	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.
<b>Protection of first-aiders</b>	: PicoMaxx High Fidelity PCR System	No action shall be taken involving any personal risk or without suitable training.
	10X PicoMaxx Reaction Buffer	No action shall be taken involving any personal risk or without suitable training.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Potential acute health effects

<b>Eye contact</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.
<b>Inhalation</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.
<b>Skin contact</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.
<b>Ingestion</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

<b>Eye contact</b>	: PicoMaxx High Fidelity PCR System	No specific data.
	10X PicoMaxx Reaction Buffer	No specific data.

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## SECTION 4: First aid measures

<b>Inhalation</b>	: PicoMaxx High Fidelity PCR System	No specific data.
	10X PicoMaxx Reaction Buffer	No specific data.
<b>Skin contact</b>	: PicoMaxx High Fidelity PCR System	No specific data.
	10X PicoMaxx Reaction Buffer	No specific data.
<b>Ingestion</b>	: PicoMaxx High Fidelity PCR System	No specific data.
	10X PicoMaxx Reaction Buffer	No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

<b>Notes to physician</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
<b>Specific treatments</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	No specific treatment. No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	None known. None known.

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

<b>Hazards from the substance or mixture</b>	: PicoMaxx High Fidelity PCR System	In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
	10X PicoMaxx Reaction Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous combustion products</b>	: PicoMaxx High Fidelity PCR System	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	10X PicoMaxx Reaction Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides halogenated compounds metal oxide/oxides

### 5.3 Advice for firefighters

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## SECTION 5: Firefighting measures

<b>Special precautions for fire-fighters</b>	: PicoMaxx High Fidelity PCR System	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 PicoMaxx Reaction 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.
<b>Special protective equipment for fire-fighters</b>	: PicoMaxx High Fidelity PCR System	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	10X PicoMaxx Reaction Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	: 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 spilt material. 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 spilt material. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	: PicoMaxx High Fidelity PCR System	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	10X PicoMaxx Reaction Buffer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

: PicoMaxx High Fidelity PCR System	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
10X PicoMaxx Reaction Buffer	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

<b>Methods for cleaning up</b>	: 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. May be harmful to the environment if released. Dispose of spillages under controlled conditions.
	10X PicoMaxx Reaction Buffer	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively,



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SECTION 6: Accidental release measures

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.

6.4 Reference to other sections : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures	: PicoMaxx High Fidelity PCR System	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour 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.
	10X PicoMaxx Reaction Buffer	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	: PicoMaxx High Fidelity PCR System	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 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.

7.2 Conditions for safe storage, including any incompatibilities

Storage	: PicoMaxx High Fidelity PCR System	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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
	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 unlabelled 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	: PicoMaxx High Fidelity PCR System	Industrial applications, Professional applications.
	10X PicoMaxx Reaction Buffer	Industrial applications, Professional applications.

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## SECTION 7: Handling and storage

**Industrial sector specific solutions** : PicoMaxx High Fidelity PCR System  
10X PicoMaxx Reaction Buffer Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
PicoMaxx High Fidelity PCR System Glycerol	NAOSH (Ireland, 5/2021). Notes: Advisory Occupational Exposure Limit Values (OELVs) OELV-8hr: 10 mg/m <sup>3</sup> 8 hours. Form: mist

#### Biological exposure indices

None known.

**Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
10X PicoMaxx Reaction Buffer Trometamol	DNEL	Long term Oral	8.3 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	29 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Dermal	83.3 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	117.5 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	166.7 mg/kg bw/day	Workers	Systemic

#### PNECs

No PNECs available

### 8.2 Exposure controls

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### 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: safety glasses with side-shields.



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## SECTION 8: Exposure controls/personal protection

### 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.

**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.

## SECTION 9: Physical and chemical properties

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

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	PicoMaxx High Fidelity PCR System	Liquid.
	10X PicoMaxx Reaction Buffer	Liquid.
<b>Colour</b>	PicoMaxx High Fidelity PCR System	Not available.
	10X PicoMaxx Reaction Buffer	Not available.
<b>Odour</b>	PicoMaxx High Fidelity PCR System	Not available.
	10X PicoMaxx Reaction Buffer	Not available.
<b>Odour threshold</b>	PicoMaxx High Fidelity PCR System	Not available.
	10X PicoMaxx Reaction Buffer	Not available.
<b>Melting point/freezing point</b>	PicoMaxx High Fidelity PCR System	Not available.
	10X PicoMaxx Reaction Buffer	Not available.
<b>Initial boiling point and boiling range</b>	PicoMaxx High Fidelity PCR System	Not available.
	10X PicoMaxx Reaction Buffer	Not available.
<b>Flammability</b>	PicoMaxx High Fidelity PCR System	Not applicable.
	10X PicoMaxx Reaction Buffer	Not applicable.

