

SAFETY DATA SHEET

SureMASTR BRCA Hereditary Cancer

Section 1. Identification

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| Product identifier | : SureMASTR BRCA Hereditary Cancer |
| Part no. (chemical kit) | : MR-0320.024, MR-1320.024 |
| Part no. | : PCR Mix Plex 1 I-1412 PCR Mix Plex 2 I-1413 PCR Mix Plex 3 I-1414 PCR Mix Plex 4 I-1415 PCR Mix Plex 5 I-1416 Taq DNA Polymerase I-1417 AR 3 I-1338 |
| Material uses | : Analytical reagent. For Research Use Only. Not for use in diagnostic procedures. PCR Mix Plex 1 0.24 ml PCR Mix Plex 2 0.24 ml PCR Mix Plex 3 0.24 ml PCR Mix Plex 4 0.24 ml PCR Mix Plex 5 0.24 ml Taq DNA Polymerase 0.022 ml AR 3 0.5 ml |
| Supplier/Manufacturer | : Agilent Technologies Belgium De Kleetlaan 5 bus 9 1831 Diegem Belgium Tel.: +32(0)2 404 90 00 |
| Emergency telephone number (with hours of operation) | : CHEMTREC®: 1-800-424-9300 |

Section 2. Hazard identification

Classification of the substance or mixture

Taq DNA Polymerase

H320
H412

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

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. PCR Mix Plex 5 No signal word. Taq DNA Polymerase Warning AR 3 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. PCR Mix Plex 5 No known significant effects or critical hazards. Taq DNA Polymerase H320 - Causes eye irritation. H412 - Harmful to aquatic life with long lasting effects. |

Section 2. Hazard identification

AR 3

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.
 PCR Mix Plex 5 Not applicable.
 Taq DNA Polymerase P273 - Avoid release to the environment.
 AR 3 Not applicable.

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.
 PCR Mix Plex 5 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.

Storage

AR 3 Not applicable.
 : PCR Mix Plex 1 Not applicable.
 PCR Mix Plex 2 Not applicable.
 PCR Mix Plex 3 Not applicable.
 PCR Mix Plex 4 Not applicable.
 PCR Mix Plex 5 Not applicable.
 Taq DNA Polymerase Not applicable.
 AR 3 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.
 PCR Mix Plex 5 Not applicable.
 Taq DNA Polymerase P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

AR 3 Not applicable.
 : PCR Mix Plex 1 None known.
 PCR Mix Plex 2 None known.
 PCR Mix Plex 3 None known.
 PCR Mix Plex 4 None known.
 PCR Mix Plex 5 None known.
 Taq DNA Polymerase None known.
 AR 3 None known.

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%
 PCR Mix Plex 5 Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 5.6%
 AR 3 Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 5%

Section 2. Hazard identification

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| Other hazards which do not result in classification | : PCR Mix Plex 1 | None known. |
| | PCR Mix Plex 2 | None known. |
| | PCR Mix Plex 3 | None known. |
| | PCR Mix Plex 4 | None known. |
| | PCR Mix Plex 5 | None known. |
| | Taq DNA Polymerase | None known. |
| | AR 3 | 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 |
| | PCR Mix Plex 5 | Mixture |
| | Taq DNA Polymerase | Mixture |
| | AR 3 | Mixture |

| Ingredient name | % (w/w) | CAS number |
|---|---------|------------|
| PCR Mix Plex 1 Magnesium chloride | 0.1 - 1 | 7786-30-3 |
| PCR Mix Plex 2 Magnesium chloride | 0.1 - 1 | 7786-30-3 |
| PCR Mix Plex 3 Magnesium chloride | 0.1 - 1 | 7786-30-3 |
| PCR Mix Plex 4 Magnesium chloride | 0.1 - 1 | 7786-30-3 |
| PCR Mix Plex 5 Magnesium chloride | 0.1 - 1 | 7786-30-3 |
| Taq DNA Polymerase Glycerol | 10 - 30 | 56-81-5 |
| Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy- | 0.1 - 1 | 9036-19-5 |

