

SAFETY DATA SHEET



GeneMorph II Random Mutagenesis Kit, Part Number 200550

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

1.1 Product identifier

Product name : GeneMorph II Random Mutagenesis Kit, Part Number 200550
Part No. (Kit) : 200550
Part No. : Mutazyme II 200550-51
10X Mutazyme II 200550-52
Reaction Buffer
40 mM dNTP Mix (10 mM each dNTP) 600550-53
1.1 kb Gel Standard 600550-54

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

| Identified uses | |
|---|-----------------------|
| Analytical reagent. | |
| <input checked="" type="checkbox"/> Mutazyme II | 30 µl (75 U 2.5 U/µl) |
| 10X Mutazyme II Reaction Buffer | 150 µl |
| 40 mM dNTP Mix (10 mM each dNTP) | 30 µl |
| 1.1 kb Gel Standard | 150 µl (20 ng/µl) |

1.3 Details of the supplier of the safety data sheet

Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str. 8
76337 Waldbronn
Germany
0800 603 1000

e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

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

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mutazyme II Mixture
10X Mutazyme II Mixture
Reaction Buffer
40 mM dNTP Mix (10 mM each dNTP) Mixture
1.1 kb Gel Standard Mixture

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

Not classified.

GeneMorph II Random Mutagenesis Kit, Part Number 200550

SECTION 2: Hazards identification

| | | |
|---|--|--|
| Ingredients of unknown toxicity | <ul style="list-style-type: none"> : Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) | <ul style="list-style-type: none"> Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 30 - 60% Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 1 - 10% |
| Ingredients of unknown ecotoxicity | <ul style="list-style-type: none"> : 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) | <ul style="list-style-type: none"> Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 9% Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 5.7% |

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

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

2.2 Label elements

| | | |
|--|---|--|
| Signal word | <ul style="list-style-type: none"> : Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | <ul style="list-style-type: none"> No signal word. No signal word. No signal word. No signal word. |
| Hazard statements | <ul style="list-style-type: none"> : Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | <ul style="list-style-type: none"> 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. |
| <u>Precautionary statements</u> | | |
| Prevention | <ul style="list-style-type: none"> : Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | <ul style="list-style-type: none"> Not applicable. Not applicable. Not applicable. Not applicable. |
| Response | <ul style="list-style-type: none"> : Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | <ul style="list-style-type: none"> Not applicable. Not applicable. Not applicable. Not applicable. |
| Storage | <ul style="list-style-type: none"> : Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | <ul style="list-style-type: none"> Not applicable. Not applicable. Not applicable. Not applicable. |

GeneMorph II Random Mutagenesis Kit, Part Number 200550

SECTION 2: Hazards identification

| | | |
|---|--|--|
| Disposal | : Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | Not applicable. Not applicable. Not applicable. Not applicable. |
| Hazardous ingredients | : <input checked="" type="checkbox"/> Mutazyme II | Not applicable. |
| Supplemental label elements | : Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | Not applicable. Not applicable. Not applicable. Not applicable. |
| Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles | : Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | Not applicable. Not applicable. Not applicable. Not applicable. |
| <u>Special packaging requirements</u> | | |
| Tactile warning of danger | : Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | Not applicable. Not applicable. Not applicable. Not applicable. |
| 2.3 Other hazards | | |
| Other hazards which do not result in classification | : Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | None known. None known. None known. None known. |

SECTION 3: Composition/information on ingredients

| | | |
|-----------------------|--|--|
| 3.1 Substances | : Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | Mixture Mixture Mixture Mixture |
|-----------------------|--|--|

| Product/ingredient name | Identifiers | % | Regulation (EC) No. 1272/2008 [CLP] | Type |
|---|-------------------------------|-----------|---|---------|
| <input checked="" type="checkbox"/> Mutazyme II | EC: 200-289-5 CAS: 56-81-5 | ≥50 - ≤75 | Not classified. | [2] |
| Glycerol | CAS: 9036-19-5 | ≤0.3 | Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411 | [1] [5] |
| Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy- | | | See Section 16 for the full text of the H statements declared above. | |

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.

