



## Section 2. Hazards identification

other users of this product.

### Classification of the substance or mixture

**RT**

H320 EYE IRRITATION - Category 2B

### Easy-A Hi-Fi PCR Cloning

**Enzyme**

H320 EYE IRRITATION - Category 2B

**Ingredients of unknown toxicity** :

<b>RT</b>	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60%
Easy-A Hi-Fi PCR Cloning Enzyme	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60%
10X RT-PCR Buffer	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%

### 2.2 GHS label elements

#### Signal word

RT	No signal word.
Easy-A Hi-Fi PCR Cloning Enzyme	Warning
10X RT-PCR Buffer	Warning
40 mM dNTP Mix (10 mM each dNTP)	No signal word.
	No signal word.

#### Hazard statements

RT	No known significant effects or critical hazards.
Easy-A Hi-Fi PCR Cloning Enzyme	H320 - Causes eye irritation.
10X RT-PCR Buffer	H320 - Causes eye irritation.
40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.
	No known significant effects or critical hazards.

#### Precautionary statements

##### Prevention

RT	Not applicable.
Easy-A Hi-Fi PCR Cloning Enzyme	P264 - Wash hands thoroughly after handling.
10X RT-PCR Buffer	P264 - Wash hands thoroughly after handling.
40 mM dNTP Mix (10 mM each dNTP)	Not applicable.
	Not applicable.

##### Response

RT	Not applicable.
	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.
Easy-A Hi-Fi PCR Cloning Enzyme	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 RT-PCR Buffer	Not applicable.
40 mM dNTP Mix (10 mM each dNTP)	Not applicable.

## Section 2. Hazards identification

**Storage** :  RNase-Free Water Not applicable.  
 RT Not applicable.  
 Easy-A Hi-Fi PCR Cloning Enzyme Not applicable.  
 10X RT-PCR Buffer Not applicable.  
 40 mM dNTP Mix (10 mM each dNTP) Not applicable.

**Disposal** :  RNase-Free Water Not applicable.  
 RT Not applicable.  
 Easy-A Hi-Fi PCR Cloning Enzyme Not applicable.  
 10X RT-PCR Buffer Not applicable.  
 40 mM dNTP Mix (10 mM each dNTP) Not applicable.

**Supplemental label elements** :  RNase-Free Water None known.  
 RT None known.  
 Easy-A Hi-Fi PCR Cloning Enzyme None known.  
 10X RT-PCR Buffer None known.  
 40 mM dNTP Mix (10 mM each dNTP) None known.

### 2.3 Other hazards

**Hazards not otherwise classified** :  RNase-Free Water None known.  
 RT None known.  
 Easy-A Hi-Fi PCR Cloning Enzyme None known.  
 10X RT-PCR Buffer None known.  
 40 mM dNTP Mix (10 mM each dNTP) None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** :  RNase-Free Water Substance  
 RT Mixture  
 Easy-A Hi-Fi PCR Cloning Enzyme Mixture  
 10X RT-PCR Buffer Mixture  
 40 mM dNTP Mix (10 mM each dNTP) Mixture

Ingredient name	%	CAS number
<input checked="" type="checkbox"/> RNase-Free Water Water	100	7732-18-5
<b>RT</b> Glycerol	≥50 - ≤75	56-81-5
<b>Easy-A Hi-Fi PCR Cloning Enzyme</b> Glycerol	≥25 - ≤50	56-81-5
<b>10X RT-PCR Buffer</b> Trometamol	≤7.6	77-86-1
Potassium chloride	≤2.3	7447-40-7

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

### 4.1 Description of necessary first aid measures

#### Eye contact

: RNase-Free Water

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.

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.

Easy-A Hi-Fi PCR Cloning Enzyme

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 RT-PCR Buffer

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.

40 mM dNTP Mix (10 mM each dNTP)

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.

#### Inhalation

: RNase-Free Water

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

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.