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

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

Section 4. First-aid measures

Description of necessary first aid measures

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| 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. |

Section 4. First-aid measures

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| | 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. |
| | PCR Mix Plex 5 | 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 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. |
| 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 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. |
| | PCR Mix Plex 5 | 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 3 | Remove victim to fresh air and keep at rest in a |

Section 4. First-aid measures

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| | | 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. |
| | PCR Mix Plex 5 | 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. |
| Ingestion | : 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 | Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 3 | Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 5 | Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of |

Section 4. First-aid measures

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| Taq DNA Polymerase | water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 3 | Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. |

Most important symptoms/effects, acute and delayed

Potential acute health effects

| | | |
|---------------------|--|---|
| Eye contact | : PCR Mix Plex 1 PCR Mix Plex 2 PCR Mix Plex 3 PCR Mix Plex 4 PCR Mix Plex 5 Taq DNA Polymerase AR 3 | No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. Causes eye irritation. No known significant effects or critical hazards. |
| Inhalation | : PCR Mix Plex 1 PCR Mix Plex 2 PCR Mix Plex 3 PCR Mix Plex 4 PCR Mix Plex 5 Taq DNA Polymerase AR 3 | No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. |
| Skin contact | : PCR Mix Plex 1 PCR Mix Plex 2 PCR Mix Plex 3 PCR Mix Plex 4 PCR Mix Plex 5 Taq DNA Polymerase AR 3 | No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. |
| Ingestion | : PCR Mix Plex 1 PCR Mix Plex 2 PCR Mix Plex 3 PCR Mix Plex 4 PCR Mix Plex 5 Taq DNA Polymerase AR 3 | No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. |

Section 4. First-aid measures

Over-exposure signs/symptoms

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| 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. |
| | | PCR Mix Plex 5 | No specific data. |
| | | Taq DNA Polymerase | Adverse symptoms may include the following: irritation watering redness |
| Inhalation | : | AR 3 | No specific data. |
| | | 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. |
| | | PCR Mix Plex 5 | No specific data. |
| Skin contact | : | Taq DNA Polymerase | No specific data. |
| | | AR 3 | No specific data. |
| | | 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. |
| Ingestion | : | PCR Mix Plex 5 | No specific data. |
| | | Taq DNA Polymerase | No specific data. |
| | | AR 3 | No specific data. |
| | | PCR Mix Plex 1 | No specific data. |
| | | PCR Mix Plex 2 | No specific data. |
| | | PCR Mix Plex 3 | No specific data. |

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

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| 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. |
| | | PCR Mix Plex 5 | 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. |

Section 4. First-aid measures

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| | AR 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. |
| Specific treatments | : PCR Mix Plex 1 PCR Mix Plex 2 PCR Mix Plex 3 PCR Mix Plex 4 PCR Mix Plex 5 Taq DNA Polymerase AR 3 | No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. |
| Protection of first-aiders | : PCR Mix Plex 1 PCR Mix Plex 2 PCR Mix Plex 3 PCR Mix Plex 4 PCR Mix Plex 5 Taq DNA Polymerase AR 3 | No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. 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. No action shall be taken involving any personal risk or without suitable training. |

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

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|---------------------------------------|--|---|
| Suitable extinguishing media | : PCR Mix Plex 1 PCR Mix Plex 2 PCR Mix Plex 3 PCR Mix Plex 4 PCR Mix Plex 5 Taq DNA Polymerase AR 3 | Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. |
| Unsuitable extinguishing media | : PCR Mix Plex 1 PCR Mix Plex 2 PCR Mix Plex 3 PCR Mix Plex 4 PCR Mix Plex 5 Taq DNA Polymerase AR 3 | None known. None known. None known. None known. None known. None known. None known. |

Section 5. Fire-fighting measures

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| 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. |
| | PCR Mix Plex 5 | 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 water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. |
| Hazardous thermal decomposition products | : PCR Mix Plex 1 | In a fire or if heated, a pressure increase will occur and the container may burst. 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 |
| | PCR Mix Plex 5 | Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides phosphorus oxides |
| | Taq DNA Polymerase | Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides |
| | AR 3 | Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides |

Section 5. Fire-fighting measures

phosphorus oxides

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.

