# SAFETY DATA SHEET

## HotStart-IT™ Probe qPCR Master Mix Kit

### Section 1. Identification

<table>
<thead>
<tr>
<th>GHS product identifier</th>
<th>HotStart-IT™ Probe qPCR Master Mix Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
<td>75766</td>
</tr>
<tr>
<td>Other means of identification</td>
<td>Not available.</td>
</tr>
<tr>
<td>Supplier/Manufacturer</td>
<td>3420 Central Expressway, Santa Clara  CA 95051</td>
</tr>
<tr>
<td>In case of emergency</td>
<td>Chemtrec: 1 800 424 9300</td>
</tr>
<tr>
<td></td>
<td>Outside USA &amp; Canada: +1 703 527 3887</td>
</tr>
</tbody>
</table>

### Section 2. Hazards identification

#### OSHA/HCS status

- **HotStart-IT™ Probe qPCR Master Mix (2X)**
  - This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

- **Magnesium Chloride, 25 mM Solution**
  - While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

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

#### Classification of the substance or mixture

- **HotStart-IT™ Probe qPCR Master Mix (2X)**
  - SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B

- **Magnesium Chloride, 25 mM Solution**
  - Not classified.

- **ROX™ Passive Reference Dye**
  - Not classified.

#### GHS label elements

**Signal word**

- **HotStart-IT™ Probe qPCR Master Mix (2X)**
  - Warning

- **Magnesium Chloride, 25 mM Solution**
  - No signal word.

- **ROX™ Passive Reference Dye**
  - No signal word.

#### Hazard statements

- **HotStart-IT™ Probe qPCR Master Mix (2X)**
  - Causes eye irritation.

- **Magnesium Chloride, 25 mM Solution**
  - No known significant effects or critical hazards.

- **ROX™ Passive Reference Dye**
  - No known significant effects or critical hazards.

#### Precautionary statements

**General**

- **HotStart-IT™ Probe qPCR Master Mix (2X)**
  - Not applicable.

- **Magnesium Chloride, 25 mM Solution**
  - Not applicable.

- **ROX™ Passive Reference Dye**
  - Not applicable.
Section 2. Hazards identification

**Prevention**
- HotStart-IT™ Probe qPCR Master Mix (2X)
  - Wear eye or face protection. Wash hands thoroughly after handling.
  - Not applicable.
- Magnesium Chloride, 25 mM Solution
  - Not applicable.
- ROX™ Passive Reference Dye
  - Not applicable.

**Response**
- HotStart-IT™ Probe qPCR Master Mix (2X)
  - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
  - Not applicable.
- Magnesium Chloride, 25 mM Solution
  - Not applicable.
- ROX™ Passive Reference Dye
  - Not applicable.

**Storage**
- HotStart-IT™ Probe qPCR Master Mix (2X)
  - Not applicable.
- Magnesium Chloride, 25 mM Solution
  - Not applicable.
- ROX™ Passive Reference Dye
  - Not applicable.

**Disposal**
- HotStart-IT™ Probe qPCR Master Mix (2X)
  - Not applicable.
- Magnesium Chloride, 25 mM Solution
  - Not applicable.
- ROX™ Passive Reference Dye
  - Not applicable.

**Supplemental label elements**
- HotStart-IT™ Probe qPCR Master Mix (2X)
  - None known.
- Magnesium Chloride, 25 mM Solution
  - None known.
- ROX™ Passive Reference Dye
  - None known.

**Hazards not otherwise classified**
- HotStart-IT™ Probe qPCR Master Mix (2X)
  - None known.
- Magnesium Chloride, 25 mM Solution
  - None known.
- ROX™ Passive Reference Dye
  - None known.

Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ingredient name</strong></td>
<td><strong>%</strong></td>
</tr>
<tr>
<td>HotStart-IT™ Probe qPCR Master Mix (2X)</td>
<td>1 - 10</td>
</tr>
<tr>
<td>glycerol</td>
<td></td>
</tr>
</tbody>
</table>

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

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.
### Section 4. First aid measures

**Description of necessary first aid measures**

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>HotStart-IT™ Probe qPCR Master Mix (2X)</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. If irritation persists, get medical attention.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Magnesium Chloride, 25 mM Solution</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></td>
<td>ROX™ Passive Reference Dye</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>HotStart-IT™ Probe qPCR Master Mix (2X)</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 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.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Magnesium Chloride, 25 mM Solution</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>
<tr>
<td></td>
<td>ROX™ Passive Reference Dye</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>HotStart-IT™ Probe qPCR Master Mix (2X)</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Magnesium Chloride, 25 mM Solution</td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td></td>
<td>ROX™ Passive Reference Dye</td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</td>
</tr>
</tbody>
</table>

| Ingestion | HotStart-IT™ Probe qPCR Master Mix (2X) | Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
|           | Magnesium Chloride, 25 mM Solution      | 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. 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. |
Section 4. First aid measures

Most important symptoms/effects, acute and delayed

Potential acute health effects

**Eye contact**
- HotStart-IT™ Probe qPCR Master Mix (2X)
- Magnesium Chloride, 25 mM Solution
- ROX™ Passive Reference Dye
  - Causes eye irritation.