Easy-A Hi-Fi PCR Cloning Enzyme

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 RT-PCR Buffer

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

40 mM dNTP Mix (10 mM each

Remove victim to fresh air and keep at rest in a

## Section 4. First aid measures

	dNTP)	position comfortable for breathing. Get medical attention if symptoms occur.
<b>Skin contact</b>	:  Nase-Free Water	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	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.
	Easy-A Hi-Fi PCR Cloning Enzyme	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 RT-PCR Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	40 mM dNTP Mix (10 mM each dNTP)	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	:  Nase-Free Water	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	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 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.
	Easy-A Hi-Fi PCR Cloning Enzyme	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

## Section 4. First aid measures

10X RT-PCR Buffer

airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

40 mM dNTP Mix (10 mM each dNTP)

Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

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

#### Potential acute health effects

##### Eye contact

- |                                       |                                  |   |
|---------------------------------------|----------------------------------|---|
| : <input checked="" type="checkbox"/> | Nase-Free Water                  | No known significant effects or critical hazards. |
|                                       | RT                               | Causes eye irritation.                            |
|                                       | Easy-A Hi-Fi PCR Cloning Enzyme  | Causes eye irritation.                            |
|                                       | 10X RT-PCR Buffer                | No known significant effects or critical hazards. |
|                                       | 40 mM dNTP Mix (10 mM each dNTP) | No known significant effects or critical hazards. |

##### Inhalation

- |                                       |                                  |   |
|---------------------------------------|----------------------------------|---|
| : <input checked="" type="checkbox"/> | Nase-Free Water                  | No known significant effects or critical hazards. |
|                                       | RT                               | No known significant effects or critical hazards. |
|                                       | Easy-A Hi-Fi PCR Cloning Enzyme  | No known significant effects or critical hazards. |
|                                       | 10X RT-PCR Buffer                | No known significant effects or critical hazards. |
|                                       | 40 mM dNTP Mix (10 mM each dNTP) | No known significant effects or critical hazards. |

##### Skin contact

- |                                       |                                  |   |
|---------------------------------------|----------------------------------|---|
| : <input checked="" type="checkbox"/> | Nase-Free Water                  | No known significant effects or critical hazards. |
|                                       | RT                               | No known significant effects or critical hazards. |
|                                       | Easy-A Hi-Fi PCR Cloning Enzyme  | No known significant effects or critical hazards. |
|                                       | 10X RT-PCR Buffer                | No known significant effects or critical hazards. |
|                                       | 40 mM dNTP Mix (10 mM each dNTP) | No known significant effects or critical hazards. |

##### Ingestion

- |                                       |                                  |   |
|---------------------------------------|----------------------------------|---|
| : <input checked="" type="checkbox"/> | Nase-Free Water                  | No known significant effects or critical hazards. |
|                                       | RT                               | No known significant effects or critical hazards. |
|                                       | Easy-A Hi-Fi PCR Cloning Enzyme  | No known significant effects or critical hazards. |
|                                       | 10X RT-PCR Buffer                | No known significant effects or critical hazards. |
|                                       | 40 mM dNTP Mix (10 mM each dNTP) | No known significant effects or critical hazards. |

#### Over-exposure signs/symptoms

##### Eye contact

- |                                       |                                  |  |
|---------------------------------------|----------------------------------|--|
| : <input checked="" type="checkbox"/> | Nase-Free Water                  | No specific data.  |
|                                       | RT                               | Adverse symptoms may include the following:<br>irritation<br>watering<br>redness |
|                                       | Easy-A Hi-Fi PCR Cloning Enzyme  | Adverse symptoms may include the following:<br>irritation<br>watering<br>redness |
|                                       | 10X RT-PCR Buffer                | No specific data.  |
|                                       | 40 mM dNTP Mix (10 mM each dNTP) | No specific data.  |

## Section 4. First aid measures

<b>Inhalation</b>	: <input checked="" type="checkbox"/> Nase-Free Water	No specific data.
	RT	No specific data.
	Easy-A Hi-Fi PCR Cloning Enzyme	No specific data.
	10X RT-PCR Buffer	No specific data.
	40 mM dNTP Mix (10 mM each dNTP)	No specific data.
<b>Skin contact</b>	: <input checked="" type="checkbox"/> Nase-Free Water	No specific data.
	RT	No specific data.
	Easy-A Hi-Fi PCR Cloning Enzyme	No specific data.
	10X RT-PCR Buffer	No specific data.
	40 mM dNTP Mix (10 mM each dNTP)	No specific data.
<b>Ingestion</b>	: <input checked="" type="checkbox"/> Nase-Free Water	No specific data.
	RT	No specific data.
	Easy-A Hi-Fi PCR Cloning Enzyme	No specific data.
	10X RT-PCR Buffer	No specific data.
	40 mM dNTP Mix (10 mM each dNTP)	No specific data.