PCR Mix Plex 5

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 without suitable training.

AR 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.

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.

PCR Mix Plex 5

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 3

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

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| 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. |
| | PCR Mix Plex 5 | 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 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. |
| For emergency responders | AR 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 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 |

Section 6. Accidental release measures

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| | PCR Mix Plex 5 | spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". 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 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". |
| 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). |
| | PCR Mix Plex 5 | 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. 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 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). |

Methods and materials for containment and cleaning up

Section 6. Accidental release measures

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| 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. |
| | PCR Mix Plex 5 | 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 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. |

Section 7. Handling and storage

Precautions for safe handling

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| 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 (see Section 8). |
| | PCR Mix Plex 5 | Put on appropriate personal protective equipment (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 |

Section 7. Handling and storage

Advice on general occupational hygiene

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|--------------------|---|
| AR 3 | 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. Put on appropriate personal protective equipment (see Section 8). |
| : 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. |
| PCR Mix Plex 5 | 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 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. |

Section 7. Handling and storage

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.

PCR Mix Plex 5

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

Section 7. Handling and storage

AR 3

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. 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.

Section 8. Exposure controls/personal protection

[Control parameters](#)

[Occupational exposure limits](#)

| Ingredient name | Exposure limits |
|--------------------------------|--|
| Taq DNA Polymerase Glycerol | <p>CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 10 mg/m³ 8 hours. Form: Mist</p> <p>CA Quebec Provincial (Canada, 7/2019). TWAEV: 10 mg/m³ 8 hours. Form: mist</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). STEL: 20 mg/m³ 15 minutes. Form: mist TWA: 10 mg/m³ 8 hours. Form: mist</p> <p>CA British Columbia Provincial (Canada, 1/2020). TWA: 3 mg/m³ 8 hours. Form: respirable mist TWA: 10 mg/m³ 8 hours. Form: total mist</p> |

[Appropriate engineering controls](#)

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

[Environmental exposure controls](#)

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

[Individual protection measures](#)

[Hygiene measures](#)

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

Section 8. Exposure controls/personal protection

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

Appearance

- Physical state** : PCR Mix Plex 1 Liquid.
 PCR Mix Plex 2 Liquid.
 PCR Mix Plex 3 Liquid.
 PCR Mix Plex 4 Liquid.
 PCR Mix Plex 5 Liquid.
 Taq DNA Polymerase AR 3 Liquid. [Clear. / solution]
- 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.
 PCR Mix Plex 5 Not available.
 Taq DNA Polymerase AR 3 Colorless.
- 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.
 PCR Mix Plex 5 Not available.
 Taq DNA Polymerase AR 3 Not available.
- 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.
 PCR Mix Plex 5 Not available.
 Taq DNA Polymerase AR 3 Not available.
- pH** :