Type

GeneMorph II Random Mutagenesis Kit, Part Number 200550

SECTION 3: Composition/information on ingredients

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

SECTION 4: First aid measures

4.1 Description of first aid measures

| | | |
|---------------------|----------------------------------|---|
| Eye contact | : Mutazyme II | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. |
| | 10X Mutazyme II Reaction Buffer | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. |
| | 40 mM dNTP Mix (10 mM each dNTP) | 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. |
| | 1.1 kb Gel Standard | 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 | : Mutazyme II | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| | 10X Mutazyme II Reaction Buffer | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |
| | 40 mM dNTP Mix (10 mM each dNTP) | 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. |
| | 1.1 kb Gel Standard | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| Skin contact | : Mutazyme II | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | 10X Mutazyme II Reaction Buffer | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | 40 mM dNTP Mix (10 mM each dNTP) | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | 1.1 kb Gel Standard | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| Ingestion | : Mutazyme II | 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. |
| | 10X Mutazyme II Reaction Buffer | 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 |

SECTION 4: First aid measures

| | | |
|-----------------------------------|----------------------------------|---|
| 40 mM dNTP Mix (10 mM each dNTP) | | induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. 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. |
| 1.1 kb Gel Standard | | 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. |
| Protection of first-aiders | : Mutazyme II | No action shall be taken involving any personal risk or without suitable training. |
| | 10X Mutazyme II | No action shall be taken involving any personal risk or without suitable training. |
| | Reaction Buffer | No action shall be taken involving any personal risk or without suitable training. |
| | 40 mM dNTP Mix (10 mM each dNTP) | No action shall be taken involving any personal risk or without suitable training. |
| | 1.1 kb Gel Standard | No action shall be taken involving any personal risk or without suitable training. |

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

| | | |
|---------------------|----------------------------------|---|
| Eye contact | : Mutazyme II | No known significant effects or critical hazards. |
| | 10X Mutazyme II | No known significant effects or critical hazards. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | No known significant effects or critical hazards. |
| | 1.1 kb Gel Standard | No known significant effects or critical hazards. |
| Inhalation | : Mutazyme II | No known significant effects or critical hazards. |
| | 10X Mutazyme II | No known significant effects or critical hazards. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | No known significant effects or critical hazards. |
| | 1.1 kb Gel Standard | No known significant effects or critical hazards. |
| Skin contact | : Mutazyme II | No known significant effects or critical hazards. |
| | 10X Mutazyme II | No known significant effects or critical hazards. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | No known significant effects or critical hazards. |
| | 1.1 kb Gel Standard | No known significant effects or critical hazards. |
| Ingestion | : Mutazyme II | No known significant effects or critical hazards. |
| | 10X Mutazyme II | No known significant effects or critical hazards. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | No known significant effects or critical hazards. |
| | 1.1 kb Gel Standard | No known significant effects or critical hazards. |

Over-exposure signs/symptoms

| | | |
|--------------------|----------------------------------|-------------------|
| Eye contact | : Mutazyme II | No specific data. |
| | 10X Mutazyme II | No specific data. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | No specific data. |
| | 1.1 kb Gel Standard | No specific data. |

GeneMorph II Random Mutagenesis Kit, Part Number 200550

SECTION 4: First aid measures

| | | | |
|---------------------|---|----------------------------------|-------------------|
| Inhalation | : | Mutazyme II | No specific data. |
| | | 10X Mutazyme II | No specific data. |
| | | Reaction Buffer | |
| | | 40 mM dNTP Mix (10 mM each dNTP) | No specific data. |
| | | 1.1 kb Gel Standard | No specific data. |
| Skin contact | : | Mutazyme II | No specific data. |
| | | 10X Mutazyme II | No specific data. |
| | | Reaction Buffer | |
| | | 40 mM dNTP Mix (10 mM each dNTP) | No specific data. |
| | | 1.1 kb Gel Standard | No specific data. |
| Ingestion | : | Mutazyme II | No specific data. |
| | | 10X Mutazyme II | No specific data. |
| | | Reaction Buffer | |
| | | 40 mM dNTP Mix (10 mM each dNTP) | No specific data. |
| | | 1.1 kb Gel Standard | No specific data. |

4.3 Indication of any immediate medical attention and special treatment needed

| | | | |
|----------------------------|---|----------------------------------|---|
| Notes to physician | : | Mutazyme II | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| | | 10X Mutazyme II | 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. |
| | | Reaction Buffer | |
| | | 40 mM dNTP Mix (10 mM each dNTP) | 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. |
| | | 1.1 kb Gel Standard | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| Specific treatments | : | Mutazyme II | No specific treatment. |
| | | 10X Mutazyme II | No specific treatment. |
| | | Reaction Buffer | |
| | | 40 mM dNTP Mix (10 mM each dNTP) | No specific treatment. |
| | | 1.1 kb Gel Standard | No specific treatment. |