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

<b>Notes to physician</b>	: <input checked="" type="checkbox"/> Nase-Free Water	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	RT	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Easy-A Hi-Fi PCR Cloning Enzyme	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	10X RT-PCR Buffer	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.
	40 mM dNTP Mix (10 mM each dNTP)	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	: <input checked="" type="checkbox"/> Nase-Free Water	No specific treatment.
	RT	No specific treatment.
	Easy-A Hi-Fi PCR Cloning Enzyme	No specific treatment.
	10X RT-PCR Buffer	No specific treatment.
	40 mM dNTP Mix (10 mM each dNTP)	No specific treatment.
<b>Protection of first-aiders</b>	: <input checked="" type="checkbox"/> Nase-Free Water	No action shall be taken involving any personal risk or without suitable training.
	RT	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.
	Easy-A Hi-Fi PCR Cloning Enzyme	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 RT-PCR Buffer	No action shall be taken involving any personal risk or without suitable training.
	40 mM dNTP Mix (10 mM each dNTP)	No action shall be taken involving any personal risk or without suitable training.





## Section 4. First aid measures



See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	:  Nase-Free Water	Use an extinguishing agent suitable for the surrounding fire.
	RT	Use an extinguishing agent suitable for the surrounding fire.
	Easy-A Hi-Fi PCR Cloning Enzyme	Use an extinguishing agent suitable for the surrounding fire.
	10X RT-PCR Buffer	Use an extinguishing agent suitable for the surrounding fire.
	40 mM dNTP Mix (10 mM each dNTP)	Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	:  Nase-Free Water	None known.
	RT	None known.
	Easy-A Hi-Fi PCR Cloning Enzyme	None known.
	10X RT-PCR Buffer	None known.
	40 mM dNTP Mix (10 mM each dNTP)	None known.

### 5.2 Special hazards arising from the substance or mixture

<b>Specific hazards arising from the chemical</b>	:  Nase-Free Water	In a fire or if heated, a pressure increase will occur and the container may burst.
	RT	In a fire or if heated, a pressure increase will occur and the container may burst.
	Easy-A Hi-Fi PCR Cloning Enzyme	In a fire or if heated, a pressure increase will occur and the container may burst.
	10X RT-PCR Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	40 mM dNTP Mix (10 mM each dNTP)	In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous thermal decomposition products</b>	:  Nase-Free Water	No specific data.
	RT	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	Easy-A Hi-Fi PCR Cloning Enzyme	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	10X RT-PCR Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
	40 mM dNTP Mix (10 mM each dNTP)	No specific data.

### 5.3 Advice for firefighters



## Section 5. Fire-fighting measures

<b>Special protective actions for fire-fighters</b>	<b>:</b>	<input checked="" type="checkbox"/> Nase-Free Water	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.
		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.
		Easy-A Hi-Fi PCR Cloning Enzyme	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 RT-PCR 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.
		40 mM dNTP Mix (10 mM each dNTP)	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.
<b>Special protective equipment for fire-fighters</b>	<b>:</b>	<input checked="" type="checkbox"/> Nase-Free Water	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		RT	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Easy-A Hi-Fi PCR Cloning Enzyme	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		10X RT-PCR Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		40 mM dNTP Mix (10 mM each dNTP)	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

<b>For non-emergency personnel</b>	<b>:</b>	<input checked="" type="checkbox"/> Nase-Free Water	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.
		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.