Section 9. Physical and chemical properties

| | | |
|---|-------------------------|-----------------|
| | PCR Mix Plex 1 | Not available. |
| | PCR Mix Plex 2 | Not available. |
| | PCR Mix Plex 3 | Not available. |
| | PCR Mix Plex 4 | Not available. |
| | PCR Mix Plex 5 | Not available. |
| | Taq DNA Polymerase AR 3 | Not available. |
| Melting 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. |
| | PCR Mix Plex 5 | Not available. |
| | Taq DNA Polymerase AR 3 | Not available. |
| Boiling 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. |
| | PCR Mix Plex 5 | Not available. |
| | Taq DNA Polymerase AR 3 | Not available. |
| Flash 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. |
| | PCR Mix Plex 5 | Not available. |
| | Taq DNA Polymerase AR 3 | Not available. |
| 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. |
| | PCR Mix Plex 5 | Not available. |
| | Taq DNA Polymerase AR 3 | Not available. |
| Flammability (solid, gas) | : PCR Mix Plex 1 | Not applicable. |
| | PCR Mix Plex 2 | Not applicable. |
| | PCR Mix Plex 3 | Not applicable. |
| | PCR Mix Plex 4 | Not applicable. |
| | PCR Mix Plex 5 | Not applicable. |
| | Taq DNA Polymerase AR 3 | Not applicable. |
| Lower and upper explosive (flammable) limits | : PCR Mix Plex 1 | Not available. |
| | PCR Mix Plex 2 | Not available. |
| | PCR Mix Plex 3 | Not available. |
| | PCR Mix Plex 4 | Not available. |
| | PCR Mix Plex 5 | Not available. |
| | Taq DNA Polymerase AR 3 | Not available. |
| Vapor pressure | : PCR Mix Plex 1 | Not available. |
| | PCR Mix Plex 2 | Not available. |
| | PCR Mix Plex 3 | Not available. |
| | PCR Mix Plex 4 | Not available. |
| | PCR Mix Plex 5 | Not available. |
| | Taq DNA Polymerase AR 3 | Not available. |
| Vapor density | : | |

Section 9. Physical and chemical properties

| | | |
|--|----------------------------|---|
| | PCR Mix Plex 1 | Not available. |
| | PCR Mix Plex 2 | Not available. |
| | PCR Mix Plex 3 | Not available. |
| | PCR Mix Plex 4 | Not available. |
| | PCR Mix Plex 5 | Not available. |
| | Taq DNA Polymerase AR 3 | Not available. Not available. |
| 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. |
| | PCR Mix Plex 5 | Not available. |
| | Taq DNA Polymerase AR 3 | Not available. Not available. |
| Solubility | : PCR Mix Plex 1 | Not available. |
| | PCR Mix Plex 2 | Not available. |
| | PCR Mix Plex 3 | Not available. |
| | PCR Mix Plex 4 | Not available. |
| | PCR Mix Plex 5 | Not available. |
| | Taq DNA Polymerase AR 3 | Not available. Easily soluble in the following materials: cold water and hot water. |
| Partition coefficient: n- octanol/water | : PCR Mix Plex 1 | Not available. |
| | PCR Mix Plex 2 | Not available. |
| | PCR Mix Plex 3 | Not available. |
| | PCR Mix Plex 4 | Not available. |
| | PCR Mix Plex 5 | Not available. |
| | Taq DNA Polymerase AR 3 | Not available. Not available. |
| Auto-ignition 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. |
| | PCR Mix Plex 5 | Not available. |
| | Taq DNA Polymerase AR 3 | Not available. Not available. |
| 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. |
| | PCR Mix Plex 5 | Not available. |
| | Taq DNA Polymerase AR 3 | Not available. 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. |
| | PCR Mix Plex 5 | Not available. |
| | Taq DNA Polymerase AR 3 | Not available. Not available. |

Section 10. Stability and reactivity

| | | |
|---|--------------------|--|
| 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. |
| | PCR Mix Plex 5 | 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 3 | No specific test data related to reactivity available for this product or its ingredients. |
| 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. |
| | PCR Mix Plex 5 | The product is stable. |
| | Taq DNA Polymerase | The product is stable. |
| | AR 3 | The product is stable. |
| 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. |
| | PCR Mix Plex 5 | 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 3 | Under normal conditions of storage and use, hazardous reactions will not occur. |
| 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. |
| | PCR Mix Plex 5 | No specific data. |
| | Taq DNA Polymerase | No specific data. |
| | AR 3 | No specific data. |
| 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. |
| | PCR Mix Plex 5 | May react or be incompatible with oxidizing materials. |
| | Taq DNA Polymerase | May react or be incompatible with oxidizing materials. |
| | AR 3 | May react or be incompatible with oxidizing materials. |

