Section 1. Identification

1.1 Product identifier
Product name : AffinityScript One-Step RT-PCR Kit, Part Number 600188
Part No. (Chemical Kit) : 600188
Part No. : Herculase II RT-PCR 2X Master Mix 600188-51
      AffinityScript RT/RNase Block 600188-52
Validation date : 8/3/2017

1.2 Relevant identified uses of the substance or mixture and uses advised against
Material uses : Analytical reagent.
Herculase II RT-PCR 2X Master Mix 2.5 ml
AffinityScript RT/RNase Block 0.1 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 : Herculase II RT-PCR 2X Master Mix
                   AffinityScript RT/RNase Block
                   This material is considered hazardous by the OSHA
Classification of the substance or mixture
Herculase II RT-PCR 2X Master Mix
H361
   TOXIC TO REPRODUCTION (Fertility) - Category 2

AffinityScript RT/RNase Block
H320
   EYE IRRITATION - Category 2B

Ingredients of unknown toxicity : Herculase II RT-PCR 2X Master Mix
                              AffinityScript RT/RNase Block
                              Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10%
                              Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10%
                              Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 1 - 10%
                              Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 30 - 60%

2.2 GHS label elements

Date of issue : 08/03/2017
Section 2. Hazards identification

**Hazard pictograms**

- Herculase II RT-PCR 2X Master Mix

**Signal word**

- Herculase II RT-PCR 2X Master Mix: Warning
- AffinityScript RT/RNase Block: Warning

**Hazard statements**

- Herculase II RT-PCR 2X Master Mix: H361 - Suspected of damaging fertility.
- AffinityScript RT/RNase Block: H320 - Causes eye irritation.

**Precautionary statements**

**Prevention**

- Herculase II RT-PCR 2X Master Mix: P201 - Obtain special instructions before use.
- AffinityScript RT/RNase Block: P202 - Do not handle until all safety precautions have been read and understood.
- P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
- P264 - Wash hands thoroughly after handling.

**Response**

- Herculase II RT-PCR 2X Master Mix: P308 + P313 - IF exposed or concerned: Get medical attention.
- AffinityScript RT/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.
- P337 + P313 - If eye irritation persists: Get medical attention.

**Storage**

- Herculase II RT-PCR 2X Master Mix: P405 - Store locked up.
- AffinityScript RT/RNase Block: Not applicable.

**Disposal**

- Herculase II RT-PCR 2X Master Mix: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- AffinityScript RT/RNase Block: Not applicable.

**Supplemental label elements**

- Herculase II RT-PCR 2X Master Mix: None known.
- AffinityScript RT/RNase Block: None known.

2.3 Other hazards

**Hazards not otherwise classified**

- Herculase II RT-PCR 2X Master Mix: None known.
- AffinityScript RT/RNase Block: None known.

Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herculase II RT-PCR 2X Master Mix</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caesium chloride</td>
<td>≤5</td>
<td>7647-17-8</td>
</tr>
<tr>
<td>AffinityScript RT/RNase Block</td>
<td></td>
<td></td>
</tr>
<tr>
<td>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.

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Section 3. Composition/information on ingredients

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

4.1 Description of necessary first aid measures

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>Herculase II RT-PCR 2X Master Mix</th>
<th>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 if irritation occurs.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AffinityScript RT/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>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inhalation</th>
<th>Herculase II RT-PCR 2X Master Mix</th>
<th>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 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.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AffinityScript RT/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>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Skin contact</th>
<th>Herculase II RT-PCR 2X Master Mix</th>
<th>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AffinityScript RT/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>
</tbody>
</table>
## Section 4. First aid measures

### Ingestion

<table>
<thead>
<tr>
<th>Product</th>
<th>First aid measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herculase II RT-PCR 2X Master Mix</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. 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. 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.</td>
</tr>
<tr>
<td>AffinityScript RT/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. 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. 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.</td>
</tr>
</tbody>
</table>

### Inhalation

<table>
<thead>
<tr>
<th>Product</th>
<th>First aid measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herculase II RT-PCR 2X Master Mix</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>AffinityScript RT/RNase Block</td>
<td>Causes eye irritation.</td>
</tr>
</tbody>
</table>

### Skin contact

<table>
<thead>
<tr>
<th>Product</th>
<th>First aid measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herculase II RT-PCR 2X Master Mix</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>AffinityScript RT/RNase Block</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

### Eye contact

<table>
<thead>
<tr>
<th>Product</th>
<th>First aid measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herculase II RT-PCR 2X Master Mix</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>AffinityScript RT/RNase Block</td>
<td>Causes eye irritation.</td>
</tr>
</tbody>
</table>

### Over-exposure signs/symptoms

<table>
<thead>
<tr>
<th>Product</th>
<th>First aid measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herculase II RT-PCR 2X Master Mix</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>AffinityScript RT/RNase Block</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

### 4.2 Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- **Eye contact**: Causes eye irritation.
- **Inhalation**: No known significant effects or critical hazards.
- **Skin contact**: No known significant effects or critical hazards.
- **Ingestion**: No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

- **Eye contact**: Adverse symptoms may include the following: irritation, watering, redness.
## Section 4. First aid measures

### Inhalation
- **Herculase II RT-PCR 2X Master Mix**: Adverse symptoms may include the following:
  - reduced fetal weight
  - increase in fetal deaths
  - skeletal malformations
- **AffinityScript RT/RNase Block**: No specific data.

