Conforms to US OSHA Hazard Communication 29CFR1910.1200

SAFETY DATA SHEET

Agilent Technologies

SureMASTR ADH

Section 1. Identification

1.1 Product identifier

Product name : SureMASTR ADH

Part no. (chemical kit) : MR-0141.024

Part no. :

PCR Mix Plex 1	I-0941
PCR Mix Plex 2	I-0942
PCR Mix Plex 3	I-0943
PCR Mix Plex 4	I-0944
Taq DNA Polymerase	I-0956
AR 2	I-1885

Validation date : 11/28/2021

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

Material uses : Analytical reagent.
For Research Use Only. Not for use in diagnostic procedures.

PCR Mix Plex 1	0.240 ml
PCR Mix Plex 2	0.240 ml
PCR Mix Plex 3	0.240 ml
PCR Mix Plex 4	0.240 ml
Taq DNA Polymerase	0.010 ml
AR 2	1.5 ml

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer : Agilent Technologies Belgium
De Kleetlaan 5 bus 9
1831 Diegem
Belgium
Tel.: +32(0)2 404 90 00

1.4 Emergency telephone number

In case of emergency : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status :

PCR Mix Plex 1	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
PCR Mix Plex 2	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
PCR Mix Plex 3	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Section 2. Hazards identification

PCR Mix Plex 4	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Taq DNA Polymerase	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
AR 2	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture

Taq DNA Polymerase

H320 EYE IRRITATION - Category 2B
H412 AQUATIC HAZARD (LONG-TERM) - Category 3

PCR Mix Plex 1	Percentage of the mixture consisting of ingredient (s) of unknown hazards to the aquatic environment: 1.1%
PCR Mix Plex 2	Percentage of the mixture consisting of ingredient (s) of unknown hazards to the aquatic environment: 1.1%
PCR Mix Plex 3	Percentage of the mixture consisting of ingredient (s) of unknown hazards to the aquatic environment: 1.1%
PCR Mix Plex 4	Percentage of the mixture consisting of ingredient (s) of unknown hazards to the aquatic environment: 1.1%

2.2 GHS label elements

Signal word	: PCR Mix Plex 1	No signal word.
	PCR Mix Plex 2	No signal word.
	PCR Mix Plex 3	No signal word.
	PCR Mix Plex 4	No signal word.
	Taq DNA Polymerase	Warning
	AR 2	No signal word.
Hazard statements	: PCR Mix Plex 1	No known significant effects or critical hazards.
	PCR Mix Plex 2	No known significant effects or critical hazards.
	PCR Mix Plex 3	No known significant effects or critical hazards.
	PCR Mix Plex 4	No known significant effects or critical hazards.
	Taq DNA Polymerase	H320 - Causes eye irritation. H412 - Harmful to aquatic life with long lasting effects.
	AR 2	No known significant effects or critical hazards.

Precautionary statements

Prevention	: PCR Mix Plex 1	Not applicable.
	PCR Mix Plex 2	Not applicable.
	PCR Mix Plex 3	Not applicable.
	PCR Mix Plex 4	Not applicable.
	Taq DNA Polymerase	P273 - Avoid release to the environment.
	AR 2	Not applicable.

Section 2. Hazards identification

Response	:	PCR Mix Plex 1	Not applicable.
		PCR Mix Plex 2	Not applicable.
		PCR Mix Plex 3	Not applicable.
		PCR Mix Plex 4	Not applicable.
		Taq DNA Polymerase	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.
		AR 2	Not applicable.
Storage	:	PCR Mix Plex 1	Not applicable.
		PCR Mix Plex 2	Not applicable.
		PCR Mix Plex 3	Not applicable.
		PCR Mix Plex 4	Not applicable.
		Taq DNA Polymerase	Not applicable.
		AR 2	Not applicable.
Disposal	:	PCR Mix Plex 1	Not applicable.
		PCR Mix Plex 2	Not applicable.
		PCR Mix Plex 3	Not applicable.
		PCR Mix Plex 4	Not applicable.
		Taq DNA Polymerase	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
		AR 2	Not applicable.
Supplemental label elements	:	PCR Mix Plex 1	None known.
		PCR Mix Plex 2	None known.
		PCR Mix Plex 3	None known.
		PCR Mix Plex 4	None known.
		Taq DNA Polymerase	None known.
		AR 2	None known.

