Section 1. Identification

1.1 Product identifier

Product name: OneSeq Phased Exome Target Enrichment Box 2, 16 reactions, Part Number 5190-9660
Part No. (Chemical Kit): 5190-9660
Part No.: OneSeq Hyb 3 5190-9658
OneSeq RNase Block 5190-9659
OneSeq Phased Exome Blocker Mix 5190-9656
Validation date: 10/20/2016

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

Material uses: Analytical reagent.
OneSeq Hyb 3 0.16 ml
OneSeq RNase Block 0.016 ml
OneSeq Phased Exome Blocker Mix 0.144 ml

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer: Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

1.4 Emergency telephone number

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

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status: OneSeq Hyb 3
OneSeq RNase Block
OneSeq Phased Exome Blocker Mix

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

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

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

Classification of the substance or mixture

OneSeq RNase Block
H320 EYE IRRITATION - Category 2B
Ingredients of unknown toxicity: OneSeq Hyb 3 Percentage of the mixture consisting of ingredient (s) of unknown toxicity: 1%

2.2 GHS label elements

Date of issue: 10/20/2016
Section 2. Hazards identification

Signal word:
- OneSeq Hyb 3: No signal word.
- OneSeq RNase Block: Warning
- OneSeq Phased Exome Blocker Mix: No signal word.

Hazard statements:
- OneSeq Hyb 3: No known significant effects or critical hazards.
- OneSeq RNase Block: H320 - Causes eye irritation.
- OneSeq Phased Exome Blocker Mix: No known significant effects or critical hazards.

Precautionary statements:

Prevention:
- OneSeq Hyb 3: Not applicable.
- OneSeq RNase Block: P264 - Wash hands thoroughly after handling.
- OneSeq Phased Exome Blocker Mix: Not applicable.

Response:
- OneSeq Hyb 3: Not applicable.
- OneSeq RNase Block: P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- OneSeq Phased Exome Blocker Mix: Not applicable.

Storage:
- OneSeq Hyb 3: Not applicable.
- OneSeq RNase Block: Not applicable.
- OneSeq Phased Exome Blocker Mix: Not applicable.

Disposal:
- OneSeq Hyb 3: Not applicable.
- OneSeq RNase Block: Not applicable.
- OneSeq Phased Exome Blocker Mix: Not applicable.

Supplemental label elements:
- OneSeq Hyb 3: None known.
- OneSeq RNase Block: None known.
- OneSeq Phased Exome Blocker Mix: None known.

2.3 Other hazards

Hazards not otherwise classified:
- OneSeq Hyb 3: None known.
- OneSeq RNase Block: None known.
- OneSeq Phased Exome Blocker Mix: None known.

Section 3. Composition/information on ingredients

Substance/mixture:
- OneSeq Hyb 3: Mixture
- OneSeq RNase Block: Mixture
- OneSeq Phased Exome Blocker Mix: Mixture

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>OneSeq RNase Block</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>≥50 - ≤75</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.

Date of issue: 10/20/2016
### Section 4. First aid measures

#### 4.1 Description of necessary first aid measures

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>OneSeq Hyb 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>OneSeq RNase Block</td>
<td>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.</td>
</tr>
<tr>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>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.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inhalation</th>
<th>OneSeq Hyb 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>OneSeq RNase Block</td>
<td>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.</td>
</tr>
<tr>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Skin contact</th>
<th>OneSeq Hyb 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td>OneSeq RNase Block</td>
<td>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.</td>
</tr>
<tr>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingestion</th>
<th>OneSeq Hyb 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>OneSeq RNase Block</td>
<td>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. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.</td>
</tr>
</tbody>
</table>
Section 4. First aid measures

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.

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.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact

: OneSeq Hyb 3
OneSeq RNase Block
OneSeq Phased Exome Blocker Mix
No known significant effects or critical hazards.
Causes eye irritation.

Inhalation

: OneSeq Hyb 3
OneSeq RNase Block
OneSeq Phased Exome Blocker Mix
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.

Skin contact

: OneSeq Hyb 3
OneSeq RNase Block
OneSeq Phased Exome Blocker Mix
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.

Ingestion

: OneSeq Hyb 3
OneSeq RNase Block
OneSeq Phased Exome Blocker Mix
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact

: OneSeq Hyb 3
OneSeq RNase Block
No specific data.
Adverse symptoms may include the following:
irritation
watering
redness
OneSeq Phased Exome Blocker Mix
No specific data.