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## SECTION 9: Physical and chemical properties

<b>Upper/lower flammability or explosive limits</b>	PicoMaxx High Fidelity PCR System	Not available.
	10X PicoMaxx Reaction Buffer	Not available.

## Flash point

Ingredient name	Closed cup		Open cup	
	°C	Method	°C	Method
<b>PicoMaxx High Fidelity PCR System</b>				
Glycerol			177	
<b>10X PicoMaxx Reaction Buffer</b>				
Sorbitan monolaurate, ethoxylated	275		290	

## Auto-ignition temperature

Ingredient name	°C	Method
<b>PicoMaxx High Fidelity PCR System</b>		
Glycerol	370	

## Decomposition temperature

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

pH

• PicoMaxx High Fidelity PCR System	8
10X PicoMaxx Reaction Buffer	8.83

## Viscosity

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

**Solubility(ies)**

Media	Result
<b>PicoMaxx High Fidelity PCR System</b> water	Soluble
<b>10X PicoMaxx Reaction Buffer</b> water	Soluble

**Partition coefficient: n-octanol/water**

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

## Vapour pressure

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
<b>PicoMaxx High Fidelity PCR System</b>						
water	23.8	3.2		92.258	12.3	
Glycerol	0.000075	0.00001		0.0025	0.00033	
<b>10X PicoMaxx Reaction Buffer</b>						
water	23.8	3.2		92.258	12.3	

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## SECTION 9: Physical and chemical properties

	Sorbitan monolaurate, ethoxylated	<1	<0.13				
<b>Evaporation rate</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not available.	Not available.				
<b>Relative density</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not available.	Not available.				
<b>Vapour density</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not available.	Not available.				
<b>Explosive properties</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not available.	Not available.				
<b>Oxidising properties</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not available.	Not available.				
<b>Particle characteristics</b>							
<b>Median particle size</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not applicable.	Not applicable.				

### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	The product is stable. The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	No specific data. No specific data.
<b>10.5 Incompatible materials</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.

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**SECTION 10: Stability and reactivity**

10.6 Hazardous decomposition products	PicoMaxx High Fidelity PCR System	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	10X PicoMaxx Reaction Buffer	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
PicoMaxx High Fidelity PCR System Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	LD50 Oral	Rat	2800 mg/kg	-
10X PicoMaxx Reaction Buffer Trometamol	LD50 Dermal	Rat	>5000 mg/kg	-

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
PicoMaxx High Fidelity PCR System Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	500	N/A	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
PicoMaxx High Fidelity PCR System Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Eyes - Severe irritant	Rabbit	-	1 %	-
10X PicoMaxx Reaction Buffer Trometamol	Skin - Moderate irritant Skin - Severe irritant	Rabbit Rabbit	- -	25 % 500 mg	- -

Sensitiser

Conclusion/Summary : 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)

Not available.

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## SECTION 11: Toxicological information

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

<b>Information on likely routes of exposure</b>	: PicoMaxx High Fidelity PCR System	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
	10X PicoMaxx Reaction Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

### Potential acute health effects

<b>Inhalation</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.
<b>Ingestion</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.
<b>Skin contact</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.
<b>Eye contact</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.

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

<b>Inhalation</b>	: PicoMaxx High Fidelity PCR System	No specific data.
	10X PicoMaxx Reaction Buffer	No specific data.
<b>Ingestion</b>	: PicoMaxx High Fidelity PCR System	No specific data.
	10X PicoMaxx Reaction Buffer	No specific data.
<b>Skin contact</b>	: PicoMaxx High Fidelity PCR System	No specific data.
	10X PicoMaxx Reaction Buffer	No specific data.
<b>Eye contact</b>	: PicoMaxx High Fidelity PCR System	No specific data.
	10X PicoMaxx Reaction Buffer	No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

<b>Potential immediate effects</b>	: Not available.
<b>Potential delayed effects</b>	: Not available.

