

SAFETY DATA SHEET



Taq2000 DNA Polymerase, Part Number 600196

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

1.1 Product identifier

Product name : Taq2000 DNA Polymerase, Part Number 600196
Part no. (chemical kit) : 600196
Part no. : Taq2000 DNA 600196-51
Polymerase
10X Taq Polymerase 600131-82
Buffer

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

Material uses : Analytical reagent.
Taq2000 DNA Polymerase 0.1 ml (500U 5U/μl)
10X Taq Polymerase Buffer 1 ml

1.3 Details of the supplier of the safety data sheet

Agilent Technologies Manufacturing GmbH & Co. KG
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 : Taq2000 DNA Mixture
Polymerase
10X Taq Polymerase Mixture
Buffer

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

Taq2000 DNA Polymerase

H412 LONG-TERM (CHRONIC) AQUATIC HAZARD Category 3

Ingredients of unknown toxicity : Taq2000 DNA Polymerase Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 30 - 60%
10X Taq Polymerase Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 1 - 10%
Buffer Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 1 - 10%

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

Taq2000 DNA Polymerase, Part Number 600196

SECTION 2: Hazards identification

Signal word	: Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	No signal word. No signal word.
Hazard statements	: Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	H412 - Harmful to aquatic life with long lasting effects. No known significant effects or critical hazards.
<u>Precautionary statements</u>		
Prevention	: Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	P273 - Avoid release to the environment. Not applicable.
Response	: Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	Not applicable. Not applicable.
Storage	: Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	Not applicable. Not applicable.
Disposal	: Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. Not applicable.
Hazardous ingredients	: Taq2000 DNA Polymerase	Not applicable.
Supplemental label elements	: Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	Not applicable. Not applicable.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	Not applicable. Not applicable.
<u>Special packaging requirements</u>		
Tactile warning of danger	: Taq2000 DNA Polymerase 10X Taq Polymerase 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	: Taq2000 DNA Polymerase 10X Taq Polymerase 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.
Other hazards which do not result in classification	: Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	None known. None known.

Taq2000 DNA Polymerase, Part Number 600196

SECTION 3: Composition/information on ingredients

3.1 Substances : Taq2000 DNA Polymerase Mixture
10X Taq Polymerase Buffer Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
Taq2000 DNA Polymerase				
Glycerol	REACH #: Annex V 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	Eye Irrit. 2, H319 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1) See Section 16 for the full text of the H statements declared above.	[1] [5]

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

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

[6] Additional disclosure due to company policy

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	: Taq2000 DNA Polymerase	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
	10X Taq Polymerase 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	: Taq2000 DNA Polymerase	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 Taq Polymerase 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.

Taq2000 DNA Polymerase, Part Number 600196

SECTION 4: First aid measures

Skin contact	: Taq2000 DNA Polymerase	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 Taq Polymerase Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: Taq2000 DNA Polymerase	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 Taq Polymerase 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.
Protection of first-aiders	: Taq2000 DNA Polymerase	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 Taq Polymerase 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

Eye contact	: Taq2000 DNA Polymerase	No known significant effects or critical hazards.
	10X Taq Polymerase Buffer	No known significant effects or critical hazards.
Inhalation	: Taq2000 DNA Polymerase	No known significant effects or critical hazards.
	10X Taq Polymerase Buffer	No known significant effects or critical hazards.
Skin contact	: Taq2000 DNA Polymerase	No known significant effects or critical hazards.
	10X Taq Polymerase Buffer	No known significant effects or critical hazards.
Ingestion	: Taq2000 DNA Polymerase	No known significant effects or critical hazards.
	10X Taq Polymerase Buffer	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: Taq2000 DNA Polymerase	No specific data.
	10X Taq Polymerase Buffer	No specific data.
Inhalation	: Taq2000 DNA Polymerase	No specific data.
	10X Taq Polymerase Buffer	No specific data.

Taq2000 DNA Polymerase, Part Number 600196

SECTION 4: First aid measures

Skin contact	: Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	No specific data. No specific data.
Ingestion	: Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	No specific data. No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	: Taq2000 DNA Polymerase 10X Taq Polymerase 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.
Specific treatments	: Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	No specific treatment. No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	: Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	None known. None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous combustion products	: Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides

5.3 Advice for firefighters

Special precautions for fire-fighters	: Taq2000 DNA Polymerase 10X Taq Polymerase 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. 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.
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Taq2000 DNA Polymerase, Part Number 600196

SECTION 5: Firefighting measures

Special protective equipment for fire-fighters	: Taq2000 DNA Polymerase	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 Taq Polymerase 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

For non-emergency personnel	: Taq2000 DNA Polymerase	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. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	10X Taq Polymerase 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.
For emergency responders	: Taq2000 DNA Polymerase	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 Taq Polymerase 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

: Taq2000 DNA Polymerase	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 Taq Polymerase 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

Methods for cleaning up	: Taq2000 DNA Polymerase	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 Taq Polymerase 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.

