Section 1. Identification

1.1 Product identifier

Product name: Custom AffinityScript Multiple Temperature Reverse Transcriptase, Part Number 930107
Part No. (Chemical Kit): 930107
Part No.
- AffinityScript Multi-Temp RT 600105-51
- 10X AffinityScript RT Buffer 600100-52
Validation date: 6/12/2017

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

Material uses:
- AffinityScript Multi-Temp RT: 10 reactions
- 10X AffinityScript RT Buffer: 1 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:
- AffinityScript Multi-Temp RT
- 10X AffinityScript RT Buffer

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

Classification of the substance or mixture

AffinityScript Multi-Temp RT
- H320 EYE IRRITATION - Category 2B

10X AffinityScript RT Buffer
- H319 EYE IRRITATION - Category 2A

Ingredients of unknown toxicity:
- AffinityScript Multi-Temp RT
- 10X AffinityScript RT Buffer

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: 10 - 30%
Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 10 - 30%
Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%

2.2 GHS label elements

Date of issue: 06/12/2017
Section 2. Hazards identification

**Hazard pictograms**

- **Signal word**: AffinityScript Multi-Temp RT, 10X AffinityScript RT Buffer
  - Warning

**Hazard statements**

- **AffinityScript Multi-Temp RT**: H320 - Causes eye irritation.
- **10X AffinityScript RT Buffer**: H319 - Causes serious eye irritation.

**Precautionary statements**

**Prevention**

- **AffinityScript Multi-Temp RT**: P264 - Wash hands thoroughly after handling.
- **10X AffinityScript RT Buffer**: P280 - Wear eye or face protection. P264 - Wash hands thoroughly after handling.

**Response**

- **AffinityScript Multi-Temp RT**: P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
- **10X AffinityScript RT Buffer**: P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.

**Storage**

- **AffinityScript Multi-Temp RT**: Not applicable.
- **10X AffinityScript RT Buffer**: Not applicable.

**Disposal**

- **AffinityScript Multi-Temp RT**: Not applicable.
- **10X AffinityScript RT Buffer**: Not applicable.

**Supplemental label elements**

- **AffinityScript Multi-Temp RT**: None known.
- **10X AffinityScript RT Buffer**: None known.

**2.3 Other hazards**

**Hazards not otherwise classified**

- **AffinityScript Multi-Temp RT**: None known.
- **10X AffinityScript RT Buffer**: None known.

Section 3. Composition/information on ingredients

**Substance/mixture**

- **AffinityScript Multi-Temp RT**: Mixture
- **10X AffinityScript RT Buffer**: Mixture

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AffinityScript Multi-Temp RT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>≥50 - ≤75</td>
<td>56-81-5</td>
</tr>
<tr>
<td><strong>10X AffinityScript RT Buffer</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride</td>
<td>&lt;10</td>
<td>1185-53-1</td>
</tr>
<tr>
<td>Potassium chloride</td>
<td>≤10</td>
<td>7447-40-7</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 : 06/12/2017
Section 4. First aid measures

4.1 Description of necessary first aid measures

**Eye contact**  
*AffinityScript Multi-Temp RT*  
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.

*10X AffinityScript RT 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. Get medical attention.

**Skin contact**  
*AffinityScript Multi-Temp RT*  
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.

*10X AffinityScript RT 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.

**Inhalation**  
*AffinityScript Multi-Temp RT*  
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.

*10X AffinityScript RT 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. 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.

**Ingestion**  
*AffinityScript Multi-Temp RT*  
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...
Section 4. First aid measures

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

<table>
<thead>
<tr>
<th></th>
<th>AffinityScript Multi-Temp RT</th>
<th>10X AffinityScript RT Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye contact</td>
<td>Causes eye irritation.</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>Inhalation</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>
</tr>
<tr>
<td>Ingestion</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

Over-exposure signs/symptoms

<table>
<thead>
<tr>
<th></th>
<th>AffinityScript Multi-Temp RT</th>
<th>10X AffinityScript RT Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye contact</td>
<td>Adverse symptoms may include the following: irritation watering redness</td>
<td>Adverse symptoms may include the following: pain or irritation watering redness</td>
</tr>
<tr>
<td>Inhalation</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>
</tr>
<tr>
<td>Ingestion</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

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

4/16

Date of issue: 06/12/2017
Section 4. First aid measures

Notes to physician:  
- **AffinityScript Multi-Temp RT**  
  Treatment: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- **10X AffinityScript RT Buffer**  
  Prevention: 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.