2.3 Other hazards

Hazards not otherwise classified	:	PCR Mix Plex 1	None known.
		PCR Mix Plex 2	None known.
		PCR Mix Plex 3	None known.
		PCR Mix Plex 4	None known.
		Taq DNA Polymerase	None known.
		AR 2	None known.

Section 3. Composition/information on ingredients

Substance/mixture	:	PCR Mix Plex 1	Mixture
		PCR Mix Plex 2	Mixture
		PCR Mix Plex 3	Mixture
		PCR Mix Plex 4	Mixture
		Taq DNA Polymerase	Mixture
		AR 2	Mixture

Ingredient name	%	CAS number
PCR Mix Plex 1		
Magnesium chloride	<0.25	7786-30-3
PCR Mix Plex 2		
Magnesium chloride	<0.25	7786-30-3
PCR Mix Plex 3		
Magnesium chloride	<0.25	7786-30-3

Section 3. Composition/information on ingredients

PCR Mix Plex 4		
Magnesium chloride	<0.25	7786-30-3
Taq DNA Polymerase		
Glycerol	≥10 - ≤25	56-81-5
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	<1	9036-19-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

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

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact :

PCR Mix Plex 1: 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.

PCR Mix Plex 2: 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.

PCR Mix Plex 3: 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.

PCR Mix Plex 4: 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.

Taq 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. If irritation persists, get medical attention.

AR 2: 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 :

PCR Mix Plex 1: 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.

PCR Mix Plex 2: 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.

PCR Mix Plex 3: 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

Section 4. First aid measures

			may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
		PCR Mix Plex 4	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.
		Taq 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.
		AR 2	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	:	PCR Mix Plex 1	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		PCR Mix Plex 2	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		PCR Mix Plex 3	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		PCR Mix Plex 4	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Taq 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.
		AR 2	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	:	PCR Mix Plex 1	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.
		PCR Mix Plex 2	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

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	occur.
PCR Mix Plex 3	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.
PCR Mix Plex 4	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.
Taq 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.
AR 2	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	:	PCR Mix Plex 1	No known significant effects or critical hazards.
		PCR Mix Plex 2	No known significant effects or critical hazards.
		PCR Mix Plex 3	No known significant effects or critical hazards.
		PCR Mix Plex 4	No known significant effects or critical hazards.
		Taq DNA Polymerase	Causes eye irritation.
		AR 2	No known significant effects or critical hazards.
Inhalation	:	PCR Mix Plex 1	No known significant effects or critical hazards.
		PCR Mix Plex 2	No known significant effects or critical hazards.
		PCR Mix Plex 3	No known significant effects or critical hazards.
		PCR Mix Plex 4	No known significant effects or critical hazards.
		Taq DNA Polymerase	No known significant effects or critical hazards.
		AR 2	No known significant effects or critical hazards.
Skin contact	:	PCR Mix Plex 1	No known significant effects or critical hazards.
		PCR Mix Plex 2	No known significant effects or critical hazards.
		PCR Mix Plex 3	No known significant effects or critical hazards.
		PCR Mix Plex 4	No known significant effects or critical hazards.
		Taq DNA Polymerase	No known significant effects or critical hazards.
		AR 2	No known significant effects or critical hazards.

Section 4. First aid measures

Ingestion	:	PCR Mix Plex 1	No known significant effects or critical hazards.
		PCR Mix Plex 2	No known significant effects or critical hazards.
		PCR Mix Plex 3	No known significant effects or critical hazards.
		PCR Mix Plex 4	No known significant effects or critical hazards.
		Taq DNA Polymerase	No known significant effects or critical hazards.
		AR 2	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	:	PCR Mix Plex 1	No specific data.
		PCR Mix Plex 2	No specific data.
		PCR Mix Plex 3	No specific data.
		PCR Mix Plex 4	No specific data.
		Taq DNA Polymerase	Adverse symptoms may include the following: irritation watering redness
		AR 2	No specific data.
Inhalation	:	PCR Mix Plex 1	No specific data.
		PCR Mix Plex 2	No specific data.
		PCR Mix Plex 3	No specific data.
		PCR Mix Plex 4	No specific data.
		Taq DNA Polymerase	No specific data.
		AR 2	No specific data.
Skin contact	:	PCR Mix Plex 1	No specific data.
		PCR Mix Plex 2	No specific data.
		PCR Mix Plex 3	No specific data.
		PCR Mix Plex 4	No specific data.
		Taq DNA Polymerase	No specific data.
		AR 2	No specific data.
Ingestion	:	PCR Mix Plex 1	No specific data.
		PCR Mix Plex 2	No specific data.
		PCR Mix Plex 3	No specific data.
		PCR Mix Plex 4	No specific data.
		Taq DNA Polymerase	No specific data.
		AR 2	No specific data.