Taq2000 DNA Polymerase, Part Number 600196

SECTION 6: Accidental release measures

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	: Taq2000 DNA Polymerase	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 Taq Polymerase Buffer	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	: Taq2000 DNA Polymerase	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 Taq Polymerase 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	: Taq2000 DNA Polymerase	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 Taq Polymerase 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	: Taq2000 DNA Polymerase	Industrial applications, Professional applications.
	10X Taq Polymerase Buffer	Industrial applications, Professional applications.
Industrial sector specific solutions	: Taq2000 DNA Polymerase	Not available.
	10X Taq Polymerase Buffer	Not available.

Taq2000 DNA Polymerase, Part Number 600196

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Taq2000 DNA Polymerase Glycerol	NAOSH (Ireland, 1/2020). OELV-8hr: 10 mg/m ³ 8 hours. Form: mist

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. 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

No DNELs/DMELs available.

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.

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.

Taq2000 DNA Polymerase, Part Number 600196

SECTION 8: Exposure controls/personal protection

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

Physical state	Taq2000 DNA Polymerase	Liquid.
	10X Taq Polymerase Buffer	Liquid.
Colour	Taq2000 DNA Polymerase	Not available.
	10X Taq Polymerase Buffer	Not available.
Odour	Taq2000 DNA Polymerase	Not available.
	10X Taq Polymerase Buffer	Not available.
Odour threshold	Taq2000 DNA Polymerase	Not available.
	10X Taq Polymerase Buffer	Not available.
Melting point/freezing point	Taq2000 DNA Polymerase	Not available.
	10X Taq Polymerase Buffer	Not available.
Initial boiling point and boiling range	Taq2000 DNA Polymerase	Not available.
	10X Taq Polymerase Buffer	Not available.
Flammability (solid, gas)	Taq2000 DNA Polymerase	Not applicable.
	10X Taq Polymerase Buffer	Not applicable.
Upper/lower flammability or explosive limits	Taq2000 DNA Polymerase	Not available.
	10X Taq Polymerase Buffer	Not available.

Flash point	Ingredient name	Closed cup			Open cup		
		°C	°F	Method	°C	°F	Method
Auto-ignition temperature	Taq2000 DNA Polymerase						
	Edetic acid	>100	>212	DIN 51758			
	Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	>109.85	>229.7				
Auto-ignition temperature	Ingredient name	°C	°F	Method			
	Taq2000 DNA Polymerase						
	Glycerol	370	698				
	Edetic acid	>400	>752	VDI 2263			

Taq2000 DNA Polymerase, Part Number 600196

SECTION 9: Physical and chemical properties

Decomposition temperature	:	Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	Not available. Not available.
pH	:	Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	8 8.8
Viscosity	:	Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	Not available. Not available.
Solubility(ies)	:	Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	Soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	:	Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	Not applicable. Not applicable.

Vapour pressure	:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="text-align: left;">Ingredient name</th> <th colspan="3" style="text-align: center;">Vapour Pressure at 20°C</th> <th colspan="3" style="text-align: center;">Vapour pressure at 50°C</th> </tr> <tr> <th style="text-align: center;">mm Hg</th> <th style="text-align: center;">kPa</th> <th style="text-align: center;">Method</th> <th style="text-align: center;">mm Hg</th> <th style="text-align: center;">kPa</th> <th style="text-align: center;">Method</th> </tr> </thead> <tbody> <tr> <td>Taq2000 DNA Polymerase</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>water</td> <td style="text-align: center;">23.8</td> <td style="text-align: center;">3.2</td> <td></td> <td style="text-align: center;">92.258</td> <td style="text-align: center;">12.3</td> <td></td> </tr> <tr> <td>Sorbitan monolaurate, ethoxylated</td> <td style="text-align: center;"><1</td> <td style="text-align: center;"><0.13</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>10X Taq Polymerase Buffer</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>water</td> <td style="text-align: center;">23.8</td> <td style="text-align: center;">3.2</td> <td></td> <td style="text-align: center;">92.258</td> <td style="text-align: center;">12.3</td> <td></td> </tr> <tr> <td>2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride</td> <td style="text-align: center;">0.000027</td> <td style="text-align: center;">0.0000036</td> <td></td> <td style="text-align: center;">0.000007501</td> <td style="text-align: center;">0.000001</td> <td></td> </tr> </tbody> </table>						Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C			mm Hg	kPa	Method	mm Hg	kPa	Method	Taq2000 DNA Polymerase							water	23.8	3.2		92.258	12.3		Sorbitan monolaurate, ethoxylated	<1	<0.13					10X Taq Polymerase Buffer							water	23.8	3.2		92.258	12.3		2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
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Evaporation rate	:	Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	Not available. Not available.
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Relative density	:	Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	Not available. Not available.
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Vapour density	:	Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	Not available. Not available.
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Oxidising properties	:	Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	Not available. Not available.
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Particle characteristics

Median particle size	:	Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	Not applicable. Not applicable.
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Taq2000 DNA Polymerase, Part Number 600196