**Inhalation**
- HotStart-IT™ Probe qPCR Master Mix (2X)
- Magnesium Chloride, 25 mM Solution
- ROX™ Passive Reference Dye
  - No known significant effects or critical hazards.

**Skin contact**
- HotStart-IT™ Probe qPCR Master Mix (2X)
- Magnesium Chloride, 25 mM Solution
- ROX™ Passive Reference Dye
  - No known significant effects or critical hazards.

**Ingestion**
- HotStart-IT™ Probe qPCR Master Mix (2X)
- Magnesium Chloride, 25 mM Solution
- ROX™ Passive Reference Dye
  - May be irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

**Eye contact**
- HotStart-IT™ Probe qPCR Master Mix (2X)
- Magnesium Chloride, 25 mM Solution
- ROX™ Passive Reference Dye
  - Adverse symptoms may include the following:
    - irritation
    - watering
    - redness
  - No specific data.

**Inhalation**
- HotStart-IT™ Probe qPCR Master Mix (2X)
- Magnesium Chloride, 25 mM Solution
- ROX™ Passive Reference Dye
  - No specific data.
## Section 4. First aid measures

| Skin contact | HotStart-IT™ Probe qPCR Master Mix (2X) | No specific data. |
| Ingestion | HotStart-IT™ Probe qPCR Master Mix (2X) | No specific data. |
| Magnesium Chloride, 25 mM Solution | No specific data. |
| ROX™ Passive Reference Dye | No specific data. |

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

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

**Specific treatments**: No specific treatment.

**Protection of first-aiders**: No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

**Extinguishing media**

| Suitable extinguishing media | HotStart-IT™ Probe qPCR Master Mix (2X) | Use an extinguishing agent suitable for the surrounding fire. |
| Magnesium Chloride, 25 mM Solution | Use an extinguishing agent suitable for the surrounding fire. |
| ROX™ Passive Reference Dye | Use an extinguishing agent suitable for the surrounding fire. |

| Unsuitable extinguishing media | HotStart-IT™ Probe qPCR Master Mix (2X) | None known. |
| Magnesium Chloride, 25 mM Solution | None known. |
| ROX™ Passive Reference Dye | None known. |

**Specific hazards arising from the chemical**

| HotStart-IT™ Probe qPCR Master Mix (2X) | In a fire or if heated, a pressure increase will occur and the container may burst. |
| Magnesium Chloride, 25 mM Solution | In a fire or if heated, a pressure increase will occur and the container may burst. |
| ROX™ Passive Reference Dye | In a fire or if heated, a pressure increase will occur and the container may burst. |

**Hazardous thermal decomposition products**

| Decomposition products may include the following materials: carbon dioxide carbon monoxide |
| Magnesium Chloride, 25 mM Solution | No specific data. |
| ROX™ Passive Reference Dye | No specific data. |
Section 5. Fire-fighting measures

**Special protective actions for fire-fighters**
- HotStart-IT™ Probe qPCR Master Mix (2X)
  - 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.
- Magnesium Chloride, 25 mM Solution
  - 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.
- ROX™ Passive Reference Dye
  - 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**
- HotStart-IT™ Probe qPCR Master Mix (2X)
  - Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Magnesium Chloride, 25 mM Solution
  - Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- ROX™ Passive Reference Dye
  - 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

**Personal precautions, protective equipment and emergency procedures**
- **For non-emergency personnel**:
  - No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
- **For emergency responders**:
  - If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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

**Methods and materials for containment and cleaning up**
- **Small spill**
  - Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- **Large spill**
  - Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
### Section 7. Handling and storage

**Precautions for safe handling**

<table>
<thead>
<tr>
<th>Protective measures</th>
<th>HotStart-IT™ Probe qPCR Master Mix (2X)</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Magnesium Chloride, 25 mM Solution</td>
<td>Put on appropriate personal protective equipment (see Section 8).</td>
</tr>
<tr>
<td></td>
<td>ROX™ Passive Reference Dye</td>
<td>Put on appropriate personal protective equipment (see Section 8).</td>
</tr>
</tbody>
</table>

