## Section 1. Identification

<table>
<thead>
<tr>
<th>GHS product identifier</th>
<th>Prep2Seq Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
<td>79900</td>
</tr>
<tr>
<td>Other means of identification</td>
<td>Not available.</td>
</tr>
<tr>
<td>Supplier/Manufacturer</td>
<td>3420 Central Expressway, Santa Clara CA 95051</td>
</tr>
<tr>
<td>In case of emergency</td>
<td>Chemtrec: 1 800 424 9300 Outside USA &amp; Canada: +1 703 527 3887</td>
</tr>
</tbody>
</table>

## Section 2. Hazards identification

<table>
<thead>
<tr>
<th>OSHA/HCS status</th>
<th>Prep2Seq NGS Enzyme Mix</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).</td>
</tr>
<tr>
<td>Classification of the substance or mixture</td>
<td>Prep2Seq NGS 2X Buffer</td>
</tr>
<tr>
<td></td>
<td>This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).</td>
</tr>
<tr>
<td></td>
<td>Prep2Seq NGS High Concentration Ligase</td>
</tr>
<tr>
<td></td>
<td>This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).</td>
</tr>
<tr>
<td>GHS label elements</td>
<td>Prep2Seq NGS Enzyme Mix</td>
</tr>
<tr>
<td></td>
<td>Prep2Seq NGS 2X Buffer</td>
</tr>
<tr>
<td></td>
<td>Prep2Seq NGS High Concentration Ligase</td>
</tr>
<tr>
<td>Hazard statements</td>
<td>Prep2Seq NGS Enzyme Mix</td>
</tr>
<tr>
<td></td>
<td>Prep2Seq NGS 2X Buffer</td>
</tr>
<tr>
<td></td>
<td>Prep2Seq NGS High Concentration Ligase</td>
</tr>
<tr>
<td>Precautionary statements</td>
<td>Prep2Seq NGS Enzyme Mix</td>
</tr>
<tr>
<td></td>
<td>Prep2Seq NGS 2X Buffer</td>
</tr>
<tr>
<td></td>
<td>Prep2Seq NGS High Concentration Ligase</td>
</tr>
<tr>
<td>General</td>
<td>Prep2Seq NGS Enzyme Mix</td>
</tr>
<tr>
<td></td>
<td>Prep2Seq NGS 2X Buffer</td>
</tr>
<tr>
<td></td>
<td>Prep2Seq NGS High Concentration Ligase</td>
</tr>
<tr>
<td>Prevention</td>
<td>Prep2Seq NGS Enzyme Mix</td>
</tr>
<tr>
<td></td>
<td>Prep2Seq NGS 2X Buffer</td>
</tr>
<tr>
<td></td>
<td>Prep2Seq NGS High Concentration Ligase</td>
</tr>
</tbody>
</table>
Section 2. Hazards identification

| Concentration Ligase | minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. |

**Storage**
- Prep2Seq NGS Enzyme Mix
- Prep2Seq NGS 2X Buffer
- Prep2Seq NGS High Concentration Ligase

**Disposal**
- Prep2Seq NGS Enzyme Mix
- Prep2Seq NGS 2X Buffer
- Prep2Seq NGS High Concentration Ligase

**Supplemental label elements**
- Prep2Seq NGS Enzyme Mix
- Prep2Seq NGS 2X Buffer
- Prep2Seq NGS High Concentration Ligase

**Hazards not otherwise classified**
- Prep2Seq NGS Enzyme Mix
- Prep2Seq NGS 2X Buffer
- Prep2Seq NGS High Concentration Ligase

Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prep2Seq NGS Enzyme Mix glycerol</td>
<td>25 - 50</td>
<td>56-81-5</td>
</tr>
<tr>
<td>Prep2Seq NGS 2X Buffer glycerol</td>
<td>25 - 50</td>
<td>56-81-5</td>
</tr>
<tr>
<td>Prep2Seq NGS High Concentration Ligase glycerol</td>
<td>25 - 50</td>
<td>56-81-5</td>
</tr>
</tbody>
</table>

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

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified 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**

**Eye contact**
- Prep2Seq NGS Enzyme Mix
  - 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.
- Prep2Seq NGS 2X Buffer
  - 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.
- Prep2Seq NGS High Concentration Ligase
  - 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.
Section 4. First aid measures

### Inhalation
- **Prep2Seq NGS Enzyme Mix**: 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.

- **Prep2Seq NGS 2X Buffer**: 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.