Inhalation

: OneSeq Hyb 3
OneSeq RNase Block
OneSeq Phased Exome Blocker Mix
No specific data.
No specific data.
No specific data.

Skin contact

: OneSeq Hyb 3
OneSeq RNase Block
OneSeq Phased Exome Blocker Mix
No specific data.
No specific data.
No specific data.

Date of issue : 10/20/2016
Section 4. First aid measures

Ingestion:

<table>
<thead>
<tr>
<th>Product</th>
<th>Notes to physician</th>
<th>Specific treatments</th>
<th>Protection of first-aiders</th>
</tr>
</thead>
<tbody>
<tr>
<td>OneSeq Hyb 3</td>
<td>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.</td>
<td>No specific treatment.</td>
<td>No action shall be taken involving any personal risk or without suitable training.</td>
</tr>
<tr>
<td>OneSeq RNase Block</td>
<td>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</td>
<td>No specific treatment.</td>
<td>No action shall be taken involving any personal risk or without suitable training.</td>
</tr>
<tr>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</td>
<td>No specific treatment.</td>
<td>No action shall be taken involving any personal risk or without suitable training.</td>
</tr>
</tbody>
</table>

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

Notes to physician:

<table>
<thead>
<tr>
<th>Product</th>
<th>Notes to physician</th>
</tr>
</thead>
<tbody>
<tr>
<td>OneSeq Hyb 3</td>
<td>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.</td>
</tr>
<tr>
<td>OneSeq RNase Block</td>
<td>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</td>
</tr>
<tr>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</td>
</tr>
</tbody>
</table>

Specific treatments:

<table>
<thead>
<tr>
<th>Product</th>
<th>Specific treatments</th>
</tr>
</thead>
<tbody>
<tr>
<td>OneSeq Hyb 3</td>
<td>No specific treatment.</td>
</tr>
<tr>
<td>OneSeq RNase Block</td>
<td>No specific treatment.</td>
</tr>
<tr>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>No specific treatment.</td>
</tr>
</tbody>
</table>

Protection of first-aiders:

<table>
<thead>
<tr>
<th>Product</th>
<th>Protection of first-aiders</th>
</tr>
</thead>
<tbody>
<tr>
<td>OneSeq Hyb 3</td>
<td>No action shall be taken involving any personal risk or without suitable training.</td>
</tr>
<tr>
<td>OneSeq RNase Block</td>
<td>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.</td>
</tr>
<tr>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>No action shall be taken involving any personal risk or without suitable training.</td>
</tr>
</tbody>
</table>

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media:

<table>
<thead>
<tr>
<th>Product</th>
<th>Notes to physician</th>
</tr>
</thead>
<tbody>
<tr>
<td>OneSeq Hyb 3</td>
<td>Use an extinguishing agent suitable for the surrounding fire.</td>
</tr>
<tr>
<td>OneSeq RNase Block</td>
<td>Use an extinguishing agent suitable for the surrounding fire.</td>
</tr>
<tr>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>Use an extinguishing agent suitable for the surrounding fire.</td>
</tr>
</tbody>
</table>

Unsuitable extinguishing media:

<table>
<thead>
<tr>
<th>Product</th>
<th>Notes to physician</th>
</tr>
</thead>
<tbody>
<tr>
<td>OneSeq Hyb 3</td>
<td>None known.</td>
</tr>
<tr>
<td>OneSeq RNase Block</td>
<td>None known.</td>
</tr>
<tr>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>None known.</td>
</tr>
</tbody>
</table>

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical:

<table>
<thead>
<tr>
<th>Product</th>
<th>Notes to physician</th>
</tr>
</thead>
<tbody>
<tr>
<td>OneSeq Hyb 3</td>
<td>In a fire or if heated, a pressure increase will occur and the container may burst.</td>
</tr>
<tr>
<td>OneSeq RNase Block</td>
<td>In a fire or if heated, a pressure increase will occur and the container may burst.</td>
</tr>
<tr>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>In a fire or if heated, a pressure increase will occur and the container may burst.</td>
</tr>
</tbody>
</table>
Section 5. Fire-fighting measures

| Hazardous thermal decomposition products | OneSeq Hyb 3 | Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides, halogenated compounds, carbonyl halides |
| OneSeq RNase Block | Decomposition products may include the following materials: carbon dioxide, carbon monoxide |
| OneSeq Phased Exome Blocker Mix | No specific data. |