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

Notes to physician	:	PCR Mix Plex 1	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.
		PCR Mix Plex 2	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.
		PCR Mix Plex 3	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.
		PCR Mix Plex 4	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.
		Taq DNA Polymerase	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		AR 2	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical

Section 4. First aid measures

			surveillance for 48 hours.
Specific treatments	:	PCR Mix Plex 1	No specific treatment.
		PCR Mix Plex 2	No specific treatment.
		PCR Mix Plex 3	No specific treatment.
		PCR Mix Plex 4	No specific treatment.
		Taq DNA Polymerase	No specific treatment.
		AR 2	No specific treatment.
Protection of first-aiders	:	PCR Mix Plex 1	No action shall be taken involving any personal risk or without suitable training.
		PCR Mix Plex 2	No action shall be taken involving any personal risk or without suitable training.
		PCR Mix Plex 3	No action shall be taken involving any personal risk or without suitable training.
		PCR Mix Plex 4	No action shall be taken involving any personal risk or without suitable training.
		Taq 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.
		AR 2	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	PCR Mix Plex 1	Use an extinguishing agent suitable for the surrounding fire.
		PCR Mix Plex 2	Use an extinguishing agent suitable for the surrounding fire.
		PCR Mix Plex 3	Use an extinguishing agent suitable for the surrounding fire.
		PCR Mix Plex 4	Use an extinguishing agent suitable for the surrounding fire.
		Taq DNA Polymerase	Use an extinguishing agent suitable for the surrounding fire.
		AR 2	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	:	PCR Mix Plex 1	None known.
		PCR Mix Plex 2	None known.
		PCR Mix Plex 3	None known.
		PCR Mix Plex 4	None known.
		Taq DNA Polymerase	None known.
		AR 2	None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	:	PCR Mix Plex 1	In a fire or if heated, a pressure increase will occur and the container may burst.
		PCR Mix Plex 2	In a fire or if heated, a pressure increase will occur and the container may burst.
		PCR Mix Plex 3	In a fire or if heated, a pressure increase will occur and the container may burst.
		PCR Mix Plex 4	In a fire or if heated, a pressure increase will occur and the container may burst.
		Taq DNA Polymerase	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

Section 5. Fire-fighting measures

		water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
	AR 2	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products :	PCR Mix Plex 1	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides
	PCR Mix Plex 2	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides
	PCR Mix Plex 3	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides
	PCR Mix Plex 4	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides
	Taq DNA Polymerase	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	AR 2	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters :	PCR Mix Plex 1	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.
	PCR Mix Plex 2	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.
	PCR Mix Plex 3	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.
	PCR Mix Plex 4	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.
	Taq DNA Polymerase	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

Section 5. Fire-fighting measures

		without suitable training.
	AR 2	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters :	PCR Mix Plex 1	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	PCR Mix Plex 2	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	PCR Mix Plex 3	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	PCR Mix Plex 4	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Taq 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.
	AR 2	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel :	PCR Mix Plex 1	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.
	PCR Mix Plex 2	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.
	PCR Mix Plex 3	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.
	PCR Mix Plex 4	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.
	Taq DNA Polymerase	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and

Section 6. Accidental release measures

		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.
	AR 2	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 :	PCR Mix Plex 1	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".
	PCR Mix Plex 2	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".
	PCR Mix Plex 3	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".
	PCR Mix Plex 4	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".
	Taq DNA Polymerase	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".
	AR 2	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
6.2 Environmental precautions :	PCR Mix Plex 1	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).
	PCR Mix Plex 2	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).
	PCR Mix Plex 3	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).
	PCR Mix Plex 4	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).
	Taq DNA Polymerase	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 6. Accidental release measures

		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.
	AR 2	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).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up :	PCR Mix Plex 1	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.
	PCR Mix Plex 2	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.
	PCR Mix Plex 3	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.
	PCR Mix Plex 4	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.
	Taq 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. Dispose of via a licensed waste disposal contractor.
	AR 2	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

7.1 Precautions for safe handling

Protective measures :	PCR Mix Plex 1	Put on appropriate personal protective equipment (see Section 8).
	PCR Mix Plex 2	Put on appropriate personal protective equipment (see Section 8).
	PCR Mix Plex 3	Put on appropriate personal protective equipment (see Section 8).
	PCR Mix Plex 4	Put on appropriate personal protective equipment

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		(see Section 8).
	Taq DNA Polymerase	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.
	AR 2	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene :	PCR Mix Plex 1	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.
	PCR Mix Plex 2	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.
	PCR Mix Plex 3	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.
	PCR Mix Plex 4	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.
	Taq 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.
	AR 2	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.