- **Prep2Seq NGS High Concentration Ligase**: 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.

### Skin contact
- **Prep2Seq NGS Enzyme Mix**: 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.

- **Prep2Seq NGS 2X Buffer**: 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.

- **Prep2Seq NGS High Concentration Ligase**: 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
- **Prep2Seq NGS Enzyme Mix**: 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.
Section 4. First aid measures

Medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Prep2Seq NGS 2X Buffer
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.

Prep2Seq NGS High Concentration Ligase
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.

Most important symptoms/effects, acute and delayed

### Potential acute health effects

#### Eye contact
- Prep2Seq NGS Enzyme Mix
- Prep2Seq NGS 2X Buffer
- Prep2Seq NGS High Concentration Ligase
Causes eye irritation.

#### Inhalation
- Prep2Seq NGS Enzyme Mix
- Prep2Seq NGS 2X Buffer
- Prep2Seq NGS High Concentration Ligase
No known significant effects or critical hazards.

#### Skin contact
- Prep2Seq NGS Enzyme Mix
- Prep2Seq NGS 2X Buffer
- Prep2Seq NGS High Concentration Ligase
No known significant effects or critical hazards.

#### Ingestion
- Prep2Seq NGS Enzyme Mix
- Prep2Seq NGS 2X Buffer
- Prep2Seq NGS High Concentration Ligase
May be irritating to mouth, throat and stomach.

Over-exposure signs/symptoms
Section 4. First aid measures

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>Prep2Seq NGS Enzyme Mix</th>
<th>Adverse symptoms may include the following: irritation, watering, redness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prep2Seq NGS 2X Buffer</td>
<td></td>
<td>Adverse symptoms may include the following: irritation, watering, redness</td>
</tr>
<tr>
<td>Prep2Seq NGS High Concentration Ligase</td>
<td></td>
<td>Adverse symptoms may include the following: irritation, watering, redness</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inhalation</th>
<th>Prep2Seq NGS Enzyme Mix</th>
<th>No specific data.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prep2Seq NGS 2X Buffer</td>
<td></td>
<td>No specific data.</td>
</tr>
<tr>
<td>Prep2Seq NGS High Concentration Ligase</td>
<td></td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Skin contact</th>
<th>Prep2Seq NGS Enzyme Mix</th>
<th>No specific data.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prep2Seq NGS 2X Buffer</td>
<td></td>
<td>No specific data.</td>
</tr>
<tr>
<td>Prep2Seq NGS High Concentration Ligase</td>
<td></td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingestion</th>
<th>Prep2Seq NGS Enzyme Mix</th>
<th>No specific data.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prep2Seq NGS 2X Buffer</td>
<td></td>
<td>No specific data.</td>
</tr>
<tr>
<td>Prep2Seq NGS High Concentration Ligase</td>
<td></td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

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

Notes to physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments: No specific treatment.

Protection of first-aiders: 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.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media: Prep2Seq NGS Enzyme Mix Use an extinguishing agent suitable for the surrounding fire.
Prep2Seq NGS 2X Buffer Use an extinguishing agent suitable for the surrounding fire.
Prep2Seq NGS High Concentration Ligase Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: Prep2Seq NGS Enzyme Mix None known.
Prep2Seq NGS 2X Buffer None known.
Prep2Seq NGS High Concentration Ligase None known.