5.3 Advice for firefighters

Special protective actions for fire-fighters

| OneSeq Hyb 3 | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| OneSeq RNase Block | 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. |
| OneSeq Phased Exome Blocker Mix | 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

| OneSeq Hyb 3 | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| OneSeq RNase Block | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| OneSeq Phased Exome Blocker Mix | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

| OneSeq Hyb 3 | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. |
| OneSeq RNase Block | 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. |
# Section 6. Accidental release measures

<table>
<thead>
<tr>
<th>Material</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.</td>
</tr>
<tr>
<td>OneSeq Hyb 3</td>
<td>For emergency responders: If specialized clothing is required, refer to Section 8. 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).</td>
</tr>
<tr>
<td>OneSeq RNase Block</td>
<td>If specialized clothing is required, refer to Section 8. 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).</td>
</tr>
<tr>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>If specialized clothing is required, refer to Section 8. 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).</td>
</tr>
</tbody>
</table>

## 6.2 Environmental precautions

<table>
<thead>
<tr>
<th>Material</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>OneSeq Hyb 3</td>
<td>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).</td>
</tr>
<tr>
<td>OneSeq RNase Block</td>
<td>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).</td>
</tr>
<tr>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>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).</td>
</tr>
</tbody>
</table>

## 6.3 Methods and materials for containment and cleaning up

<table>
<thead>
<tr>
<th>Material</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>OneSeq Hyb 3</td>
<td>Methods for cleaning up: 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.</td>
</tr>
<tr>
<td>OneSeq RNase Block</td>
<td>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.</td>
</tr>
<tr>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>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.</td>
</tr>
</tbody>
</table>
# Section 7. Handling and storage

## 7.1 Precautions for safe handling

<table>
<thead>
<tr>
<th>Protective measures</th>
<th>Advice on general occupational hygiene</th>
</tr>
</thead>
<tbody>
<tr>
<td>OneSeq Hyb 3</td>
<td>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.</td>
</tr>
<tr>
<td>OneSeq RNase Block</td>
<td>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.</td>
</tr>
<tr>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>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.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Protective measures</th>
<th>Advice on general occupational hygiene</th>
</tr>
</thead>
<tbody>
<tr>
<td>OneSeq Hyb 3</td>
<td>Put on appropriate personal protective equipment (see Section 8).</td>
</tr>
<tr>
<td>OneSeq RNase Block</td>
<td>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.</td>
</tr>
<tr>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>Put on appropriate personal protective equipment (see Section 8).</td>
</tr>
</tbody>
</table>

## 7.2 Conditions for safe storage, including any incompatibilities

<table>
<thead>
<tr>
<th>Protective measures</th>
<th>Advice on general occupational hygiene</th>
</tr>
</thead>
<tbody>
<tr>
<td>OneSeq Hyb 3</td>
<td>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.</td>
</tr>
<tr>
<td>OneSeq RNase Block</td>
<td>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.</td>
</tr>
<tr>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>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.</td>
</tr>
</tbody>
</table>
Section 7. Handling and storage

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.

7.3 Specific end use(s)

**Recommendations**

- OneSeq Hyb 3
- OneSeq RNase Block
- OneSeq Phased Exome Blocker Mix

**Industrial sector specific solutions**

- OneSeq Hyb 3
- OneSeq RNase Block
- OneSeq Phased Exome Blocker Mix

Not applicable.

Section 8. Exposure controls/personal protection

8.1 Control parameters

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TWA: 5 mg/m³ 8 hours. Form: Respirable</td>
</tr>
<tr>
<td></td>
<td>fraction</td>
</tr>
<tr>
<td></td>
<td>TWA: 10 mg/m³ 8 hours. Form: Total dust</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (United States, 2/2013).</td>
</tr>
<tr>
<td></td>
<td>TWA: 5 mg/m³ 8 hours. Form: Respirable</td>
</tr>
<tr>
<td></td>
<td>fraction</td>
</tr>
<tr>
<td></td>
<td>TWA: 15 mg/m³ 8 hours. Form: Total dust</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

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

**Individual protection measures**

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

Date of issue : 10/20/2016
Section 8. Exposure controls/personal protection

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

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

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

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

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

**Appearance**

**Physical state**: OneSeq Hyb 3 Liquid.
OneSeq RNase Block Liquid.
OneSeq Phased Exome Blocker Mix Liquid.

**Color**: OneSeq Hyb 3 Not available.
OneSeq RNase Block Not available.
OneSeq Phased Exome Blocker Mix Not available.

**Odor**: OneSeq Hyb 3 Not available.
OneSeq RNase Block Not available.
OneSeq Phased Exome Blocker Mix Not available.

**Odor threshold**: OneSeq Hyb 3 Not available.
OneSeq RNase Block Not available.
OneSeq Phased Exome Blocker Mix Not available.