Section 7. Handling and storage

7.2 Conditions for safe storage, including any incompatibilities

: PCR Mix Plex 1

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.

PCR Mix Plex 2

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.

PCR Mix Plex 3

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.

PCR Mix Plex 4

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.

Taq 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

AR 2

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

Section 7. Handling and storage

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

7.3 Specific end use(s)

Recommendations	:	PCR Mix Plex 1	Industrial applications, Professional applications.
		PCR Mix Plex 2	Industrial applications, Professional applications.
		PCR Mix Plex 3	Industrial applications, Professional applications.
		PCR Mix Plex 4	Industrial applications, Professional applications.
		Taq DNA Polymerase	Industrial applications, Professional applications.
		AR 2	Industrial applications, Professional applications.
Industrial sector specific solutions	:	PCR Mix Plex 1	Not available.
		PCR Mix Plex 2	Not available.
		PCR Mix Plex 3	Not available.
		PCR Mix Plex 4	Not available.
		Taq DNA Polymerase	Not available.
		AR 2	Not available.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
PCR Mix Plex 1	
Magnesium chloride	None.
PCR Mix Plex 2	
Magnesium chloride	None.
PCR Mix Plex 3	
Magnesium chloride	None.
PCR Mix Plex 4	
Magnesium chloride	None.
Taq DNA Polymerase	
Glycerol	**OSHA PEL 1989 (United States, 3/1989).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust **OSHA PEL (United States, 5/2018).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	None.

8.2 Exposure controls

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

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.

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.

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

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

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

Section 9. Physical and chemical properties and safety characteristics

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

Appearance

Physical state :	PCR Mix Plex 1	Liquid.
	PCR Mix Plex 2	Liquid.
	PCR Mix Plex 3	Liquid.
	PCR Mix Plex 4	Liquid.
	Taq DNA Polymerase	Liquid. [Clear. / solution]
	AR 2	Liquid.
Color :	PCR Mix Plex 1	Not available.
	PCR Mix Plex 2	Not available.
	PCR Mix Plex 3	Not available.
	PCR Mix Plex 4	Not available.
	Taq DNA Polymerase	Colorless.
	AR 2	Not available.
Odor :	PCR Mix Plex 1	Not available.
	PCR Mix Plex 2	Not available.
	PCR Mix Plex 3	Not available.
	PCR Mix Plex 4	Not available.
	Taq DNA Polymerase	Not available.
	AR 2	Not available.

Section 9. Physical and chemical properties and safety characteristics

Odor threshold :

PCR Mix Plex 1	Not available.
PCR Mix Plex 2	Not available.
PCR Mix Plex 3	Not available.
PCR Mix Plex 4	Not available.
Taq DNA Polymerase	Not available.
AR 2	Not available.

pH :

PCR Mix Plex 1	Not available.
PCR Mix Plex 2	Not available.
PCR Mix Plex 3	Not available.
PCR Mix Plex 4	Not available.
Taq DNA Polymerase	Not available.
AR 2	Not available.

Melting point/freezing point :

PCR Mix Plex 1	Not available.
PCR Mix Plex 2	Not available.
PCR Mix Plex 3	Not available.
PCR Mix Plex 4	Not available.
Taq DNA Polymerase	Not available.
AR 2	Not available.

Boiling point, initial boiling point, and boiling range :

PCR Mix Plex 1	Not available.
PCR Mix Plex 2	Not available.
PCR Mix Plex 3	Not available.
PCR Mix Plex 4	Not available.
Taq DNA Polymerase	Not available.
AR 2	Not available.