Specific hazards arising from the chemical: Prep2Seq NGS Enzyme Mix In a fire or if heated, a pressure increase will occur and the container may burst.
Prep2Seq NGS 2X Buffer In a fire or if heated, a pressure increase will occur and the container may burst.
Prep2Seq NGS High Concentration Ligase In a fire or if heated, a pressure increase will occur and the container may burst.
Section 5. Fire-fighting measures

**Hazardous thermal decomposition products**

<table>
<thead>
<tr>
<th>Prep2Seq NGS Enzyme Mix</th>
<th>Decomposition products may include the following materials: carbon dioxide, carbon monoxide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prep2Seq NGS 2X Buffer</td>
<td>Decomposition products may include the following materials: carbon dioxide, carbon monoxide</td>
</tr>
<tr>
<td>Prep2Seq NGS High Concentration Ligase</td>
<td>Decomposition products may include the following materials: carbon dioxide, carbon monoxide</td>
</tr>
</tbody>
</table>

**Special protective actions for fire-fighters**

<table>
<thead>
<tr>
<th>Prep2Seq NGS Enzyme Mix</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prep2Seq NGS 2X Buffer</td>
<td>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.</td>
</tr>
<tr>
<td>Prep2Seq NGS High Concentration Ligase</td>
<td>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.</td>
</tr>
</tbody>
</table>

**Special protective equipment for fire-fighters**

<table>
<thead>
<tr>
<th>Prep2Seq NGS Enzyme Mix</th>
<th>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prep2Seq NGS 2X Buffer</td>
<td>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</td>
</tr>
<tr>
<td>Prep2Seq NGS High Concentration Ligase</td>
<td>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</td>
</tr>
</tbody>
</table>

Section 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel**

- 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**

- 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".

**Environmental precautions**

- 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

Small spill: 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.

Large spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures: Prep2Seq NGS Enzyme Mix
Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. 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.

Prep2Seq NGS 2X Buffer
Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. 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.

Prep2Seq NGS High Concentration Ligase
Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. 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.

Advice on general occupational hygiene: Prep2Seq NGS Enzyme Mix
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.

Prep2Seq NGS 2X 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.

Prep2Seq NGS High Concentration Ligase
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**

- **Prep2Seq NGS Enzyme Mix**
  - 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.

- **Prep2Seq NGS 2X 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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

- **Prep2Seq NGS High Concentration Ligase**
  - 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.

Section 8. Exposure controls/personal protection

**Control parameters**

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
</table>
| Prep2Seq NGS Enzyme Mix glycerol | OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction  
  TWA: 10 mg/m³ 8 hours. Form: Total dust  
OSHA PEL (United States, 2/2013).  
TWA: 5 mg/m³ 8 hours. Form: Respirable fraction  
TWA: 15 mg/m³ 8 hours. Form: Total dust |
TWA: 5 mg/m³ 8 hours. Form: Respirable fraction  
TWA: 10 mg/m³ 8 hours. Form: Total dust  
OSHA PEL (United States, 2/2013).  
TWA: 5 mg/m³ 8 hours. Form: Respirable fraction  
TWA: 15 mg/m³ 8 hours. Form: Total dust |
TWA: 5 mg/m³ 8 hours. Form: Respirable fraction  
TWA: 10 mg/m³ 8 hours. Form: Total dust  
OSHA PEL (United States, 2/2013).  
TWA: 5 mg/m³ 8 hours. Form: Respirable fraction  
TWA: 15 mg/m³ 8 hours. Form: Total dust |
Section 8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Appropriate engineering controls</th>
<th>Good general ventilation should be sufficient to control worker exposure to airborne contaminants.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental exposure controls</td>
<td>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.</td>
</tr>
</tbody>
</table>

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: chemical splash goggles.

Skin protection
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Hand 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
Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Prep2Seq NGS Enzyme Mix</th>
<th>Liquid.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prep2Seq NGS 2X Buffer</td>
<td>Liquid.</td>
</tr>
<tr>
<td></td>
<td>Prep2Seq NGS High</td>
<td>Liquid.</td>
</tr>
<tr>
<td></td>
<td>Concentration Ligase</td>
<td>Liquid.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Color</th>
<th>Prep2Seq NGS Enzyme Mix</th>
<th>Not available.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prep2Seq NGS 2X Buffer</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>Prep2Seq NGS High</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>Concentration Ligase</td>
<td>Not available.</td>
</tr>
</tbody>
</table>
### Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Prep2Seq NGS Enzyme Mix</th>
<th>Prep2Seq NGS 2X Buffer</th>
<th>Prep2Seq NGS High Concentration Ligase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammable limits</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Molecular weight</td>
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<td>Not applicable.</td>
</tr>
<tr>
<td>Molecular formula</td>
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<td>Not applicable.</td>
</tr>
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<td>pH</td>
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<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Boiling/condensation point</td>
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<td>Not available.</td>
</tr>
<tr>
<td>Melting/freezing point</td>
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<td>Not available.</td>
</tr>
<tr>
<td>Relative density</td>
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</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Volatility</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>
Section 9. Physical and chemical properties