**Advice on general occupational hygiene**

<table>
<thead>
<tr>
<th>HotStart-IT™ Probe qPCR Master Mix (2X)</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium Chloride, 25 mM Solution</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>ROX™ Passive Reference Dye</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>

**Conditions for safe storage, including any incompatibilities**

<table>
<thead>
<tr>
<th>HotStart-IT™ Probe qPCR Master Mix (2X)</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium Chloride, 25 mM Solution</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>ROX™ Passive Reference Dye</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

resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HotStart-IT™ Probe qPCR Master Mix (2X) glycerol</td>
<td>OSHA PEL 1989 (United States, 3/1989).</td>
</tr>
<tr>
<td></td>
<td>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></td>
<td>OSHA PEL (United States, 2/2013).</td>
</tr>
<tr>
<td></td>
<td>TWA: 5 mg/m³ 8 hours. Form: Respirable fraction</td>
</tr>
<tr>
<td></td>
<td>TWA: 15 mg/m³ 8 hours. Form: Total dust</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Environmental exposure controls

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

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: safety glasses with side-shields.

Skin protection

Hand protection

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

Body protection

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

Other skin protection

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

Respiratory protection

: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
### Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>HotStart-IT™ Probe qPCR Master Mix (2X)</th>
<th>Magnesium Chloride, 25 mM Solution</th>
<th>ROX™ Passive Reference Dye</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical state</strong></td>
<td>Liquid.</td>
<td>Liquid.</td>
<td>Liquid.</td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Odor</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Flammable limits</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Molecular weight</strong></td>
<td>Not applicable.</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Molecular formula</strong></td>
<td>Not applicable.</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
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</tbody>
</table>
## Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Component</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling/condensation point</td>
<td>HotStart-IT™ Probe qPCR Master Mix (2X)</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>Magnesium Chloride, 25 mM Solution</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>ROX™ Passive Reference Dye</td>
<td>Not available.</td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>HotStart-IT™ Probe qPCR Master Mix (2X)</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>Magnesium Chloride, 25 mM Solution</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>ROX™ Passive Reference Dye</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>HotStart-IT™ Probe qPCR Master Mix (2X)</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>Magnesium Chloride, 25 mM Solution</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>ROX™ Passive Reference Dye</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>HotStart-IT™ Probe qPCR Master Mix (2X)</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>Magnesium Chloride, 25 mM Solution</td>
<td>Not available.</td>
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<tr>
<td></td>
<td>ROX™ Passive Reference Dye</td>
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<tr>
<td>Vapor density</td>
<td>HotStart-IT™ Probe qPCR Master Mix (2X)</td>
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<td></td>
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<td>Not available.</td>
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<td></td>
<td>ROX™ Passive Reference Dye</td>
<td>Not available.</td>
</tr>
<tr>
<td>Volatility</td>
<td>HotStart-IT™ Probe qPCR Master Mix (2X)</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>Magnesium Chloride, 25 mM Solution</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>ROX™ Passive Reference Dye</td>
<td>Not available.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>HotStart-IT™ Probe qPCR Master Mix (2X)</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>Magnesium Chloride, 25 mM Solution</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>ROX™ Passive Reference Dye</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>HotStart-IT™ Probe qPCR Master Mix (2X)</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>Magnesium Chloride, 25 mM Solution</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>ROX™ Passive Reference Dye</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility</td>
<td>HotStart-IT™ Probe qPCR Master Mix (2X)</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>Magnesium Chloride, 25 mM Solution</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>ROX™ Passive Reference Dye</td>
<td>Not available.</td>
</tr>
</tbody>
</table>
### Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Physical/chemical properties comments</th>
<th>HotStart-IT™ Probe qPCR Master Mix (2X)</th>
<th>Not available.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Magnesium Chloride, 25 mM Solution</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td>ROX™ Passive Reference Dye</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

### Section 10. Stability and reactivity

#### Reactivity

| HotStart-IT™ Probe qPCR Master Mix (2X) | No specific test data related to reactivity available for this product or its ingredients. |
| Magnesium Chloride, 25 mM Solution     | No specific test data related to reactivity available for this product or its ingredients. |
| ROX™ Passive Reference Dye              | No specific test data related to reactivity available for this product or its ingredients. |