Flash point :

	Closed cup			Open cup		
Ingredient name	**°C**	**°F**	**Method**	**°C**	**°F**	**Method**
PCR Mix Plex 1						
Deoxycytidine thiotriphosphate	440.851	825.5				
PCR Mix Plex 2						
Deoxycytidine thiotriphosphate	440.851	825.5				
PCR Mix Plex 3						
Deoxycytidine thiotriphosphate	440.851	825.5				
PCR Mix Plex 4						
Deoxycytidine thiotriphosphate	440.851	825.5				
Taq DNA Polymerase						
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	>109.85	>229.7				
Glycerol			Pensky-Martens	177	350.6	

Evaporation rate :

PCR Mix Plex 1	Not available.
PCR Mix Plex 2	Not available.
PCR Mix Plex 3	Not available.
PCR Mix Plex 4	Not available.
Taq DNA Polymerase	Not available.
AR 2	Not available.

Section 9. Physical and chemical properties and safety characteristics

Flammability :

PCR Mix Plex 1	Not applicable.
PCR Mix Plex 2	Not applicable.
PCR Mix Plex 3	Not applicable.
PCR Mix Plex 4	Not applicable.
Taq DNA Polymerase	Not applicable.
AR 2	Not applicable.

Lower and upper explosion limit/flammability limit :

PCR Mix Plex 1	Not available.
PCR Mix Plex 2	Not available.
PCR Mix Plex 3	Not available.
PCR Mix Plex 4	Not available.
Taq DNA Polymerase	Not available.
AR 2	Not available.

Vapor pressure :

Ingredient name	Vapor Pressure at 20˚C			Vapor pressure at 50˚C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
PCR Mix Plex 1						
Water	23.8	3.2		92.258	12.3	
N-(ri(Hydroxymethyl) methyl)glycine	<0.000015001	<0.000002				
PCR Mix Plex 2						
Water	23.8	3.2		92.258	12.3	
N-(ri(Hydroxymethyl) methyl)glycine	<0.000015001	<0.000002				
PCR Mix Plex 3						
Water	23.8	3.2		92.258	12.3	
N-(ri(Hydroxymethyl) methyl)glycine	<0.000015001	<0.000002				
PCR Mix Plex 4						
Water	23.8	3.2		92.258	12.3	
N-(ri(Hydroxymethyl) methyl)glycine	<0.000015001	<0.000002				
Taq DNA Polymerase						
Glycerol	0	0		0	0	
AR 2						
Water	23.8	3.2		92.258	12.3	
Betaine	0	0	EU A.4	0	0	EU A.4

Relative vapor density :

PCR Mix Plex 1	Not available.
PCR Mix Plex 2	Not available.
PCR Mix Plex 3	Not available.
PCR Mix Plex 4	Not available.
Taq DNA Polymerase	Not available.
AR 2	Not available.

Section 9. Physical and chemical properties and safety characteristics

Relative density :

PCR Mix Plex 1	Not available.
PCR Mix Plex 2	Not available.
PCR Mix Plex 3	Not available.
PCR Mix Plex 4	Not available.
Taq DNA Polymerase	Not available.
AR 2	Not available.

Solubility :

PCR Mix Plex 1	Partially soluble in the following materials: cold water and hot water.
PCR Mix Plex 2	Partially soluble in the following materials: cold water and hot water.
PCR Mix Plex 3	Partially soluble in the following materials: cold water and hot water.
PCR Mix Plex 4	Partially soluble in the following materials: cold water and hot water.
Taq DNA Polymerase	Not available.
AR 2	Not available.

Partition coefficient: n-octanol/water :

PCR Mix Plex 1	Not applicable.
PCR Mix Plex 2	Not applicable.
PCR Mix Plex 3	Not applicable.
PCR Mix Plex 4	Not applicable.
Taq DNA Polymerase	Not applicable.
AR 2	Not applicable.

Auto-ignition temperature :

Ingredient name	°C	°F	Method
Taq DNA Polymerase			
Glycerol	370	698	

Decomposition temperature :

PCR Mix Plex 1	Not available.
PCR Mix Plex 2	Not available.
PCR Mix Plex 3	Not available.
PCR Mix Plex 4	Not available.
Taq DNA Polymerase	Not available.
AR 2	Not available.

Viscosity :

PCR Mix Plex 1	Not available.
PCR Mix Plex 2	Not available.
PCR Mix Plex 3	Not available.
PCR Mix Plex 4	Not available.
Taq DNA Polymerase	Not available.
AR 2	Not available.

Particle characteristics

Median particle size :

PCR Mix Plex 1	Not applicable.
PCR Mix Plex 2	Not applicable.
PCR Mix Plex 3	Not applicable.
PCR Mix Plex 4	Not applicable.
Taq DNA Polymerase	Not applicable.
AR 2	Not applicable.