SECTION 5: Firefighting measures

5.1 Extinguishing media

| | | | |
|---------------------------------------|---|----------------------------------|---|
| Suitable extinguishing media | : | Mutazyme II | Use an extinguishing agent suitable for the surrounding fire. |
| | | 10X Mutazyme II | Use an extinguishing agent suitable for the surrounding fire. |
| | | Reaction Buffer | |
| | | 40 mM dNTP Mix (10 mM each dNTP) | Use an extinguishing agent suitable for the surrounding fire. |
| | | 1.1 kb Gel Standard | Use an extinguishing agent suitable for the surrounding fire. |
| Unsuitable extinguishing media | : | Mutazyme II | None known. |
| | | 10X Mutazyme II | None known. |
| | | Reaction Buffer | |
| | | 40 mM dNTP Mix (10 mM each dNTP) | None known. |
| | | 1.1 kb Gel Standard | None known. |

5.2 Special hazards arising from the substance or mixture

SECTION 5: Firefighting measures

| | | | |
|---|--|---|---|
| Hazards from the substance or mixture | : Mutazyme II | In a fire or if heated, a pressure increase will occur and the container may burst. | |
| | 10X Mutazyme II | In a fire or if heated, a pressure increase will occur and the container may burst. | |
| | Reaction Buffer | In a fire or if heated, a pressure increase will occur and the container may burst. | |
| | 40 mM dNTP Mix (10 mM each dNTP) | In a fire or if heated, a pressure increase will occur and the container may burst. | |
| Hazardous combustion products | 1.1 kb Gel Standard | In a fire or if heated, a pressure increase will occur and the container may burst. | |
| | : Mutazyme II | Decomposition products may include the following materials: carbon dioxide carbon monoxide | |
| | 10X Mutazyme II | Decomposition products may include the following materials: | |
| | Reaction Buffer | carbon dioxide carbon monoxide nitrogen oxides | |
| 5.3 Advice for firefighters | 40 mM dNTP Mix (10 mM each dNTP) | Decomposition products may include the following materials: | |
| | 1.1 kb Gel Standard | carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides No specific data. | |
| | Special precautions for fire-fighters | : Mutazyme II | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| | 10X Mutazyme II | Reaction Buffer | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| Special protective equipment for fire-fighters | 40 mM dNTP Mix (10 mM each dNTP) | 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. | |
| | 1.1 kb Gel Standard | 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. | |
| | : Mutazyme II | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. | |
| | 10X Mutazyme II | Reaction Buffer | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. |
| Date of issue/Date of revision | 40 mM dNTP Mix (10 mM each dNTP) | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. | |
| | 1.1 kb Gel Standard | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. | |

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

| | | |
|--------------------------------------|----------------------------------|---|
| For non-emergency personnel | : Mutazyme II | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment. |
| | 10X Mutazyme II Reaction Buffer | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment. |
| | 40 mM dNTP Mix (10 mM each dNTP) | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment. |
| | 1.1 kb Gel Standard | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment. |
| For emergency responders | : Mutazyme II | If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |
| | 10X Mutazyme II Reaction Buffer | If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |
| | 40 mM dNTP Mix (10 mM each dNTP) | If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |
| | 1.1 kb Gel Standard | If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |
| 6.2 Environmental precautions | : Mutazyme II | Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |
| | 10X Mutazyme II Reaction Buffer | Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |
| | 40 mM dNTP Mix (10 mM each dNTP) | Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |
| | 1.1 kb Gel Standard | Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |

6.3 Methods and material for containment and cleaning up

GeneMorph II Random Mutagenesis Kit, Part Number 200550

SECTION 6: Accidental release measures

| | | |
|--|---|---|
| Methods for cleaning up | : Mutazyme II | Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |
| | 10X Mutazyme II Reaction Buffer | Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |
| | 40 mM dNTP Mix (10 mM each dNTP) | 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. |
| | 1.1 kb Gel Standard | 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. |
| 6.4 Reference to other sections | : See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information. | |

SECTION 7: Handling and storage

7.1 Precautions for safe handling

| | | |
|---|----------------------------------|---|
| Protective measures | : Mutazyme II | Put on appropriate personal protective equipment (see Section 8). |
| | 10X Mutazyme II Reaction Buffer | Put on appropriate personal protective equipment (see Section 8). |
| | 40 mM dNTP Mix (10 mM each dNTP) | Put on appropriate personal protective equipment (see Section 8). |
| | 1.1 kb Gel Standard | Put on appropriate personal protective equipment (see Section 8). |
| Advice on general occupational hygiene | : Mutazyme II | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |
| | 10X Mutazyme II Reaction Buffer | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |
| | 40 mM dNTP Mix (10 mM each dNTP) | 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. |
| | 1.1 kb Gel Standard | 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. |