Protection of first-aiders:  
- **AffinityScript Multi-Temp RT**  
  Prevention: 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.
- **10X AffinityScript RT Buffer**  
  Prevention: 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.

Specific treatments:  
- **AffinityScript Multi-Temp RT**  
  Treatment: No specific treatment.
- **10X AffinityScript RT Buffer**  
  Treatment: No specific treatment.

Notes to physician:  
- **AffinityScript Multi-Temp RT**  
  Treatment: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- **10X AffinityScript RT Buffer**  
  Prevention: 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.

Protection of first-aiders:  
- **AffinityScript Multi-Temp RT**  
  Prevention: 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.
- **10X AffinityScript RT Buffer**  
  Prevention: 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

5.1 Extinguishing media

- **Suitable extinguishing media:**  
  - **AffinityScript Multi-Temp RT**  
    - Use an extinguishing agent suitable for the surrounding fire.
  - **10X AffinityScript RT Buffer**  
    - Use an extinguishing agent suitable for the surrounding fire.

- **Unsuitable extinguishing media:**  
  - **AffinityScript Multi-Temp RT**  
    - None known.
  - **10X AffinityScript RT Buffer**  
    - None known.

5.2 Special hazards arising from the substance or mixture

- **Specific hazards arising from the chemical:**  
  - **AffinityScript Multi-Temp RT**  
    - In a fire or if heated, a pressure increase will occur and the container may burst.
  - **10X AffinityScript RT Buffer**  
    - In a fire or if heated, a pressure increase will occur and the container may burst.

- **Hazardous thermal decomposition products:**  
  - **AffinityScript Multi-Temp RT**  
    - Decomposition products may include the following materials: carbon dioxide, carbon monoxide.
  - **10X AffinityScript RT Buffer**  
    - Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides, halogenated compounds, metal oxide/oxides.

5.3 Advice for firefighters

- **Special protective actions for fire-fighters:**  
  - **AffinityScript Multi-Temp RT**  
    - 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 AffinityScript RT 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.
Section 5. Fire-fighting measures

Special protective equipment for fire-fighters: AffinityScript Multi-Temp RT

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

10X AffinityScript RT Buffer

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: AffinityScript Multi-Temp RT

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.

10X AffinityScript RT 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 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: AffinityScript Multi-Temp RT

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

10X AffinityScript RT Buffer

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.2 Environmental precautions: AffinityScript Multi-Temp RT

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).

10X AffinityScript RT Buffer

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Date of issue: 06/12/2017
Section 6. Accidental release measures

Methods for cleaning up

| AffinityScript Multi-Temp RT | Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, 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 AffinityScript RT Buffer | Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures

| AffinityScript Multi-Temp RT | 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. |

| 10X AffinityScript RT 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. |

Advice on general occupational hygiene

| AffinityScript Multi-Temp RT | 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 AffinityScript RT 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. |

7.2 Conditions for safe storage, including any incompatibilities

| AffinityScript Multi-Temp RT | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. |

| 10X AffinityScript RT 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. See Section 10 for incompatible materials before handling or use. |

Date of issue: 06/12/2017
Section 7. Handling and storage

10X AffinityScript RT 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. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations:
- AffinityScript Multi-Temp RT
  - Industrial applications, Professional applications.
- 10X AffinityScript RT Buffer
  - Industrial applications, Professional applications.

Industrial sector specific solutions:
- AffinityScript Multi-Temp RT
  - Not applicable.
- 10X AffinityScript RT Buffer
  - 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>
</table>
| AffinityScript Multi-Temp RT | 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 |
| Glycerol | OSHA PEL (United States, 6/2016). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction  
TWA: 15 mg/m³ 8 hours. Form: Total dust |
| 10X AffinityScript RT Buffer | None. |
| 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride | None. |
| Potassium chloride | None. |

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.