Section 10. Stability and reactivity

10.1 Reactivity :

PCR Mix Plex 1	No specific test data related to reactivity available for this product or its ingredients.
PCR Mix Plex 2	No specific test data related to reactivity available for this product or its ingredients.
PCR Mix Plex 3	No specific test data related to reactivity available for this product or its ingredients.
PCR Mix Plex 4	No specific test data related to reactivity available for this product or its ingredients.
Taq DNA Polymerase	No specific test data related to reactivity available for this product or its ingredients.
AR 2	No specific test data related to reactivity available

Section 10. Stability and reactivity

for this product or its ingredients.

10.2 Chemical stability	:	PCR Mix Plex 1	The product is stable.
		PCR Mix Plex 2	The product is stable.
		PCR Mix Plex 3	The product is stable.
		PCR Mix Plex 4	The product is stable.
		Taq DNA Polymerase	The product is stable.
		AR 2	The product is stable.
10.3 Possibility of hazardous reactions	:	PCR Mix Plex 1	Under normal conditions of storage and use, hazardous reactions will not occur.
		PCR Mix Plex 2	Under normal conditions of storage and use, hazardous reactions will not occur.
		PCR Mix Plex 3	Under normal conditions of storage and use, hazardous reactions will not occur.
		PCR Mix Plex 4	Under normal conditions of storage and use, hazardous reactions will not occur.
		Taq DNA Polymerase	Under normal conditions of storage and use, hazardous reactions will not occur.
		AR 2	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	:	PCR Mix Plex 1	No specific data.
		PCR Mix Plex 2	No specific data.
		PCR Mix Plex 3	No specific data.
		PCR Mix Plex 4	No specific data.
		Taq DNA Polymerase	No specific data.
		AR 2	No specific data.
10.5 Incompatible materials	:	PCR Mix Plex 1	May react or be incompatible with oxidizing materials.
		PCR Mix Plex 2	May react or be incompatible with oxidizing materials.
		PCR Mix Plex 3	May react or be incompatible with oxidizing materials.
		PCR Mix Plex 4	May react or be incompatible with oxidizing materials.
		Taq DNA Polymerase	May react or be incompatible with oxidizing materials.
		AR 2	May react or be incompatible with oxidizing materials.
10.6 Hazardous decomposition products	:	PCR Mix Plex 1	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		PCR Mix Plex 2	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		PCR Mix Plex 3	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		PCR Mix Plex 4	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Taq DNA Polymerase	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		AR 2	Under normal conditions of storage and use,

Section 10. Stability and reactivity

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
PCR Mix Plex 1				
Magnesium chloride	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat	2800 mg/kg	-
PCR Mix Plex 2				
Magnesium chloride	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat	2800 mg/kg	-
PCR Mix Plex 3				
Magnesium chloride	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat	2800 mg/kg	-
PCR Mix Plex 4				
Magnesium chloride	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat	2800 mg/kg	-
Taq DNA Polymerase				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy-	LD50 Oral	Rat	2800 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Taq DNA Polymerase					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy-	Eyes - Severe irritant	Rabbit	-	1 %	-

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

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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 the likely routes of exposure	:	PCR Mix Plex 1	Not available.
		PCR Mix Plex 2	Not available.
		PCR Mix Plex 3	Not available.
		PCR Mix Plex 4	Not available.
		Taq DNA Polymerase	Routes of entry anticipated: Oral, Dermal, Inhalation.
		AR 2	Not available.