#### Chemical stability

| HotStart-IT™ Probe qPCR Master Mix (2X) | The product is stable. |
| Magnesium Chloride, 25 mM Solution     | The product is stable. |
| ROX™ Passive Reference Dye              | The product is stable. |

#### Possibility of hazardous reactions

| HotStart-IT™ Probe qPCR Master Mix (2X) | Under normal conditions of storage and use, hazardous reactions will not occur. |
| Magnesium Chloride, 25 mM Solution     | Under normal conditions of storage and use, hazardous reactions will not occur. |
| ROX™ Passive Reference Dye              | Under normal conditions of storage and use, hazardous reactions will not occur. |

#### Conditions to avoid

| HotStart-IT™ Probe qPCR Master Mix (2X) | No specific data. |
| Magnesium Chloride, 25 mM Solution     | No specific data. |
| ROX™ Passive Reference Dye              | No specific data. |

#### Incompatible materials

| HotStart-IT™ Probe qPCR Master Mix (2X) | No specific data. |
| Magnesium Chloride, 25 mM Solution     | No specific data. |
| ROX™ Passive Reference Dye              | No specific data. |

#### Hazardous decomposition products

| HotStart-IT™ Probe qPCR Master Mix (2X) | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| Magnesium Chloride, 25 mM Solution     | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| ROX™ Passive Reference Dye              | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>HotStart-IT™ Probe qPCR Master Mix (2X) glycerol</td>
<td>LD50 Dermal</td>
<td>Rat</td>
<td>21900 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>12600 mg/kg</td>
<td>-</td>
</tr>
</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>HotStart-IT™ Probe qPCR Master Mix (2X) 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

Potential acute health effects

Eye contact : 
Inhalation :
Skin contact :
Ingestion :

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact :
Inhalation :
Skin contact :
Section 11. Toxicological information

Ingestion :

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 :

Potential delayed effects :

Potential chronic health effects

Not available.

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

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Interactive effects :

Other information :

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP_{ow}</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>HotStart-IT™ Probe qPCR Master Mix (2X) glycerol</td>
<td>-1.76</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

Mobility in soil
**Section 12. Ecological information**

**Soil/water partition coefficient \( (K_{OC}) \)** : HotStart-IT™ Probe qPCR Master Mix (2X) Not available. Magnesium Chloride, 25 mM Solution Not available. ROX™ Passive Reference Dye Not available.

**Mobility** :

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

**Section 13. Disposal considerations**

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Section 14. Transport information**

<table>
<thead>
<tr>
<th>DOT Classification</th>
<th>TDG Classification</th>
<th>Mexico Classification</th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Packing group</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Additional information</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

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

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** : Not available.
## Section 15. Regulatory information

### U.S. Federal regulations

- **TSCA 8(a) PAIR**: Poly(oxy-1,2-ethanediyl), α-[4-(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy-
- **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined
- **United States inventory (TSCA 8b)**: Not determined.

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

- **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**: Not applicable.

#### 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>HotStart-IT™ Probe qPCR Master Mix (2X) glycerol</td>
<td>1 - 10</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</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**

**WARNING**: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.

### Ingredient name

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Cancer</th>
<th>Reproductive</th>
<th>No significant risk level</th>
<th>Maximum acceptable dosage level</th>
</tr>
</thead>
<tbody>
<tr>
<td>HotStart-IT™ Probe qPCR Master Mix (2X) Poly(oxy-1,2-ethanediyl), α-[4-(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy-</td>
<td>Yes.</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
</tbody>
</table>

### International regulations

- **Chemical Weapon Convention List Schedules I, II & III Chemicals**
Section 15. Regulatory information

Not listed.

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

Stockholm Convention on Persistent Organic Pollutants
Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)
Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals
Not listed.

Canada

WHMIS (Canada) : HotStart-IT™ Probe qPCR Master Mix (2X) Not controlled under WHMIS (Canada).
Magnesium Chloride, 25 mM Solution Not controlled under WHMIS (Canada).
ROX™ Passive Reference Dye Not controlled under WHMIS (Canada).

Canadian lists

Canadian NPRI : None of the components are listed.
CEPA Toxic substances : None of the components are listed.
Canada inventory : Not determined.

Section 16. Other information

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

Health 0
Flammability 0
Physical hazards 0

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

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

Health 2
Flammability
Instability/Reactivity
Special

History

Date of issue/Date of revision : 11/09/2015.
Date of previous issue : No previous validation.
Version : 1
Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships,
Section 16. Other information

1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

 Indicates information that has changed from previously issued version.

Notice to reader
To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.