#### Long term exposure

<b>Potential immediate effects</b>	: Not available.
<b>Potential delayed effects</b>	: Not available.

### Potential chronic health effects

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## SECTION 11: Toxicological information

<b>General</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.
<b>Mutagenicity</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

Not available.

#### 11.2.2 Other information

Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
<b>PicoMaxx High Fidelity PCR System</b> Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Acute EC50 210 µg/l Fresh water	Algae - Selenastrum sp.	96 hours
	Acute LC50 10800 µg/l Marine water	Crustaceans - Pandalus montagui - Adult	48 hours
	Acute LC50 8600 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 7200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
<b>10X PicoMaxx Reaction Buffer</b> Trometamol	Acute EC50 >980 mg/l Fresh water Acute NOEC 520 mg/l Fresh water	Daphnia Daphnia	48 hours 48 hours

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<b>10X PicoMaxx Reaction Buffer</b> Trometamol	OECD 301F Ready Biodegradability - Manometric Respirometry Test	97.1 % - Readily - 28 days	30 mg/l	-



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## SECTION 12: Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<b>10X PicoMaxx Reaction Buffer</b> Trometamol	-	-	Readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>PicoMaxx High Fidelity PCR System</b> Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	2.7	78.67	low
<b>10X PicoMaxx Reaction Buffer</b> Trometamol	-2.31	-	low

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

### 12.6 Endocrine disrupting properties

PicoMaxx High Fidelity PCR System Contains one or more substances considered to have endocrine-disrupting properties.

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : Dispose of material(s) and residues under controlled conditions. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

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## SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No.	No.	No.

### Additional information

**14.6 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.

**14.7 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**  
[EU Regulation \(EC\) No. 1907/2006 \(REACH\)](#)

[Annex XIV - List of substances subject to authorisation](#)

### Annex XIV

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
<b>PicoMaxx High Fidelity PCR System</b> Poly(oxy-1,2-ethanediyl), .alpha.-[ (1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Endocrine disrupting properties for environment	Listed	42	7/3/2017

### Substances of very high concern

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
<b>PicoMaxx High Fidelity PCR System</b> Poly(oxy-1,2-ethanediyl), .alpha.-[ (1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Endocrine disrupting properties for environment	Recommended	ED/169/2012	7/3/2017

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

Not listed.

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

### Other EU regulations

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## SECTION 15: Regulatory information

### Ozone depleting substances (1005/2009/EU)

Not listed.

### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

### Persistent Organic Pollutants

Not listed.

### Seveso Directive

This product is not controlled under the Seveso Directive.

### 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

<b>Australia</b>	: Not determined.
<b>Canada</b>	: Not determined.
<b>China</b>	: Not determined.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : Not determined.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : Not determined. <b>Japan inventory (ISHL)</b> : Not determined.
<b>New Zealand</b>	: Not determined.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: Not determined.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

## SECTION 16: Other information

Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
DMEL = Derived Minimal Effect Level  
DNEL = Derived No Effect Level  
EUH statement = CLP-specific Hazard statement  
N/A = Not available

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## SECTION 16: Other information

PBT = Persistent, Bioaccumulative and Toxic  
PNEC = Predicted No Effect Concentration  
RRN = REACH Registration Number  
vPvB = Very Persistent and Very Bioaccumulative

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
<b>PicoMaxx High Fidelity PCR System</b> Aquatic Chronic 3, H412	Calculation method

### Full text of abbreviated H statements

<b>PicoMaxx High Fidelity PCR System</b> H302 H315 H318 H400 H410 H412	Harmful if swallowed. Causes skin irritation. Causes serious eye damage. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. Harmful to aquatic life with long lasting effects.
<b>10X PicoMaxx Reaction Buffer</b> H315 H319	Causes skin irritation. Causes serious eye irritation.

### Full text of classifications [CLP/GHS]

<b>PicoMaxx High Fidelity PCR System</b> Acute Tox. 4 Aquatic Acute 1 Aquatic Chronic 1 Aquatic Chronic 3 Eye Dam. 1 Skin Irrit. 2	ACUTE TOXICITY - Category 4 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SKIN CORROSION/IRRITATION - Category 2
<b>10X PicoMaxx Reaction Buffer</b> Eye Irrit. 2 Skin Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 SKIN CORROSION/IRRITATION - Category 2

**Date of issue/ Date of revision** : 21/11/2022

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**Version** : 1.1

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