Potential acute health effects

Eye contact	:	PCR Mix Plex 1	No known significant effects or critical hazards.
		PCR Mix Plex 2	No known significant effects or critical hazards.
		PCR Mix Plex 3	No known significant effects or critical hazards.
		PCR Mix Plex 4	No known significant effects or critical hazards.
		Taq DNA Polymerase	Causes eye irritation.
		AR 2	No known significant effects or critical hazards.
Inhalation	:	PCR Mix Plex 1	No known significant effects or critical hazards.
		PCR Mix Plex 2	No known significant effects or critical hazards.
		PCR Mix Plex 3	No known significant effects or critical hazards.
		PCR Mix Plex 4	No known significant effects or critical hazards.
		Taq DNA Polymerase	No known significant effects or critical hazards.
		AR 2	No known significant effects or critical hazards.
Skin contact	:	PCR Mix Plex 1	No known significant effects or critical hazards.
		PCR Mix Plex 2	No known significant effects or critical hazards.
		PCR Mix Plex 3	No known significant effects or critical hazards.
		PCR Mix Plex 4	No known significant effects or critical hazards.
		Taq DNA Polymerase	No known significant effects or critical hazards.
		AR 2	No known significant effects or critical hazards.
Ingestion	:	PCR Mix Plex 1	No known significant effects or critical hazards.
		PCR Mix Plex 2	No known significant effects or critical hazards.
		PCR Mix Plex 3	No known significant effects or critical hazards.
		PCR Mix Plex 4	No known significant effects or critical hazards.
		Taq DNA Polymerase	No known significant effects or critical hazards.
		AR 2	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	:	PCR Mix Plex 1	No specific data.
		PCR Mix Plex 2	No specific data.
		PCR Mix Plex 3	No specific data.
		PCR Mix Plex 4	No specific data.
		Taq DNA Polymerase	Adverse symptoms may include the following: irritation watering redness
		AR 2	No specific data.

Section 11. Toxicological information

Inhalation	:	PCR Mix Plex 1	No specific data.
		PCR Mix Plex 2	No specific data.
		PCR Mix Plex 3	No specific data.
		PCR Mix Plex 4	No specific data.
		Taq DNA Polymerase	No specific data.
		AR 2	No specific data.
Skin contact	:	PCR Mix Plex 1	No specific data.
		PCR Mix Plex 2	No specific data.
		PCR Mix Plex 3	No specific data.
		PCR Mix Plex 4	No specific data.
		Taq DNA Polymerase	No specific data.
		AR 2	No specific data.
Ingestion	:	PCR Mix Plex 1	No specific data.
		PCR Mix Plex 2	No specific data.
		PCR Mix Plex 3	No specific data.
		PCR Mix Plex 4	No specific data.
		Taq DNA Polymerase	No specific data.
		AR 2	No specific data.

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	:	PCR Mix Plex 1	No known significant effects or critical hazards.
		PCR Mix Plex 2	No known significant effects or critical hazards.
		PCR Mix Plex 3	No known significant effects or critical hazards.
		PCR Mix Plex 4	No known significant effects or critical hazards.
		Taq DNA Polymerase	No known significant effects or critical hazards.
		AR 2	No known significant effects or critical hazards.
Carcinogenicity	:	PCR Mix Plex 1	No known significant effects or critical hazards.
		PCR Mix Plex 2	No known significant effects or critical hazards.
		PCR Mix Plex 3	No known significant effects or critical hazards.
		PCR Mix Plex 4	No known significant effects or critical hazards.
		Taq DNA Polymerase	No known significant effects or critical hazards.
		AR 2	No known significant effects or critical hazards.
Mutagenicity	:	PCR Mix Plex 1	No known significant effects or critical hazards.
		PCR Mix Plex 2	No known significant effects or critical hazards.
		PCR Mix Plex 3	No known significant effects or critical hazards.
		PCR Mix Plex 4	No known significant effects or critical hazards.
		Taq DNA Polymerase	No known significant effects or critical hazards.
		AR 2	No known significant effects or critical hazards.
Reproductive toxicity	:	PCR Mix Plex 1	No known significant effects or critical hazards.
		PCR Mix Plex 2	No known significant effects or critical hazards.
		PCR Mix Plex 3	No known significant effects or critical hazards.
		PCR Mix Plex 4	No known significant effects or critical hazards.
		Taq DNA Polymerase	No known significant effects or critical hazards.
		AR 2	No known significant effects or critical hazards.

Numerical measures of toxicity

Section 11. Toxicological information

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
PCR Mix Plex 1					
Magnesium chloride	2800	2500	N/A	N/A	N/A
PCR Mix Plex 2					
Magnesium chloride	2800	2500	N/A	N/A	N/A
PCR Mix Plex 3					
Magnesium chloride	2800	2500	N/A	N/A	N/A
PCR Mix Plex 4					
Magnesium chloride	2800	2500	N/A	N/A	N/A
Taq DNA Polymerase					
Glycerol	12600	N/A	N/A	N/A	N/A
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	2800	N/A	N/A	N/A	N/A