SECTION 9: Physical and chemical properties

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: Taq2000 DNA Polymerase 10X Taq Polymerase 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.
10.2 Chemical stability	: Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	The product is stable. The product is stable.
10.3 Possibility of hazardous reactions	: Taq2000 DNA Polymerase 10X Taq Polymerase 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.
10.4 Conditions to avoid	: Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	No specific data. No specific data.
10.5 Incompatible materials	: Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
10.6 Hazardous decomposition products	: Taq2000 DNA Polymerase 10X Taq Polymerase Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced. 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
Taq2000 DNA Polymerase Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy-	LD50 Oral	Rat	2800 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)
Taq2000 DNA Polymerase Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	2800	N/A	N/A	N/A	N/A

Irritation/Corrosion

Taq2000 DNA Polymerase, Part Number 600196

SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Taq2000 DNA Polymerase Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy-	Eyes - Severe irritant	Rabbit	-	1 %	-

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.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure

Taq2000 DNA Polymerase	Routes of entry anticipated: Oral, Dermal, Inhalation.
10X Taq Polymerase Buffer	Not available.

Potential acute health effects

Inhalation	: Taq2000 DNA Polymerase	No known significant effects or critical hazards.
	: 10X Taq Polymerase Buffer	No known significant effects or critical hazards.
Ingestion	: Taq2000 DNA Polymerase	No known significant effects or critical hazards.
	: 10X Taq Polymerase Buffer	No known significant effects or critical hazards.
Skin contact	: Taq2000 DNA Polymerase	No known significant effects or critical hazards.
	: 10X Taq Polymerase Buffer	No known significant effects or critical hazards.
Eye contact	: Taq2000 DNA Polymerase	No known significant effects or critical hazards.
	: 10X Taq Polymerase Buffer	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	: Taq2000 DNA Polymerase	No specific data.
	: 10X Taq Polymerase Buffer	No specific data.
Ingestion	: Taq2000 DNA Polymerase	No specific data.
	: 10X Taq Polymerase Buffer	No specific data.

Taq2000 DNA Polymerase, Part Number 600196

SECTION 11: Toxicological information

Skin contact	: Taq2000 DNA Polymerase	No specific data.
	: 10X Taq Polymerase Buffer	No specific data.
Eye contact	: Taq2000 DNA Polymerase	No specific data.
	: 10X Taq Polymerase Buffer	No specific data.

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

Short term exposure

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

Long term exposure

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

Potential chronic health effects

General	: Taq2000 DNA Polymerase	No known significant effects or critical hazards.
	: 10X Taq Polymerase Buffer	No known significant effects or critical hazards.
Carcinogenicity	: Taq2000 DNA Polymerase	No known significant effects or critical hazards.
	: 10X Taq Polymerase Buffer	No known significant effects or critical hazards.
Mutagenicity	: Taq2000 DNA Polymerase	No known significant effects or critical hazards.
	: 10X Taq Polymerase Buffer	No known significant effects or critical hazards.
Reproductive toxicity	: Taq2000 DNA Polymerase	No known significant effects or critical hazards.
	: 10X Taq Polymerase Buffer	No known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Taq2000 DNA Polymerase 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

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Taq2000 DNA Polymerase, Part Number 600196

SECTION 12: Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
Taq2000 DNA Polymerase Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy-	3.77	78.67	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : 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 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.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN 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.

Taq2000 DNA Polymerase, Part Number 600196

SECTION 14: Transport information

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

<u>Ingredient name</u>	<u>Intrinsic property</u>	<u>Status</u>	<u>Reference number</u>	<u>Date of revision</u>
Taq2000 DNA Polymerase Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Substance of equivalent concern for environment	Listed	42	7/3/2017

Substances of very high concern

<u>Ingredient name</u>	<u>Intrinsic property</u>	<u>Status</u>	<u>Reference number</u>	<u>Date of revision</u>
Taq2000 DNA Polymerase Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Substance of equivalent concern 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

Label : Taq2000 DNA Polymerase Not applicable.
10X Taq Polymerase Buffer Not applicable.

Other EU regulations

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)

Taq2000 DNA Polymerase, Part Number 600196

SECTION 15: Regulatory information

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia	: All components are listed or exempted.
Canada	: All components are listed or exempted.
China	: All components are listed or exempted.
Europe	: All components are listed or exempted.
Japan	: Japan inventory (CSCL): Not determined. Japan inventory (ISHL): Not determined.
New Zealand	: All components are listed or exempted.
Philippines	: All components are listed or exempted.
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	: All components are listed or exempted.

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 PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number vPvB = Very Persistent and Very Bioaccumulative
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Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Taq2000 DNA Polymerase Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements

Taq2000 DNA Polymerase H319 H400 H410 H412	Causes serious eye irritation. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. Harmful to aquatic life with long lasting effects.
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Full text of classifications [CLP/GHS]

Taq2000 DNA Polymerase Aquatic Acute 1 Aquatic Chronic 1 Aquatic Chronic 3 Eye Irrit. 2	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 2
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Taq2000 DNA Polymerase, Part Number 600196

SECTION 16: Other information

Date of issue/ Date of revision : 04/05/2022

Date of previous issue : No previous validation

Version : 1

Notice to reader

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