**Evaporation rate**

- Prep2Seq NGS Enzyme Mix: Not available.
- Prep2Seq NGS 2X Buffer: Not available.
- Prep2Seq NGS High Concentration Ligase: Not available.

**Viscosity**

- Prep2Seq NGS Enzyme Mix: Not available.
- Prep2Seq NGS 2X Buffer: Not available.
- Prep2Seq NGS High Concentration Ligase: Not available.

**Solubility**

- Prep2Seq NGS Enzyme Mix: Not available.
- Prep2Seq NGS 2X Buffer: Not available.
- Prep2Seq NGS High Concentration Ligase: Not available.

**Physical/chemical properties comments**

- Prep2Seq NGS Enzyme Mix: Not available.
- Prep2Seq NGS 2X Buffer: Not available.
- Prep2Seq NGS High Concentration Ligase: Not available.

Section 10. Stability and reactivity

**Reactivity**

- Prep2Seq NGS Enzyme Mix: No specific test data related to reactivity available for this product or its ingredients.
- Prep2Seq NGS 2X Buffer: No specific test data related to reactivity available for this product or its ingredients.
- Prep2Seq NGS High Concentration Ligase: No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability**

- Prep2Seq NGS Enzyme Mix: The product is stable.
- Prep2Seq NGS 2X Buffer: The product is stable.
- Prep2Seq NGS High Concentration Ligase: The product is stable.

**Possibility of hazardous reactions**

- Prep2Seq NGS Enzyme Mix: Under normal conditions of storage and use, hazardous reactions will not occur.
- Prep2Seq NGS 2X Buffer: Under normal conditions of storage and use, hazardous reactions will not occur.
- Prep2Seq NGS High Concentration Ligase: Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid**

- Prep2Seq NGS Enzyme Mix: No specific data.
- Prep2Seq NGS 2X Buffer: No specific data.
- Prep2Seq NGS High Concentration Ligase: No specific data.

**Incompatible materials**

- Prep2Seq NGS Enzyme Mix: No specific data.
- Prep2Seq NGS 2X Buffer: No specific data.
- Prep2Seq NGS High Concentration Ligase: No specific data.

**Hazardous decomposition products**

- Prep2Seq NGS Enzyme Mix: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Prep2Seq NGS 2X Buffer: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Prep2Seq NGS High Concentration Ligase: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prep2Seq NGS Enzyme Mix glycerol</td>
<td>LD50 Dermal</td>
<td>Rat</td>
<td>21900 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>12600 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Prep2Seq NGS 2X Buffer glycerol</td>
<td>LD50 Dermal</td>
<td>Rat</td>
<td>21900 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>12600 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Prep2Seq NGS High Concentration Ligase</td>
<td>LD50 Dermal</td>
<td>Rat</td>
<td>21900 mg/kg</td>
<td></td>
</tr>
<tr>
<td>glycerol</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>12600 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prep2Seq NGS Enzyme Mix glycerol</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td></td>
</tr>
<tr>
<td>Prep2Seq NGS 2X Buffer glycerol</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td></td>
</tr>
<tr>
<td>Prep2Seq NGS High Concentration Ligase</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td></td>
</tr>
<tr>
<td>glycerol</td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td></td>
</tr>
</tbody>
</table>

Sensitization
Not available.

Mutagenicity
Not available.

Carcinogenicity
Not available.

Reproductive toxicity
Not available.

Teratogenicity
Not available.

Specific target organ toxicity (single exposure)
Not available.

Specific target organ toxicity (repeated exposure)
Not available.
Section 11. Toxicological information

Aspiration hazard
Not available.