Section 10. Stability and reactivity

| | | |
|---|--------------------|--|
| 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. |
| | PCR Mix Plex 5 | 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 3 | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | 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 | - |
| PCR Mix Plex 5 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 | - |

Section 11. Toxicological information

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|--|------------------------|---------|-------|-----------------|-------------|
| Taq DNA Polymerase | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| Glycerol | 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

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. |
| PCR Mix Plex 5 | Not available. |
| Taq DNA Polymerase AR 3 | Routes of entry anticipated: Oral, Dermal, Inhalation. |
| | 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. |
| PCR Mix Plex 5 | No known significant effects or critical hazards. |
| Taq DNA Polymerase AR 3 | Causes eye irritation. |
| | No known significant effects or critical hazards. |

Section 11. Toxicological information

| | | | |
|---------------------|---|----------------------------|---|
| 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. |
| | | PCR Mix Plex 5 | No known significant effects or critical hazards. |
| | | Taq DNA Polymerase AR 3 | 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. |
| | | PCR Mix Plex 5 | No known significant effects or critical hazards. |
| | | Taq DNA Polymerase AR 3 | 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. |
| | | PCR Mix Plex 5 | No known significant effects or critical hazards. |
| | | Taq DNA Polymerase AR 3 | 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. |
| | | PCR Mix Plex 5 | No specific data. |
| | | Taq DNA Polymerase AR 3 | Adverse symptoms may include the following: irritation watering redness 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. |
| | | PCR Mix Plex 5 | No specific data. |
| | | Taq DNA Polymerase AR 3 | 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. |
| | | PCR Mix Plex 5 | No specific data. |
| | | Taq DNA Polymerase AR 3 | 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. |
| | | PCR Mix Plex 5 | No specific data. |
| | | Taq DNA Polymerase AR 3 | No specific data. |

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

Section 11. Toxicological information

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 PCR Mix Plex 2 PCR Mix Plex 3 PCR Mix Plex 4 PCR Mix Plex 5 Taq DNA Polymerase AR 3 | No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. |
| Carcinogenicity | : PCR Mix Plex 1 PCR Mix Plex 2 PCR Mix Plex 3 PCR Mix Plex 4 PCR Mix Plex 5 Taq DNA Polymerase AR 3 | No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. |
| Mutagenicity | : PCR Mix Plex 1 PCR Mix Plex 2 PCR Mix Plex 3 PCR Mix Plex 4 PCR Mix Plex 5 Taq DNA Polymerase AR 3 | No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. |
| Reproductive toxicity | : PCR Mix Plex 1 PCR Mix Plex 2 PCR Mix Plex 3 PCR Mix Plex 4 PCR Mix Plex 5 Taq DNA Polymerase AR 3 | No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. |

Numerical measures of toxicity

Acute toxicity estimates

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|--------------------------------------|--------------|----------------|--------------------------|----------------------------|-------------------------------------|
| 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 | | | | | |

Section 11. Toxicological information

| | | | | | |
|---|-------|------|-----|-----|-----|
| Magnesium chloride | 2800 | 2500 | N/A | N/A | N/A |
| PCR Mix Plex 5 | | | | | |
| 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

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 |
| PCR Mix Plex 2 Magnesium chloride | Chronic NOEC 0.1 mg/l Fresh water | Fish - Cyprinus carpio | 35 days |
| | 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 |
| PCR Mix Plex 3 Magnesium chloride | 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 |
| | 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 |
| PCR Mix Plex 3 Magnesium chloride | 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 |
| | 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 |
| PCR Mix Plex 3 Magnesium chloride | 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 |
| | 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 |
| PCR Mix Plex 3 Magnesium chloride | 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 |
| | Acute EC50 >100 mg/l Fresh water | Algae - Desmodesmus subspicatus | 72 hours |