Date of issue: 06/12/2017
Section 8. Exposure controls/personal protection

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

**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. 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**: Custom AffinityScript Multiple Temperature Reverse Transcriptase, Part Number 930107

**Color**: Custom AffinityScript Multiple Temperature Reverse Transcriptase, Part Number 930107

**Odor**: Custom AffinityScript Multiple Temperature Reverse Transcriptase, Part Number 930107

**Odor threshold**: Custom AffinityScript Multiple Temperature Reverse Transcriptase, Part Number 930107

**pH**: Custom AffinityScript Multiple Temperature Reverse Transcriptase, Part Number 930107

**Melting point**: Custom AffinityScript Multiple Temperature Reverse Transcriptase, Part Number 930107

**Boiling point**: Custom AffinityScript Multiple Temperature Reverse Transcriptase, Part Number 930107

**Flash point**: Custom AffinityScript Multiple Temperature Reverse Transcriptase, Part Number 930107

**Evaporation rate**: Custom AffinityScript Multiple Temperature Reverse Transcriptase, Part Number 930107

**Flammability (solid, gas)**: Custom AffinityScript Multiple Temperature Reverse Transcriptase, Part Number 930107

**Lower and upper explosive (flammable) limits**: Custom AffinityScript Multiple Temperature Reverse Transcriptase, Part Number 930107

**Vapor pressure**: Custom AffinityScript Multiple Temperature Reverse Transcriptase, Part Number 930107

**Vapor density**: Custom AffinityScript Multiple Temperature Reverse Transcriptase, Part Number 930107

**Date of issue**: 06/12/2017
## Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>AffinityScript Multi-Temp RT</th>
<th>AffinityScript RT Buffer</th>
<th>10X AffinityScript RT Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative density</td>
<td>Not available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in the following materials: cold water and hot water.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Section 10. Stability and reactivity

10.1 Reactivity: AffinityScript Multi-Temp RT No specific test data related to reactivity available for this product or its ingredients. 10X AffinityScript RT Buffer No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability: AffinityScript Multi-Temp RT The product is stable. 10X AffinityScript RT Buffer The product is stable.

10.3 Possibility of hazardous reactions: AffinityScript Multi-Temp RT Under normal conditions of storage and use, hazardous reactions will not occur. 10X AffinityScript RT Buffer Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid: AffinityScript Multi-Temp RT No specific data. 10X AffinityScript RT Buffer No specific data.

10.5 Incompatible materials: AffinityScript Multi-Temp RT May react or be incompatible with oxidizing materials. 10X AffinityScript RT Buffer May react or be incompatible with oxidizing materials.

10.6 Hazardous decomposition products: AffinityScript Multi-Temp RT Under normal conditions of storage and use, hazardous decomposition products should not be produced. 10X AffinityScript RT Buffer 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**

**Date of issue:** 06/12/2017
Section 11. Toxicological information

<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>AffinityScript Multi-Temp RT Glycerol</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>12600 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>10X AffinityScript RT Buffer Potassium chloride</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2600 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>AffinityScript Multi-Temp RT 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>10X AffinityScript RT Buffer Potassium chloride</td>
<td>Eyes - 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)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>10X AffinityScript RT Buffer</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Specific target organ toxicity (repeated exposure)
Not available.

Aspiration hazard
Not available.

Information on the likely routes of exposure
- AffinityScript Multi-Temp RT
Routes of entry anticipated: Oral, Dermal, Inhalation.

10X AffinityScript RT Buffer
Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects
- AffinityScript Multi-Temp RT
Eye contact causes eye irritation.

10X AffinityScript RT Buffer
Eye contact causes serious eye irritation.
Section 11. Toxicological information

Inhalation:
AffinityScript Multi-Temp RT No known significant effects or critical hazards.
10X AffinityScript RT Buffer No known significant effects or critical hazards.