**pH**: OneSeq Hyb 3 7
OneSeq RNase Block 7.6
OneSeq Phased Exome Blocker Mix 7.5

**Melting point**: OneSeq Hyb 3 0°C (32°F)
OneSeq RNase Block Not available.
OneSeq Phased Exome Blocker Mix 0°C (32°F)

**Boiling point**: OneSeq Hyb 3 100°C (212°F)
OneSeq RNase Block Not available.
OneSeq Phased Exome Blocker Mix 100°C (212°F)

**Flash point**: OneSeq Hyb 3 Not available.
OneSeq RNase Block Not available.
OneSeq Phased Exome Blocker Mix Not available.
Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>OneSeq Hyb 3</th>
<th>Not available.</th>
<th>OneSeq RNase Block</th>
<th>Not available.</th>
<th>OneSeq Phased Exome Blocker Mix</th>
<th>Not available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaporation rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>OneSeq Hyb 3</td>
<td>Not applicable.</td>
<td>OneSeq RNase Block</td>
<td>Not applicable.</td>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Lower and upper explosive (flammable) limits</td>
<td>OneSeq Hyb 3</td>
<td>Not available.</td>
<td>OneSeq RNase Block</td>
<td>Not available.</td>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>OneSeq Hyb 3</td>
<td>Not available.</td>
<td>OneSeq RNase Block</td>
<td>Not available.</td>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor density</td>
<td>OneSeq Hyb 3</td>
<td>Not available.</td>
<td>OneSeq RNase Block</td>
<td>Not available.</td>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>OneSeq Hyb 3</td>
<td>Not available.</td>
<td>OneSeq RNase Block</td>
<td>Not available.</td>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility</td>
<td>OneSeq Hyb 3</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
<td>OneSeq RNase Block</td>
<td>Soluble in the following materials: cold water and hot water.</td>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>OneSeq Hyb 3</td>
<td>Not available.</td>
<td>OneSeq RNase Block</td>
<td>Not available.</td>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>OneSeq Hyb 3</td>
<td>Not available.</td>
<td>OneSeq RNase Block</td>
<td>Not available.</td>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>OneSeq Hyb 3</td>
<td>Not available.</td>
<td>OneSeq RNase Block</td>
<td>Not available.</td>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>OneSeq Hyb 3</td>
<td>Not available.</td>
<td>OneSeq RNase Block</td>
<td>Not available.</td>
<td>OneSeq Phased Exome Blocker Mix</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Section 10. Stability and reactivity

10.1 Reactivity : OneSeq Hyb 3                                                                 | No specific test data related to reactivity available for this product or its ingredients. |
                | OneSeq RNase Block                                                                 | No specific test data related to reactivity available for this product or its ingredients. |
                | OneSeq Phased Exome Blocker Mix                                                  | No specific test data related to reactivity available for this product or its ingredients. |
Section 10. Stability and reactivity

10.2 Chemical stability

OneSeq Hyb 3
The product is stable.

OneSeq RNase Block
The product is stable.

OneSeq Phased Exome Blocker Mix
The product is stable.

10.3 Possibility of hazardous reactions

OneSeq Hyb 3
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

OneSeq RNase Block
Under normal conditions of storage and use, hazardous decomposition products will not occur.

OneSeq Phased Exome Blocker Mix
Under normal conditions of storage and use, hazardous decomposition products will not occur.

10.4 Conditions to avoid

OneSeq Hyb 3
No specific data.

OneSeq RNase Block
No specific data.

OneSeq Phased Exome Blocker Mix
No specific data.

10.5 Incompatible materials

OneSeq Hyb 3
May react or be incompatible with oxidizing materials.

OneSeq RNase Block
May react or be incompatible with oxidizing materials.

OneSeq Phased Exome Blocker Mix
May react or be incompatible with oxidizing materials.

10.6 Hazardous decomposition products

OneSeq Hyb 3
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

OneSeq RNase Block
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

OneSeq Phased Exome Blocker Mix
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

<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>OneSeq RNase Block 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>OneSeq RNase Block 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>
</tbody>
</table>

Sensitization

Not available.