GeneMorph II Random Mutagenesis Kit, Part Number 200550

SECTION 7: Handling and storage

7.2 Conditions for safe storage, including any incompatibilities

| | | |
|----------------|----------------------------------|---|
| Storage | : Mutazyme II | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. |
| | 10X Mutazyme II Reaction Buffer | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. |
| | 40 mM dNTP Mix (10 mM each dNTP) | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. |
| | 1.1 kb Gel Standard | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. |

7.3 Specific end use(s)

| | | |
|---|----------------------------------|---|
| Recommendations | : Mutazyme II | Industrial applications, Professional applications. |
| | 10X Mutazyme II Reaction Buffer | Industrial applications, Professional applications. |
| | 40 mM dNTP Mix (10 mM each dNTP) | Industrial applications, Professional applications. |
| | 1.1 kb Gel Standard | Industrial applications, Professional applications. |
| Industrial sector specific solutions | : Mutazyme II | Not applicable. |
| | 10X Mutazyme II Reaction Buffer | Not applicable. |
| | 40 mM dNTP Mix (10 mM each dNTP) | Not applicable. |
| | 1.1 kb Gel Standard | Not applicable. |

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

| Product/ingredient name | Exposure limit values |
|-------------------------|--|
| Mutazyme II Glycerol | EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 10 mg/m ³ 8 hours. Form: Mist |

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available

8.2 Exposure controls

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

Individual protection measures

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

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

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

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.

GeneMorph II Random Mutagenesis Kit, Part Number 200550

SECTION 8: Exposure controls/personal protection

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

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

| | | |
|--|----------------------------------|----------------|
| Physical state | : Mutazyme II | Liquid. |
| | 10X Mutazyme II | Liquid. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | Liquid. |
| | 1.1 kb Gel Standard | Liquid. |
| Colour | : Mutazyme II | Not available. |
| | 10X Mutazyme II | Not available. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | Not available. |
| | 1.1 kb Gel Standard | Not available. |
| Odour | : Mutazyme II | Not available. |
| | 10X Mutazyme II | Not available. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | Not available. |
| | 1.1 kb Gel Standard | Not available. |
| Odour threshold | : Mutazyme II | Not available. |
| | 10X Mutazyme II | Not available. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | Not available. |
| | 1.1 kb Gel Standard | Not available. |
| pH | : Mutazyme II | 8 |
| | 10X Mutazyme II | 8.5 |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | 7.5 |
| | 1.1 kb Gel Standard | 7.5 |
| Melting point/freezing point | : Mutazyme II | Not available. |
| | 10X Mutazyme II | Not available. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | Not available. |
| | 1.1 kb Gel Standard | 0°C |
| Initial boiling point and boiling range | : Mutazyme II | Not available. |
| | 10X Mutazyme II | Not available. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | Not available. |
| | 1.1 kb Gel Standard | 100°C |
| Flash point | : Mutazyme II | Not available. |
| | 10X Mutazyme II | Not available. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | Not available. |
| | 1.1 kb Gel Standard | Not available. |

GeneMorph II Random Mutagenesis Kit, Part Number 200550

SECTION 9: Physical and chemical properties

| | | | |
|---|---|--|---|
| Evaporation rate | : | Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | Not available. Not available. Not available. Not available. |
| Flammability (solid, gas) | : | Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | Not applicable. Not applicable. Not applicable. Not applicable. |
| Upper/lower flammability or explosive limits | : | Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | Not available. Not available. Not available. Not available. |
| Vapour pressure | : | Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | Not available. Not available. Not available. Not available. |
| Vapour density | : | Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | Not available. Not available. Not available. Not available. |
| Relative density | : | Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | Not available. Not available. Not available. Not available. |
| Solubility(ies) | : | Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | Soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. |
| Partition coefficient: n-octanol/water | : | Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | Not available. Not available. Not available. Not available. |
| Auto-ignition temperature | : | Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | Not available. Not available. Not available. Not available. |