### Skin contact
- **Herculase II RT-PCR 2X Master Mix**: Adverse symptoms may include the following:
  - reduced fetal weight
  - increase in fetal deaths
  - skeletal malformations
- **AffinityScript RT/RNase Block**: No specific data.

### Ingestion
- **Herculase II RT-PCR 2X Master Mix**: Adverse symptoms may include the following:
  - reduced fetal weight
  - increase in fetal deaths
  - skeletal malformations
- **AffinityScript RT/RNase Block**: No specific data.

### Protection of first-aiders
- **Herculase II RT-PCR 2X Master Mix**: 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.
- **AffinityScript RT/RNase Block**: 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.

### Notes to physician
- **Herculase II RT-PCR 2X Master Mix**: 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. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- **AffinityScript RT/RNase Block**: No specific data.

### Specific treatments
- **Herculase II RT-PCR 2X Master Mix**: No specific treatment.
- **AffinityScript RT/RNase Block**: No specific treatment.

### See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### 5.1 Extinguishing media
- **Suitable extinguishing media**
  - **Herculase II RT-PCR 2X Master Mix**: Use an extinguishing agent suitable for the surrounding fire.
  - **AffinityScript RT/RNase Block**: Use an extinguishing agent suitable for the surrounding fire.
- **Unsuitable extinguishing media**
  - **Herculase II RT-PCR 2X Master Mix**: None known.
  - **AffinityScript RT/RNase Block**: None known.

### 5.2 Special hazards arising from the substance or mixture
## Section 5. Fire-fighting measures

| Specific hazards arising from the chemical | Herculase II RT-PCR 2X Master Mix | AffinityScript RT/RNase Block | In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. |
| Hazardous thermal decomposition products | Herculase II RT-PCR 2X Master Mix | AffinityScript RT/RNase Block | Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides, sulfur oxides, halogenated compounds, metal oxide/oxides |

### 5.3 Advice for firefighters

| Special protective actions for fire-fighters | Herculase II RT-PCR 2X Master Mix | AffinityScript RT/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. |
| Special protective equipment for fire-fighters | Herculase II RT-PCR 2X Master Mix | AffinityScript RT/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. |

## Section 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

| For non-emergency personnel | Herculase II RT-PCR 2X Master Mix | AffinityScript RT/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. |

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Section 6. Accidental release measures

For emergency responders:

- Herculase II RT-PCR 2X Master Mix
- AffinityScript RT/RNase Block

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".

6.2 Environmental precautions:

- Herculase II RT-PCR 2X Master Mix
- AffinityScript RT/RNase Block

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:

Methods for cleaning up:

- Herculase II RT-PCR 2X Master Mix
- AffinityScript RT/RNase Block

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

Section 7. Handling and storage

7.1 Precautions for safe handling:

Protective measures:

- Herculase II RT-PCR 2X Master Mix
- AffinityScript RT/RNase Block

Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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.

- Herculase II RT-PCR 2X Master Mix
- AffinityScript RT/RNase Block

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.
Section 7. Handling and storage

Advice on general occupational hygiene

<table>
<thead>
<tr>
<th>Material</th>
<th>Advice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herculase II RT-PCR 2X Master 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>
<tr>
<td>AffinityScript RT/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>
</tbody>
</table>

7.2 Conditions for safe storage, including any incompatibilities

<table>
<thead>
<tr>
<th>Material</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herculase II RT-PCR 2X Master 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. Store locked up. 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.</td>
</tr>
<tr>
<td>AffinityScript RT/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. See Section 10 for incompatible materials before handling or use.</td>
</tr>
</tbody>
</table>

7.3 Specific end use(s)

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Industrial applications, Professional applications.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial sector specific solutions</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits
Section 8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herculase II RT-PCR 2X Master Mix</td>
<td>None.</td>
</tr>
<tr>
<td>Caesium chloride</td>
<td>OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction</td>
</tr>
<tr>
<td></td>
<td>TWA: 10 mg/m³ 8 hours. Form: Total dust</td>
</tr>
<tr>
<td>AffinityScript RT/RNase Block</td>
<td>OSHA PEL (United States, 6/2016). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction</td>
</tr>
<tr>
<td>Glycerol</td>
<td>TWA: 15 mg/m³ 8 hours. Form: Total dust</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Appropriate engineering controls: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

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.

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.