Skin contact:
AffinityScript Multi-Temp RT No known significant effects or critical hazards.
10X AffinityScript RT Buffer No known significant effects or critical hazards.

Ingestion:
AffinityScript Multi-Temp RT No known significant effects or critical hazards.
10X AffinityScript RT Buffer No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact:
AffinityScript Multi-Temp RT Adverse symptoms may include the following:
irritation
watering
redness
10X AffinityScript RT Buffer Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation:
AffinityScript Multi-Temp RT No specific data.
10X AffinityScript RT Buffer No specific data.

Skin contact:
AffinityScript Multi-Temp RT No specific data.
10X AffinityScript RT Buffer No specific data.

Ingestion:
AffinityScript Multi-Temp RT No specific data.
10X AffinityScript RT Buffer No specific data.

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

Short term exposure
Potential immediate effects: Not available.
Potential delayed effects: Not available.

Long term exposure
Potential immediate effects: Not available.
Potential delayed effects: Not available.

Potential chronic health effects
General:
AffinityScript Multi-Temp RT No known significant effects or critical hazards.
10X AffinityScript RT Buffer No known significant effects or critical hazards.

Carcinogenicity:
AffinityScript Multi-Temp RT No known significant effects or critical hazards.
10X AffinityScript RT Buffer No known significant effects or critical hazards.

Mutagenicity:
AffinityScript Multi-Temp RT No known significant effects or critical hazards.
10X AffinityScript RT Buffer No known significant effects or critical hazards.

Teratogenicity:
AffinityScript Multi-Temp RT No known significant effects or critical hazards.
10X AffinityScript RT Buffer No known significant effects or critical hazards.

Developmental effects:
AffinityScript Multi-Temp RT No known significant effects or critical hazards.
10X AffinityScript RT Buffer No known significant effects or critical hazards.

Fertility effects:
AffinityScript Multi-Temp RT No known significant effects or critical hazards.
10X AffinityScript RT Buffer No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>10X AffinityScript RT Buffer Oral</td>
<td>46428.6 mg/kg</td>
</tr>
</tbody>
</table>

Date of issue: 06/12/2017
Section 11. Toxicological information

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>AffinityScript Multi-Temp RT Glycerol</td>
<td>Acute LC50 54000 mg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td>10X AffinityScript RT Buffer Potassium chloride</td>
<td>Acute EC50 133700 µg/l Fresh water</td>
<td>Algae - Navicula seminulum</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 9.24 g/L Fresh water</td>
<td>Algae - Desmodesmus subspicatus</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 141460 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 12.92 mg/l Fresh water</td>
<td>Crustaceans - Pseudosida ramosa - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 880000 µg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>10X AffinityScript RT Buffer Potassium chloride</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
</tbody>
</table>

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>AffinityScript Multi-Temp RT Glycerol</td>
<td>-1.76</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>10X AffinityScript RT Buffer Potassium chloride</td>
<td>-0.46</td>
<td>-</td>
<td>low</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 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
Section 13. Disposal considerations

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.

Section 14. Transport information

DOT / TDG / Mexico / IMDG / IATA : Not regulated.

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

Transport in bulk according to 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

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: Not determined

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 : AffinityScript Multi-Temp RT Immediate (acute) health hazard
10X AffinityScript RT Buffer 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>
</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**:

Not available.

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.

Inventory list

**Australia**: All components are listed or exempted.

**Canada**: All components are listed or exempted.

**China**: All components are listed or exempted.

**Europe**: All components are listed or exempted.


**Malaysia**: Not determined.

**New Zealand**: All components are listed or exempted.

**Philippines**: All components are listed or exempted.

**Republic of Korea**: Not determined.

**Taiwan**: All components are listed or exempted.

**Thailand**: Not determined.

**Turkey**: Not determined.

**United States**: All components are listed or exempted.

**Viet Nam**: Not determined.

Date of issue: 06/12/2017
Section 16. Other information

History

Date of issue : 06/12/2017
Date of previous issue : 10/28/2015.
Version : 4

Indicates information that has changed from previously issued version.

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.