GeneMorph II Random Mutagenesis Kit, Part Number 200550

SECTION 9: Physical and chemical properties

| | | |
|----------------------------------|----------------------------------|----------------|
| Decomposition temperature | : Mutazyme II | Not available. |
| | 10X Mutazyme II | Not available. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | Not available. |
| | 1.1 kb Gel Standard | Not available. |
| Viscosity | : Mutazyme II | Not available. |
| | 10X Mutazyme II | Not available. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | Not available. |
| | 1.1 kb Gel Standard | Not available. |
| Explosive properties | : Mutazyme II | Not available. |
| | 10X Mutazyme II | Not available. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | Not available. |
| | 1.1 kb Gel Standard | Not available. |
| Oxidising properties | : Mutazyme II | Not available. |
| | 10X Mutazyme II | Not available. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | Not available. |
| | 1.1 kb Gel Standard | Not available. |

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

| | | |
|--|----------------------------------|--|
| 10.1 Reactivity | : Mutazyme II | No specific test data related to reactivity available for this product or its ingredients. |
| | 10X Mutazyme II | No specific test data related to reactivity available for this product or its ingredients. |
| | Reaction Buffer | No specific test data related to reactivity available for this product or its ingredients. |
| | 40 mM dNTP Mix (10 mM each dNTP) | No specific test data related to reactivity available for this product or its ingredients. |
| | 1.1 kb Gel Standard | No specific test data related to reactivity available for this product or its ingredients. |
| 10.2 Chemical stability | : Mutazyme II | The product is stable. |
| | 10X Mutazyme II | The product is stable. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | The product is stable. |
| | 1.1 kb Gel Standard | The product is stable. |
| 10.3 Possibility of hazardous reactions | : Mutazyme II | Under normal conditions of storage and use, hazardous reactions will not occur. |
| | 10X Mutazyme II | Under normal conditions of storage and use, hazardous reactions will not occur. |
| | Reaction Buffer | Under normal conditions of storage and use, hazardous reactions will not occur. |
| | 40 mM dNTP Mix (10 mM each dNTP) | Under normal conditions of storage and use, hazardous reactions will not occur. |
| | 1.1 kb Gel Standard | Under normal conditions of storage and use, hazardous reactions will not occur. |

GeneMorph II Random Mutagenesis Kit, Part Number 200550

SECTION 10: Stability and reactivity

| | | |
|--|--|--|
| 10.4 Conditions to avoid | : Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | No specific data. No specific data. No specific data. No specific data. |
| 10.5 Incompatible materials | : Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. |
| 10.6 Hazardous decomposition products | : Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|-----------|---------|------------|----------|
| Mutazyme II Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3, 3-tetramethylbutyl)phenyl]-. omega.-hydroxy- | LD50 Oral | Rat | 2800 mg/kg | - |

Acute toxicity estimates

Not available.

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|------------------------|---------|-------|-----------|-------------|
| Mutazyme II Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3, 3-tetramethylbutyl)phenyl]-. omega.-hydroxy- | Eyes - Severe irritant | Rabbit | - | 1 Percent | - |

Sensitiser

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

SECTION 11: Toxicological information

| | | |
|---|----------------------------------|--|
| Information on likely routes of exposure | : Mutazyme II | Routes of entry anticipated: Oral, Dermal, Inhalation. |
| | 10X Mutazyme II | Not available. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | Not available. |
| | 1.1 kb Gel Standard | Not available. |

Potential acute health effects

| | | |
|---------------------|----------------------------------|---|
| Inhalation | : Mutazyme II | No known significant effects or critical hazards. |
| | 10X Mutazyme II | No known significant effects or critical hazards. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | No known significant effects or critical hazards. |
| | 1.1 kb Gel Standard | No known significant effects or critical hazards. |
| Ingestion | : Mutazyme II | No known significant effects or critical hazards. |
| | 10X Mutazyme II | No known significant effects or critical hazards. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | No known significant effects or critical hazards. |
| | 1.1 kb Gel Standard | No known significant effects or critical hazards. |
| Skin contact | : Mutazyme II | No known significant effects or critical hazards. |
| | 10X Mutazyme II | No known significant effects or critical hazards. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | No known significant effects or critical hazards. |
| | 1.1 kb Gel Standard | No known significant effects or critical hazards. |
| Eye contact | : Mutazyme II | No known significant effects or critical hazards. |
| | 10X Mutazyme II | No known significant effects or critical hazards. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | No known significant effects or critical hazards. |
| | 1.1 kb Gel Standard | No known significant effects or critical hazards. |