## Section 6. Accidental release measures

	Easy-A Hi-Fi PCR Cloning Enzyme	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 RT-PCR 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. Put on appropriate personal protective equipment.
	40 mM dNTP Mix (10 mM each dNTP)	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.
<p><b>For emergency responders :</b></p>	<p>☒ Nose-Free Water</p>	<p>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".</p>
	RT	<p>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".</p>
	Easy-A Hi-Fi PCR Cloning Enzyme	<p>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".</p>
	10X RT-PCR Buffer	<p>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".</p>
	40 mM dNTP Mix (10 mM each dNTP)	<p>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".</p>
<p><b>6.2 Environmental precautions</b></p>	<p>☒ Nose-Free Water</p>	<p>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).</p>
	RT	<p>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).</p>
	Easy-A Hi-Fi PCR Cloning Enzyme	<p>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).</p>
	10X RT-PCR Buffer	<p>Avoid dispersal of spilled material and runoff and</p>

## Section 6. Accidental release measures

40 mM dNTP Mix (10 mM each dNTP)

contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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** :  Nose-Free Water

RT

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.

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.

Easy-A Hi-Fi PCR Cloning Enzyme

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.

10X RT-PCR Buffer

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.

40 mM dNTP Mix (10 mM each dNTP)

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** :  Nose-Free Water

RT



Put on appropriate personal protective equipment (see Section 8).

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.

Easy-A Hi-Fi PCR Cloning Enzyme

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

## Section 7. Handling and storage

<p><b>Advice on general occupational hygiene</b></p>	<p>10X RT-PCR Buffer</p> <p>40 mM dNTP Mix (10 mM each dNTP)</p> <p>: Nase-Free Water</p>	<p>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.</p> <p>Put on appropriate personal protective equipment (see Section 8).</p> <p>Put on appropriate personal protective equipment (see Section 8).</p> <p>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.</p>
	<p>RT</p>	<p>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.</p>
	<p>Easy-A Hi-Fi PCR Cloning Enzyme</p>	<p>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.</p>
	<p>10X RT-PCR Buffer</p>	<p>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.</p>
	<p>40 mM dNTP Mix (10 mM each dNTP)</p>	<p>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.</p>
<p><b>7.2 Conditions for safe storage, including any incompatibilities</b></p>	<p>: Nase-Free Water</p> <p>RT</p>	<p>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. Store in accordance with local regulations. Store in original container protected from direct sunlight in a</p>

## Section 7. Handling and storage

	dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Easy-A Hi-Fi PCR Cloning Enzyme	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 RT-PCR 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.
40 mM dNTP Mix (10 mM each dNTP)	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

☑	Nase-Free Water	Industrial applications, Professional applications.
	RT	Industrial applications, Professional applications.
	Easy-A Hi-Fi PCR Cloning Enzyme	Industrial applications, Professional applications.
	10X RT-PCR Buffer	Industrial applications, Professional applications.
	40 mM dNTP Mix (10 mM each dNTP)	Industrial applications, Professional applications.

#### Industrial sector specific solutions

☑	Nase-Free Water	Not applicable.
	RT	Not applicable.
	Easy-A Hi-Fi PCR Cloning Enzyme	Not applicable.
	10X RT-PCR Buffer	Not applicable.
	40 mM dNTP Mix (10 mM each dNTP)	Not applicable.

## Section 8. Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
<b>RNase-Free Water</b> Water	None.
<b>RT</b> Glycerol	<b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>OSHA PEL (United States, 6/2016).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 15 mg/m <sup>3</sup> 8 hours. Form: Total dust
<b>Easy-A Hi-Fi PCR Cloning Enzyme</b> Glycerol	<b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>OSHA PEL (United States, 6/2016).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 15 mg/m <sup>3</sup> 8 hours. Form: Total dust
<b>10X RT-PCR Buffer</b> Trometamol Potassium chloride	None. 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.

##### 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



## Section 8. Exposure controls/personal protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	: RNase-Free Water	Liquid.
	RT	Liquid.
	Easy-A Hi-Fi PCR Cloning Enzyme	Liquid.
	10X RT-PCR Buffer	Liquid.
	40 mM dNTP Mix (10 mM each dNTP)	Liquid.
<b>Color</b>	: RNase-Free Water	Colorless.
	RT	Not available.
	Easy-A Hi-Fi PCR Cloning Enzyme	Not available.
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.
<b>Odor</b>	: RNase-Free Water	Odorless.
	RT	Not available.
	Easy-A Hi-Fi PCR Cloning Enzyme	Not available.
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.
<b>Odor threshold</b>	: RNase-Free Water	Not available.
	RT	Not available.
	Easy-A Hi-Fi PCR Cloning Enzyme	Not available.
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.
<b>pH</b>	: RNase-Free Water	7
	RT	8
	Easy-A Hi-Fi PCR Cloning Enzyme	8
	10X RT-PCR Buffer	8.3
	40 mM dNTP Mix (10 mM each dNTP)	7.5