Section 12. Ecological information

| | | | |
|---|------------------------------------|--|----------|
| PCR Mix Plex 4 Magnesium chloride | Acute EC50 >100 mg/l Fresh water | Algae - <i>Desmodesmus subspicatus</i> | 72 hours |
| | Acute EC50 180000 µg/l Fresh water | Crustaceans - <i>Eudiaptomus padanus</i> ssp. <i>padanus</i> - Adult | 48 hours |
| | Acute IC50 6.8 mg/l Fresh water | Aquatic plants - <i>Lemna aequinoctialis</i> | 96 hours |
| | Acute LC50 32000 µg/l Fresh water | Daphnia - <i>Daphnia hyalina</i> - Adult | 48 hours |
| | Acute LC50 2120 mg/l Fresh water | Fish - <i>Pimephales promelas</i> | 96 hours |
| | Acute NOEC 100 mg/l Fresh water | Algae - <i>Desmodesmus subspicatus</i> | 72 hours |
| PCR Mix Plex 5 Magnesium chloride | Chronic NOEC 0.1 mg/l Fresh water | Fish - <i>Cyprinus carpio</i> | 35 days |
| | Acute EC50 >100 mg/l Fresh water | Algae - <i>Desmodesmus subspicatus</i> | 72 hours |
| | Acute EC50 180000 µg/l Fresh water | Crustaceans - <i>Eudiaptomus padanus</i> ssp. <i>padanus</i> - Adult | 48 hours |
| | Acute IC50 6.8 mg/l Fresh water | Aquatic plants - <i>Lemna aequinoctialis</i> | 96 hours |
| | Acute LC50 32000 µg/l Fresh water | Daphnia - <i>Daphnia hyalina</i> - Adult | 48 hours |
| | Acute LC50 2120 mg/l Fresh water | Fish - <i>Pimephales promelas</i> | 96 hours |
| Taq DNA Polymerase Glycerol Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy- | Acute NOEC 100 mg/l Fresh water | Algae - <i>Desmodesmus subspicatus</i> | 72 hours |
| | Chronic NOEC 0.1 mg/l Fresh water | Fish - <i>Cyprinus carpio</i> | 35 days |
| | Acute LC50 54000 mg/l Fresh water | Fish - <i>Oncorhynchus mykiss</i> | 96 hours |
| | Acute EC50 210 µg/l Fresh water | Algae - <i>Pseudokirchneriella subcapitata</i> | 96 hours |
| | Acute LC50 10800 µg/l Marine water | Crustaceans - <i>Pandalus montagui</i> - Adult | 48 hours |
| | Acute LC50 8600 µg/l Fresh water | Daphnia - <i>Daphnia magna</i> - Neonate | 48 hours |
| | Acute LC50 7200 µg/l Fresh water | Fish - <i>Oncorhynchus mykiss</i> | 96 hours |

Persistence and degradability

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

Bioaccumulative potential

Section 12. Ecological information

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|--|--------------------|------------|------------|
| Taq DNA Polymerase Glycerol Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy- | -1.76 3.77 | - 78.67 | low low |

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

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

Section 13. Disposal considerations

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

Section 14. Transport information

TDG / IMDG / IATA : Not regulated.

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

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Section 15. Regulatory information

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

| | |
|--------------------------|--|
| Australia | : Not determined. |
| Canada | : Not determined. |
| China | : Not determined. |
| Europe | : Not determined. |
| Japan | : Japan inventory (ENCS) : 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

History

Date of issue/Date of revision : 02/15/2021

Date of previous issue : 10/03/2018

Version : 3

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HPR = Hazardous Products Regulations
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
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

Procedure used to derive the classification

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

References : Not available.

⚠️ Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.