Symptoms related to the physical, chemical and toxicological characteristics

| | | |
|---------------------|----------------------------------|-------------------|
| Inhalation | : Mutazyme II | No specific data. |
| | 10X Mutazyme II | No specific data. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | No specific data. |
| | 1.1 kb Gel Standard | No specific data. |
| Ingestion | : Mutazyme II | No specific data. |
| | 10X Mutazyme II | No specific data. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | No specific data. |
| | 1.1 kb Gel Standard | No specific data. |
| Skin contact | : Mutazyme II | No specific data. |
| | 10X Mutazyme II | No specific data. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | No specific data. |
| | 1.1 kb Gel Standard | No specific data. |
| Eye contact | : Mutazyme II | No specific data. |
| | 10X Mutazyme II | No specific data. |
| | Reaction Buffer | |
| | 40 mM dNTP Mix (10 mM each dNTP) | No specific data. |
| | 1.1 kb Gel Standard | No specific data. |

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

Short term exposure

SECTION 11: Toxicological information

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 | : Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | 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 | : Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | 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 | : Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | 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. |
| Teratogenicity | : Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | 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. |
| Developmental effects | : Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | 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. |
| Fertility effects | : Mutazyme II 10X Mutazyme II Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) 1.1 kb Gel Standard | 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 12: Ecological information

12.1 Toxicity

GeneMorph II Random Mutagenesis Kit, Part Number 200550

SECTION 12: Ecological information

| Product/ingredient name | Result | Species | Exposure |
|---|--|---|----------|
| Mutazyme II Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3, 3-tetramethylbutyl)phenyl]-. omega.-hydroxy- | Acute EC50 210 µg/l Fresh water | Algae - Pseudokirchneriella subcapitata | 96 hours |
| | Acute LC50 10800 µg/l Marine water | Crustaceans - Pandalus montagui - Adult | 48 hours |
| | Acute LC50 8600 to 9800 µg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 7200 µg/l Fresh water | Fish - Oncorhynchus mykiss | 96 hours |

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

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

12.4 Mobility in soil

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

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

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

Hazardous waste : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

Packaging

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

Special precautions : 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

Date of issue/Date of revision : 31/05/2017

18/20

GeneMorph II Random Mutagenesis Kit, Part Number 200550

SECTION 14: Transport information

ADR/RID / IMDG / IATA : Not regulated.

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

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

| Ingredient name | Intrinsic property | Status | Reference number | Date of revision |
|--|---|-------------|------------------|------------------|
| Mutazyme II Poly(oxy-1,2-ethanediyl), .alpha.-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy- | Substance of equivalent concern for environment | Recommended | ED/169/2012 | 2/10/2014 |

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Mutazyme II Not applicable.
10X Mutazyme II Reaction Not applicable.
Buffer Not applicable.
40 mM dNTP Mix (10 mM each dNTP) Not applicable.
1.1 kb Gel Standard Not applicable.

Other EU regulations

Ozone depleting substances (1005/2009/EU)

Not listed.

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

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

GeneMorph II Random Mutagenesis Kit, Part Number 200550

SECTION 15: Regulatory information

Inventory list

| | |
|--------------------------|--|
| Australia | : Not determined. |
| Canada | : All components are listed or exempted. |
| China | : All components are listed or exempted. |
| Europe | : All components are listed or exempted. |
| Japan | : Japan inventory (ENCS): Not determined. Japan inventory (ISHL): Not determined. |
| Malaysia | : Not determined. |
| New Zealand | : All components are listed or exempted. |
| Philippines | : Not determined. |
| Republic of Korea | : Not determined. |
| Taiwan | : All components are listed or exempted. |
| Thailand | : <input checked="" type="checkbox"/> Not determined. |
| Turkey | : Not determined. |
| United States | : All components are listed or exempted. |
| Viet Nam | : <input checked="" type="checkbox"/> Not determined. |

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

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

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

| Classification | Justification |
|-----------------|---------------|
| Not classified. | |

Full text of abbreviated H statements

| | |
|--|---|
| Mutazyme II H315 H318 H411 | Causes skin irritation. Causes serious eye damage. Toxic to aquatic life with long lasting effects. |
|--|---|

Full text of classifications [CLP/GHS]

| | |
|--|---|
| Mutazyme II Aquatic Chronic 2, H411 Eye Dam. 1, H318 Skin Irrit. 2, H315 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SKIN CORROSION/IRRITATION - Category 2 |
|--|---|

Date of issue/ Date of revision : 31/05/2017

Date of previous issue : 28/04/2016.

Version : 2

Notice to reader

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.

Date of issue/Date of revision : 31/05/2017

20/20