## Section 9. Physical and chemical properties

<b>Melting point</b>	: RNase-Free Water	0°C (32°F)
	RT	Not available.
	Easy-A Hi-Fi PCR Cloning Enzyme	Not available.
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	0°C (32°F)
<b>Boiling point</b>	: RNase-Free Water	100°C (212°F)
	RT	Not available.
	Easy-A Hi-Fi PCR Cloning Enzyme	Not available.
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	100°C (212°F)
<b>Flash point</b>	: RNase-Free Water	Not available.
	RT	Not available.
	Easy-A Hi-Fi PCR Cloning Enzyme	Not available.
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.
<b>Evaporation rate</b>	: RNase-Free Water	Not available.
	RT	Not available.
	Easy-A Hi-Fi PCR Cloning Enzyme	Not available.
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.
<b>Flammability (solid, gas)</b>	: Reverse Transcriptase (RT)	Not applicable
	Easy-A High-Fidelity PCR cloning enzyme	Not applicable
	10× RT-PCR buffer	Not applicable
	40mM dNTP Mix	Not applicable
	RNase-free Water	Not applicable
<b>Lower and upper explosive (flammable) limits</b>	: RNase-Free Water	Not available.
	RT	Not available.
	Easy-A Hi-Fi PCR Cloning Enzyme	Not available.
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.
<b>Vapor pressure</b>	: RNase-Free Water	Not available.
	RT	Not available.
	Easy-A Hi-Fi PCR Cloning Enzyme	Not available.
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.
<b>Vapor density</b>	: RNase-Free Water	Not available.
	RT	Not available.
	Easy-A Hi-Fi PCR Cloning Enzyme	Not available.
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.
<b>Relative density</b>	: RNase-Free Water	Not available.
	RT	Not available.
	Easy-A Hi-Fi PCR Cloning Enzyme	Not available.
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.

## Section 9. Physical and chemical properties

<b>Solubility</b>	: <input checked="" type="checkbox"/> Nase-Free Water	Easily soluble in the following materials: cold water and hot water.
	RT	Soluble in the following materials: cold water and hot water.
	Easy-A Hi-Fi PCR Cloning Enzyme	Soluble in the following materials: cold water and hot water.
	10X RT-PCR Buffer	Easily soluble in the following materials: cold water and hot water.
	40 mM dNTP Mix (10 mM each dNTP)	Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	: <input checked="" type="checkbox"/> Nase-Free Water	Not available.
	RT	Not available.
	Easy-A Hi-Fi PCR Cloning Enzyme	Not available.
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.
<b>Auto-ignition temperature</b>	: <input checked="" type="checkbox"/> Nase-Free Water	Not available.
	RT	Not available.
	Easy-A Hi-Fi PCR Cloning Enzyme	Not available.
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.
<b>Decomposition temperature</b>	: <input checked="" type="checkbox"/> Nase-Free Water	Not available.
	RT	Not available.
	Easy-A Hi-Fi PCR Cloning Enzyme	Not available.
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.
<b>Viscosity</b>	: <input checked="" type="checkbox"/> Nase-Free Water	Not available.
	RT	Not available.
	Easy-A Hi-Fi PCR Cloning Enzyme	Not available.
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.

## Section 10. Stability and reactivity

<b>10.1 Reactivity</b>	: <input checked="" type="checkbox"/> Nase-Free Water	No specific test data related to reactivity available for this product or its ingredients.
	RT	No specific test data related to reactivity available for this product or its ingredients.
	Easy-A Hi-Fi PCR Cloning Enzyme	No specific test data related to reactivity available for this product or its ingredients.
	10X RT-PCR Buffer	No specific test data related to reactivity available for this product or its ingredients.
	40 mM dNTP Mix (10 mM each dNTP)	No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: <input checked="" type="checkbox"/> Nase-Free Water	The product is stable.
	RT	The product is stable.
	Easy-A Hi-Fi PCR Cloning Enzyme	The product is stable.
	10X RT-PCR Buffer	The product is stable.
	40 mM dNTP Mix (10 mM each dNTP)	The product is stable.