Information on the likely routes of exposure
Not available.

Potential acute health effects
Eye contact :
Inhalation :
Skin contact :
Ingestion :

Symptoms related to the physical, chemical and toxicological characteristics
Eye contact :
Inhalation :
Skin contact :
Ingestion :

Delayed and immediate effects and also chronic effects from short and long term exposure
Short term exposure
Potential immediate effects :
Potential delayed effects :
Long term exposure
Potential immediate effects :
Potential delayed effects :

Potential chronic health effects
Not available.

General :
Carcinogenicity :
Mutagenicity :
Teratogenicity :
Developmental effects :
Fertility effects :

Numerical measures of toxicity
Acute toxicity estimates
Not available.

Interactive effects :

Other information :
Section 12. Ecological information

Toxicity
Not available.

Persistence and degradability
Not available.

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prep2Seq NGS Enzyme Mix glycerol</td>
<td>-1.76</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>Prep2Seq NGS 2X Buffer glycerol</td>
<td>-1.76</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>Prep2Seq NGS High Concentration Ligase glycerol</td>
<td>-1.76</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>): Prep2Seq NGS Enzyme Mix Not available. Prep2Seq NGS 2X Buffer Not available. Prep2Seq NGS High Concentration Ligase Not available.

Mobility:

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. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

<table>
<thead>
<tr>
<th>UN number</th>
<th>DOT Classification</th>
<th>TDG Classification</th>
<th>Mexico Classification</th>
<th>ADR/RID Classification</th>
<th>IMDG Classification</th>
<th>IATA Classification</th>
</tr>
</thead>
</table>
Section 14. Transport information

| Transport hazard class(es) | - | - | - | - | - | - |
| Packing group             | - | - | - | - | - | - |
| Additional information    | - | - | - | - | - | - |

**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 Annex II of MARPOL 73/78 and the IBC Code**

Not available.

Section 15. Regulatory information

**U.S. Federal regulations**

*TSCA 8(a) CDR Exempt/Partial exemption:* All components are listed or exempted.

*United States inventory (TSCA 8b):* All components are listed or exempted.

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)**

Not listed

**Clean Air Act Section 602 Class I Substances**

Not listed

**Clean Air Act Section 602 Class II Substances**

Not listed

**DEA List I Chemicals (Precursor Chemicals)**

Not listed

**DEA List II Chemicals (Essential Chemicals)**

Not listed

**SARA 302/304**

Composition/information on ingredients: No products were found.

**SARA 304 RQ**

Not applicable.

**SARA 311/312**

Classification: Immediate (acute) health hazard

Composition/information on ingredients
Section 15. Regulatory information

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Fire hazard</th>
<th>Sudden release of pressure</th>
<th>Reactive</th>
<th>Immediate (acute) health hazard</th>
<th>Delayed (chronic) health hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>glycerol</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>glycerol</td>
<td></td>
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</tr>
<tr>
<td>glycerol</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

State regulations
- **Massachusetts**: The following components are listed: GLYCERINE MIST
- **New York**: None of the components are listed.
- **New Jersey**: The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL
- **Pennsylvania**: The following components are listed: 1,2,3-PROPANETRIOL

International regulations
- **Chemical Weapon Convention List Schedules I, II & III Chemicals**: Not listed.
- **Stockholm Convention on Persistent Organic Pollutants**: Not listed.
- **UNECE Aarhus Protocol on POPs and Heavy Metals**: Not listed.

Canada
- **WHMIS (Canada)**: Prep2Seq NGS Enzyme Mix is Not controlled under WHMIS (Canada).
- **Prep2Seq NGS 2X Buffer**: Not controlled under WHMIS (Canada).
- **Prep2Seq NGS High Concentration Ligase**: Not controlled under WHMIS (Canada).

Canadian lists
- **Canadian NPRI**: None of the components are listed.
- **CEPA Toxic substances**: None of the components are listed.
- **Canada inventory**: All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

16/17
Section 16. Other information

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Flammability

Health

Instability/Reactivity

Special

History

Date of issue/Date of revision : 02/08/2016.

Date of previous issue : No previous validation.

Version : 1

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

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.