Mutagenicity

Not available.

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### Section 11. Toxicological information

**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.

**Aspiration hazard**
Not available.

---

**Information on the likely routes of exposure**

<table>
<thead>
<tr>
<th>Route</th>
<th>OneSeq Hyb 3</th>
<th>OneSeq RNase Block</th>
<th>OneSeq Phased Exome Blocker Mix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>No known significant effects or critical hazards.</td>
<td>Causes eye irritation.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

---

**Potential acute health effects**

**Eye contact**

<table>
<thead>
<tr>
<th>Route</th>
<th>OneSeq Hyb 3</th>
<th>OneSeq RNase Block</th>
<th>OneSeq Phased Exome Blocker Mix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

---

**Symptoms related to the physical, chemical and toxicological characteristics**

**Eye contact**

<table>
<thead>
<tr>
<th>Route</th>
<th>OneSeq Hyb 3</th>
<th>OneSeq RNase Block</th>
<th>OneSeq Phased Exome Blocker Mix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>No specific data.</td>
<td>Adverse symptoms may include the following: irritation watering redness</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No specific data.</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>No specific data.</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

---

**Inhalation**

<table>
<thead>
<tr>
<th>Route</th>
<th>OneSeq Hyb 3</th>
<th>OneSeq RNase Block</th>
<th>OneSeq Phased Exome Blocker Mix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>No specific data.</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No specific data.</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>No specific data.</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

---

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Section 11. Toxicological information

Skin contact:

- OneSeq Hyb 3
- OneSeq RNase Block
- OneSeq Phased Exome Blocker Mix

Ingestion:

- OneSeq Hyb 3
- OneSeq RNase Block
- OneSeq Phased Exome Blocker Mix

No known significant effects or critical hazards.

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

Short term exposure

Potential immediate effects:

- Not available.

Potential delayed effects:

- Not available.

Long term exposure

Potential immediate effects:

- Not available.

Potential delayed effects:

- Not available.

Potential chronic health effects

General:

- OneSeq Hyb 3
- OneSeq RNase Block
- OneSeq Phased Exome Blocker Mix

Carcinogenicity:

- OneSeq Hyb 3
- OneSeq RNase Block
- OneSeq Phased Exome Blocker Mix

Mutagenicity:

- OneSeq Hyb 3
- OneSeq RNase Block
- OneSeq Phased Exome Blocker Mix

Teratogenicity:

- OneSeq Hyb 3
- OneSeq RNase Block
- OneSeq Phased Exome Blocker Mix

Developmental effects:

- OneSeq Hyb 3
- OneSeq RNase Block
- OneSeq Phased Exome Blocker Mix

Fertility effects:

- OneSeq Hyb 3
- OneSeq RNase Block
- OneSeq Phased Exome Blocker Mix

No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

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Section 12. Ecological information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>OneSeq RNase Block</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>Acute LC50 54000 mg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability

Not available.

12.3 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>OneSeq RNase Block</td>
<td>-1.76</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

| Soil/water partition coefficient (K<sub>OC</sub>) | : Not available. |

12.5 Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

13.1 Waste treatment methods

| Disposal methods | : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at 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. |
| Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements. |
| The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. |
| Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. |

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Section 14. Transport information

Regulatory information

DOT / IMDG / IATA : Not regulated.

Section 15. Regulatory information

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

U.S. Federal regulations : United States inventory (TSCA 8b): All components are listed or exempted.
Clean Water Act (CWA) 311: Edetic acid

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

<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>OneSeq RNase Block</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
California Prop. 65 : None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals
Not listed.

Montreal Protocol (Annexes A, B, C, E)
Not listed.

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Section 15. Regulatory information

**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.

### Inventory list
- **Australia**: Not determined.
- **Canada inventory**: Not determined.
- **China**: All components are listed or exempted.
- **Europe**: All components are listed or exempted.
- **Japan**: Japan inventory (ENCS): Not determined.
  - Japan inventory (ISHL): All components are listed or exempted.
- **Malaysia**: Not determined.
- **New Zealand**: Not determined.
- **Philippines**: Not determined.
- **Republic of Korea**: Not determined.
- **Taiwan**: All components are listed or exempted.
- **Turkey**: Not determined.

Section 16. Other information

### History
- **Date of issue**: 10/20/2016
- **Date of previous issue**: No previous validation.
- **Version**: 1

*Indicates information that has changed from previously issued version.*

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