## Section 10. Stability and reactivity

<b>10.3 Possibility of hazardous reactions</b>	: <input checked="" type="checkbox"/> Nase-Free Water	Under normal conditions of storage and use, hazardous reactions will not occur.
	RT	Under normal conditions of storage and use, hazardous reactions will not occur.
	Easy-A Hi-Fi PCR Cloning Enzyme	Under normal conditions of storage and use, hazardous reactions will not occur.
	10X RT-PCR Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
	40 mM dNTP Mix (10 mM each dNTP)	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: <input checked="" type="checkbox"/> Nase-Free Water	No specific data.
	RT	No specific data.
	Easy-A Hi-Fi PCR Cloning Enzyme	No specific data.
	10X RT-PCR Buffer	No specific data.
	40 mM dNTP Mix (10 mM each dNTP)	No specific data.
<b>10.5 Incompatible materials</b>	: <input checked="" type="checkbox"/> Nase-Free Water	May react or be incompatible with oxidizing materials.
	RT	May react or be incompatible with oxidizing materials.
	Easy-A Hi-Fi PCR Cloning Enzyme	May react or be incompatible with oxidizing materials.
	10X RT-PCR Buffer	May react or be incompatible with oxidizing materials.
	40 mM dNTP Mix (10 mM each dNTP)	May react or be incompatible with oxidizing materials.
<b>10.6 Hazardous decomposition products</b>	: <input checked="" type="checkbox"/> Nase-Free Water	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	RT	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Easy-A Hi-Fi PCR Cloning Enzyme	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	10X RT-PCR Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	40 mM dNTP Mix (10 mM each dNTP)	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

## Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
<b>RT</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-
<b>Easy-A Hi-Fi PCR Cloning Enzyme</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-
<b>10X RT-PCR Buffer</b> Trometamol	LD50 Dermal LD50 Oral	Rat Rat	>5000 mg/kg 5000 mg/kg	- -
Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>RT</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
<b>Easy-A Hi-Fi PCR Cloning Enzyme</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
<b>10X RT-PCR Buffer</b> Trometamol	Skin - Moderate irritant Skin - Severe irritant	Rabbit Rabbit	- -	25 Percent 500 milligrams	- -
Potassium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

### Sensitization

Not available.

### Mutagenicity

Not available.

**Conclusion/Summary** : Not available.

### Carcinogenicity

Not available.

**Conclusion/Summary** : Not available.

### Reproductive toxicity

Not available.

**Conclusion/Summary** : Not available.

## Section 11. Toxicological information

### Teratogenicity

Not available.

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
<input checked="" type="checkbox"/> 10X RT-PCR Buffer Trometamol	Category 3	Not applicable.	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

### Information on the likely routes of exposure

<input checked="" type="checkbox"/> Nose-Free Water RT	Not available. Routes of entry anticipated: Oral, Dermal, Inhalation.
Easy-A Hi-Fi PCR Cloning Enzyme	Routes of entry anticipated: Oral, Dermal, Inhalation.
10X RT-PCR Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
40 mM dNTP Mix (10 mM each dNTP)	Not available.

### Potential acute health effects

#### Eye contact

<input checked="" type="checkbox"/> Nose-Free Water RT	No known significant effects or critical hazards. Causes eye irritation.
Easy-A Hi-Fi PCR Cloning Enzyme	Causes eye irritation.
10X RT-PCR Buffer	No known significant effects or critical hazards.
40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.

#### Inhalation

<input checked="" type="checkbox"/> Nose-Free Water RT	No known significant effects or critical hazards. No known significant effects or critical hazards.
Easy-A Hi-Fi PCR Cloning Enzyme	No known significant effects or critical hazards.
10X RT-PCR Buffer	No known significant effects or critical hazards.
40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.

#### Skin contact

<input checked="" type="checkbox"/> Nose-Free Water RT	No known significant effects or critical hazards. No known significant effects or critical hazards.
Easy-A Hi-Fi PCR Cloning Enzyme	No known significant effects or critical hazards.
10X RT-PCR Buffer	No known significant effects or critical hazards.
40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.