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### 9.1 Information on basic physical and chemical properties

**Appearance**

<table>
<thead>
<tr>
<th>Property</th>
<th>Herculase II RT-PCR 2X Master Mix</th>
<th>AffinityScript RT/RNase Block</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odor</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Lower and upper explosive (flammable) limits</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
<td>Soluble in the following materials: cold water and hot water.</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>
Section 9. Physical and chemical properties

**Auto-ignition temperature**: Not available.

**Decomposition temperature**: Not available.

**Viscosity**: Not available.

Section 10. Stability and reactivity

10.1 Reactivity: No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability: The product is stable.

10.3 Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid: No specific data.

10.5 Incompatible materials: May react or be incompatible with oxidizing materials.

10.6 Hazardous decomposition products: 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>Herculase II RT-PCR 2X Master Mix</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2004 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Caesium chloride</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AffinityScript RT/RNase Block</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>12600 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Irritation/Corrosion**

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Section 11. Toxicological information

<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 RT/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.

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></th>
<th>Herculase II RT-PCR 2X Master Mix</th>
<th>AffinityScript RT/RNase Block</th>
<th>Routes of entry anticipated: Oral, Dermal, Inhalation.</th>
<th>Routes of entry anticipated: Oral, Dermal, Inhalation.</th>
</tr>
</thead>
</table>

Potential acute health effects

Eye contact

- Herculase II RT-PCR 2X Master Mix
- AffinityScript RT/RNase Block

No known significant effects or critical hazards.
Causes eye irritation.

Inhalation

- Herculase II RT-PCR 2X Master Mix
- AffinityScript RT/RNase Block

No known significant effects or critical hazards.

Skin contact

- Herculase II RT-PCR 2X Master Mix
- AffinityScript RT/RNase Block

No known significant effects or critical hazards.

Ingestion

- Herculase II RT-PCR 2X Master Mix
- AffinityScript RT/RNase Block

No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

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## Section 11. Toxicological information

### Eye contact
- **Herculase II RT-PCR 2X Master Mix**
  - No specific data.
- **AffinityScript RT/RNase Block**
  - Adverse symptoms may include the following: reduced fetal weight, increase in fetal deaths, skeletal malformations.

### Inhalation
- **Herculase II RT-PCR 2X Master Mix**
  - Adverse symptoms may include the following: reduced fetal weight, increase in fetal deaths, skeletal malformations.
- **AffinityScript RT/RNase Block**
  - No specific data.

### Skin contact
- **Herculase II RT-PCR 2X Master Mix**
  - Adverse symptoms may include the following: reduced fetal weight, increase in fetal deaths, skeletal malformations.
- **AffinityScript RT/RNase Block**
  - No specific data.

### Ingestion
- **Herculase II RT-PCR 2X Master Mix**
  - Adverse symptoms may include the following: reduced fetal weight, increase in fetal deaths, skeletal malformations.
- **AffinityScript RT/RNase Block**
  - 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**
  - No known significant effects or critical hazards.
- **Carcinogenicity**
  - No known significant effects or critical hazards.
- **Mutagenicity**
  - No known significant effects or critical hazards.
- **Teratogenicity**
  - No known significant effects or critical hazards.
- **Developmental effects**
  - No known significant effects or critical hazards.
- **Fertility effects**
  - Suspected of damaging fertility.
  - No known significant effects or critical hazards.
Section 11. Toxicological information

**Numerical measures of toxicity**

**Acute toxicity estimates**

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herculase II RT-PCR 2X Master Mix Oral</td>
<td>66800 mg/kg</td>
</tr>
</tbody>
</table>

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>Herculase II RT-PCR 2X Master Mix</td>
<td>Acute EC50 400000 µg/l Fresh water</td>
<td>Crustaceans - Cyclops abyssorum ssp. prealpinus - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td>Caesium chloride</td>
<td>Acute LC50 7400 to 8700 µg/l Fresh water</td>
<td>Daphnia - Daphnia hyalina - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td>AffinityScript RT/RNase Block</td>
<td>Acute LC50 54000 mg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
<td></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>AffinityScript RT/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 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.

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Section 13. Disposal considerations

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) PAIR: Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-
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 : Herculase II RT-PCR 2X Master Mix Delayed (chronic) health hazard
AffinityScript RT/RNase Block Immediate (acute) health hazard

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Section 15. Regulatory information

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>Herculase II RT-PCR 2X Master Mix</td>
<td>≤5</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>Yes.</td>
</tr>
<tr>
<td>Caesium chloride</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.

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: Not determined.
Canada: Not determined.
China: Not determined.
Europe: Not determined.
Japan: Japan inventory (ENCS): Not determined.
                          Japan inventory (ISHL): Not determined.
Malaysia: Not determined.
New Zealand: Not determined.
Philippines: Not determined.
Republic of Korea: Not determined.
Taiwan: All components are listed or exempted.
Thailand: Not determined.
Turkey: Not determined.
United States: Not determined.
Viet Nam: Not determined.
Section 16. Other information

**History**

- **Date of issue**: 08/03/2017
- **Date of previous issue**: 07/15/2015
- **Version**: 4

☒ Indicates information that has changed from previously issued version.

**Notice to reader**

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