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
PCR Mix Plex 1			
Magnesium chloride	Acute EC50 >100 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 180000 µg/l Fresh water	Crustaceans - Eudiaptomus padanus ssp. padanus - Adult	48 hours
	Acute IC50 6.8 mg/l Fresh water	Aquatic plants - Lemna aequinoctialis	96 hours
	Acute LC50 32000 µg/l Fresh water	Daphnia - Daphnia hyalina - Adult	48 hours
	Acute LC50 2120 mg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute NOEC 100 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Chronic NOEC 0.1 mg/l Fresh water	Fish - Cyprinus carpio	35 days
PCR Mix Plex 2			
Magnesium chloride	Acute EC50 >100 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 180000 µg/l Fresh water	Crustaceans - Eudiaptomus padanus ssp. padanus - Adult	48 hours
	Acute IC50 6.8 mg/l Fresh water	Aquatic plants - Lemna aequinoctialis	96 hours
	Acute LC50 32000 µg/l Fresh water	Daphnia - Daphnia hyalina - Adult	48 hours
	Acute LC50 2120 mg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute NOEC 100 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Chronic NOEC 0.1 mg/l Fresh water	Fish - Cyprinus carpio	35 days
PCR Mix Plex 3			
Magnesium chloride	Acute EC50 >100 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours

Section 12. Ecological information

	Acute EC50 180000 µg/l Fresh water	Crustaceans - Eudiaptomus padanus ssp. padanus - Adult	48 hours
	Acute IC50 6.8 mg/l Fresh water	Aquatic plants - Lemna aequinoctialis	96 hours
	Acute LC50 32000 µg/l Fresh water	Daphnia - Daphnia hyalina - Adult	48 hours
	Acute LC50 2120 mg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute NOEC 100 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Chronic NOEC 0.1 mg/l Fresh water	Fish - Cyprinus carpio	35 days
PCR Mix Plex 4			
Magnesium chloride	Acute EC50 >100 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 180000 µg/l Fresh water	Crustaceans - Eudiaptomus padanus ssp. padanus - Adult	48 hours
	Acute IC50 6.8 mg/l Fresh water	Aquatic plants - Lemna aequinoctialis	96 hours
	Acute LC50 32000 µg/l Fresh water	Daphnia - Daphnia hyalina - Adult	48 hours
	Acute LC50 2120 mg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute NOEC 100 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Chronic NOEC 0.1 mg/l Fresh water	Fish - Cyprinus carpio	35 days
Taq DNA Polymerase			
Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
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

Product/ingredient name	Test	Result	Dose	Inoculum
Taq DNA Polymerase				
Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Taq DNA Polymerase			
Glycerol	-1.76	-	low
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.

Section 12. Ecological information

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

Section 13. Disposal considerations

13.1 Waste treatment methods

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

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

DOT / TDG / Mexico / 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

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations : **TSCA 8(a) PAIR**: Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

Section 15. Regulatory information

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification :

PCR Mix Plex 1	Not applicable.
PCR Mix Plex 2	Not applicable.
PCR Mix Plex 3	Not applicable.
PCR Mix Plex 4	Not applicable.
Taq DNA Polymerase	EYE IRRITATION - Category 2B
AR 2	Not applicable.

Composition/information on ingredients

Name	%	Classification
PCR Mix Plex 1 Betaine	≥25 - ≤50	COMBUSTIBLE DUSTS
PCR Mix Plex 2 Betaine	≥25 - ≤50	COMBUSTIBLE DUSTS
PCR Mix Plex 3 Betaine	≥25 - ≤50	COMBUSTIBLE DUSTS
PCR Mix Plex 4 Betaine	≥25 - ≤50	COMBUSTIBLE DUSTS
Taq DNA Polymerase Glycerol	≥10 - ≤25	EYE IRRITATION - Category 2B
AR 2 Betaine	≥50 - ≤75	COMBUSTIBLE DUSTS

State regulations

Massachusetts : The following components are listed: GLYCERINE MIST

New York : None of the components are listed.

New Jersey : The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL

Pennsylvania : The following components are listed: 1,2,3-PROPANETRIOL

California Prop. 65

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

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Section 15. Regulatory information

Not listed.

Inventory list

Australia : Not determined.

Canada : Not determined.

China : Not determined.

Europe : Not determined.

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

New Zealand : Not determined.

Philippines : Not determined.

Republic of Korea : Not determined.

Taiwan : Not determined.

Thailand : Not determined.

Turkey : Not determined.

United States : Not determined.

Viet Nam : Not determined.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
Taq DNA Polymerase	
EYE IRRITATION - Category 2B	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 3	Calculation method

History

Date of issue : 11/28/2021

Date of previous issue : 06/21/2019

Version : 4

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

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