#### Ingestion

<input checked="" type="checkbox"/> Nose-Free Water RT	No known significant effects or critical hazards. No known significant effects or critical hazards.
Easy-A Hi-Fi PCR Cloning Enzyme	No known significant effects or critical hazards.
10X RT-PCR Buffer	No known significant effects or critical hazards.
40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.

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

## Section 11. Toxicological information

<b>Eye contact</b>	<input checked="" type="checkbox"/> Nose-Free Water	No specific data.
	RT	Adverse symptoms may include the following: irritation watering redness
	Easy-A Hi-Fi PCR Cloning Enzyme	Adverse symptoms may include the following: irritation watering redness
	10X RT-PCR Buffer	No specific data.
	40 mM dNTP Mix (10 mM each dNTP)	No specific data.
<b>Inhalation</b>	<input checked="" type="checkbox"/> Nose-Free Water	No specific data.
	RT	No specific data.
	Easy-A Hi-Fi PCR Cloning Enzyme	No specific data.
	10X RT-PCR Buffer	No specific data.
	40 mM dNTP Mix (10 mM each dNTP)	No specific data.
<b>Skin contact</b>	<input checked="" type="checkbox"/> Nose-Free Water	No specific data.
	RT	No specific data.
	Easy-A Hi-Fi PCR Cloning Enzyme	No specific data.
	10X RT-PCR Buffer	No specific data.
	40 mM dNTP Mix (10 mM each dNTP)	No specific data.
<b>Ingestion</b>	<input checked="" type="checkbox"/> Nose-Free Water	No specific data.
	RT	No specific data.
	Easy-A Hi-Fi PCR Cloning Enzyme	No specific data.
	10X RT-PCR Buffer	No specific data.
	40 mM dNTP Mix (10 mM each dNTP)	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

<b>General</b>	<input checked="" type="checkbox"/> Nose-Free Water	No known significant effects or critical hazards.
	RT	No known significant effects or critical hazards.
	Easy-A Hi-Fi PCR Cloning Enzyme	No known significant effects or critical hazards.
	10X RT-PCR Buffer	No known significant effects or critical hazards.
	40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	<input checked="" type="checkbox"/> Nose-Free Water	No known significant effects or critical hazards.
	RT	No known significant effects or critical hazards.
	Easy-A Hi-Fi PCR Cloning Enzyme	No known significant effects or critical hazards.
	10X RT-PCR Buffer	No known significant effects or critical hazards.
	40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.

## Section 11. Toxicological information

<b>Mutagenicity</b>	: <input checked="" type="checkbox"/> Nase-Free Water	No known significant effects or critical hazards.
	RT	No known significant effects or critical hazards.
	Easy-A Hi-Fi PCR Cloning Enzyme	No known significant effects or critical hazards.
	10X RT-PCR Buffer	No known significant effects or critical hazards.
	40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.
<b>Teratogenicity</b>	: <input checked="" type="checkbox"/> Nase-Free Water	No known significant effects or critical hazards.
	RT	No known significant effects or critical hazards.
	Easy-A Hi-Fi PCR Cloning Enzyme	No known significant effects or critical hazards.
	10X RT-PCR Buffer	No known significant effects or critical hazards.
	40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.
<b>Developmental effects</b>	: <input checked="" type="checkbox"/> Nase-Free Water	No known significant effects or critical hazards.
	RT	No known significant effects or critical hazards.
	Easy-A Hi-Fi PCR Cloning Enzyme	No known significant effects or critical hazards.
	10X RT-PCR Buffer	No known significant effects or critical hazards.
	40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.
<b>Fertility effects</b>	: <input checked="" type="checkbox"/> Nase-Free Water	No known significant effects or critical hazards.
	RT	No known significant effects or critical hazards.
	Easy-A Hi-Fi PCR Cloning Enzyme	No known significant effects or critical hazards.
	10X RT-PCR Buffer	No known significant effects or critical hazards.
	40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
<input checked="" type="checkbox"/> 10X RT-PCR Buffer Oral	43362.2 mg/kg

## Section 12. Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure	
<input checked="" type="checkbox"/> RT Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours	
<b>Easy-A Hi-Fi PCR Cloning Enzyme</b> Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours	
<b>10X RT-PCR Buffer</b> Trometamol	Acute EC50 >980 mg/l Fresh water	Daphnia	48 hours	
	Acute NOEC 520 mg/l Fresh water	Daphnia	48 hours	
	Potassium chloride	Acute EC50 1337000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
		Acute EC50 9.24 g/L Fresh water	Algae - Desmodesmus subspicatus	72 hours
		Acute EC50 141460 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 12.92 mg/l Fresh water	Crustaceans - Pseudosida ramosa - Neonate	48 hours	
	Acute LC50 880000 µg/l Fresh water	Fish - Pimephales promelas	96 hours	



## Section 12. Ecological information

**Conclusion/Summary** : Not available.

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<input checked="" type="checkbox"/> RNase-Free Water Water	-	100 % - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<input checked="" type="checkbox"/> RNase-Free Water Water	-	-	Readily
<b>10X RT-PCR Buffer</b> Potassium chloride	-	-	Readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<input checked="" type="checkbox"/> RNase-Free Water Water	-1.38	-	low
<b>RT</b> Glycerol	-1.76	-	low
<b>Easy-A Hi-Fi PCR Cloning Enzyme</b> Glycerol	-1.76	-	low
<b>10X RT-PCR Buffer</b> Trometamol	-1.56	-	low
Potassium chloride	-0.46	-	low

### 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 and sewers.

## 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

## Section 15. Regulatory information

<b>Classification</b>	: <input checked="" type="checkbox"/> RNase-Free Water	Not applicable.
	RT	Immediate (acute) health hazard
	Easy-A Hi-Fi PCR Cloning Enzyme	Immediate (acute) health hazard
	10X RT-PCR Buffer	Not applicable.
	40 mM dNTP Mix (10 mM each dNTP)	Not applicable.

### Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
<input checked="" type="checkbox"/> RT Glycerol	≥50 - ≤75	No.	No.	No.	Yes.	No.
<b>Easy-A Hi-Fi PCR Cloning Enzyme</b> Glycerol	≥25 - ≤50	No.	No.	No.	Yes.	No.
<b>10X RT-PCR Buffer</b> Trometamol	≤7.6	Yes.	No.	No.	Yes.	No.
Potassium chloride	≤2.3	No.	No.	No.	Yes.	No.

### State regulations

<b>Massachusetts</b>	: The following components are listed: GLYCERINE MIST
<b>New York</b>	: None of the components are listed.
<b>New Jersey</b>	: The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL
<b>Pennsylvania</b>	: 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

<b>Australia</b>	: Not determined.
<b>Canada</b>	: <input checked="" type="checkbox"/> All components are listed or exempted.
<b>China</b>	: <input checked="" type="checkbox"/> All components are listed or exempted.
<b>Europe</b>	: <input checked="" type="checkbox"/> All components are listed or exempted.
<b>Japan</b>	: <input checked="" type="checkbox"/> <b>Japan inventory (ENCS)</b> : Not determined. <b>Japan inventory (ISHL)</b> : Not determined.
<b>Malaysia</b>	: <input checked="" type="checkbox"/> Not determined.
<b>New Zealand</b>	: <input checked="" type="checkbox"/> All components are listed or exempted.

## Section 15. Regulatory information

<b>Philippines</b>	: <input checked="" type="checkbox"/> All components are listed or exempted.
<b>Republic of Korea</b>	: <input checked="" type="checkbox"/> Not determined.
<b>Taiwan</b>	: <input checked="" type="checkbox"/> All components are listed or exempted.
<b>Thailand</b>	: <input checked="" type="checkbox"/> Not determined.
<b>Turkey</b>	: <input checked="" type="checkbox"/> Not determined.
<b>United States</b>	: <input checked="" type="checkbox"/> All components are listed or exempted.
<b>Viet Nam</b>	: <input checked="" type="checkbox"/> Not determined.

## Section 16. Other information

### History

<b>Date of issue</b>	: 06/30/2017
<b>Date of previous issue</b>	: 10/02/2014.
<b>Version</b>	: 4

Indicates information that has changed from previously issued version.

### Notice to reader

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