

# SAFETY DATA SHEET



Easy-A One-Tube RT-PCR System, Part Number 600182

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

<b>Product name</b>	:	Easy-A One-Tube RT-PCR System, Part Number 600182
<b>Part No. (Kit)</b>	:	600182
<b>Part No.</b>	:	RNase-Free Water 600164-58
		RT 600182-51
		Easy-A Hi-Fi PCR 600168-51
		Cloning Enzyme
		10X RT-PCR Buffer 600168-52
		40 mM dNTP Mix (10 mM each dNTP) 600164-53

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

Identified uses	
Analytical reagent.	
RT	50 µl
Easy-A Hi-Fi PCR Cloning Enzyme	25 µl (125 U 5 U/µl)
10X RT-PCR Buffer	1 ml
40 mM dNTP Mix (10 mM each dNTP)	50 µl
RNase-Free Water	1.2 ml

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Manufacturing GmbH & Co. KG  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +(44)-870-8200418

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

<b>Product definition</b>	:	RNase-Free Water	Mono-constituent substance
		RT	Mixture
		Easy-A Hi-Fi PCR	Mixture
		Cloning Enzyme	
		10X RT-PCR Buffer	Mixture
		40 mM dNTP Mix (10 mM each dNTP)	Mixture

**Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Not classified.

## SECTION 2: Hazards identification

<b>Ingredients of unknown toxicity</b>	<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%

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

<b>Signal word</b>	<b>: RNase-Free Water</b>	No signal word.
	RT	No signal word.
	Easy-A Hi-Fi PCR Cloning Enzyme	No signal word.
	10X RT-PCR Buffer	No signal word.
	40 mM dNTP Mix (10 mM each dNTP)	No signal word.
<b>Hazard statements</b>	<b>: RNase-Free Water</b>	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>Precautionary statements</b>	<b>Prevention</b>	
	<b>: RNase-Free Water</b>	Not applicable.
	RT	Not applicable.
	Easy-A Hi-Fi PCR Cloning Enzyme	Not applicable.
	10X RT-PCR Buffer	Not applicable.
<b>Response</b>	<b>: RNase-Free Water</b>	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.
<b>Storage</b>	<b>: RNase-Free Water</b>	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.
<b>Disposal</b>	<b>: RNase-Free Water</b>	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.

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**SECTION 2: Hazards identification**

<b>Hazardous ingredients</b>	: Easy-A Hi-Fi PCR Cloning Enzyme 10X RT-PCR Buffer	Not applicable. Not applicable.
<b>Supplemental label elements</b>	: RNase-Free Water RT Easy-A Hi-Fi PCR Cloning Enzyme 10X RT-PCR Buffer 40 mM dNTP Mix (10 mM each dNTP)	Not applicable. Not applicable. Not applicable. Safety data sheet available on request. Not applicable.
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	: RNase-Free Water RT Easy-A Hi-Fi PCR Cloning Enzyme 10X RT-PCR Buffer 40 mM dNTP Mix (10 mM each dNTP)	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
<b>Special packaging requirements</b>		
<b>Tactile warning of danger</b>	: RNase-Free Water RT Easy-A Hi-Fi PCR Cloning Enzyme 10X RT-PCR Buffer 40 mM dNTP Mix (10 mM each dNTP)	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.

**2.3 Other hazards**

<b>Other hazards which do not result in classification</b>	: RNase-Free Water RT Easy-A Hi-Fi PCR Cloning Enzyme 10X RT-PCR Buffer 40 mM dNTP Mix (10 mM each dNTP)	None known. None known. None known. None known. None known.
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**SECTION 3: Composition/information on ingredients**

<b>3.1 Substances</b>	: RNase-Free Water RT Easy-A Hi-Fi PCR Cloning Enzyme 10X RT-PCR Buffer 40 mM dNTP Mix (10 mM each dNTP)	Mono-constituent substance Mixture Mixture Mixture Mixture
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Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
<b>RNase-Free Water</b> Water	REACH #: Annex IV EC: 231-791-2 CAS: 7732-18-5	100	Not classified.	[A]
<b>RT</b> Glycerol	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥50 - ≤75	Not classified.	[2]
<b>Easy-A Hi-Fi PCR Cloning Enzyme</b> Glycerol	REACH #: Annex V	≥25 - ≤50	Not classified.	[2]

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**SECTION 3: Composition/information on ingredients**

Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	EC: 200-289-5 CAS: 56-81-5 CAS: 9036-19-5	<1	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411	[1] [5]
<b>10X RT-PCR Buffer</b> Trometamol	EC: 201-064-4 CAS: 77-86-1	<10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335  <b>See Section 16 for the full text of the H statements declared above.</b>	[1]

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.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern
- [6] Additional disclosure due to company policy
- [\*] Substance
- [A] Constituent
- [B] Impurity
- [C] Stabilising additive

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

<b>Eye contact</b>	: 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. Get medical attention if irritation occurs.
	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. Get medical attention if irritation occurs.
	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.
<b>Inhalation</b>	: Reverse Transcriptase (RT)	Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if symptoms occur.
	Easy-A High-Fidelity PCR cloning enzyme	Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if symptoms occur.
	10× RT-PCR buffer	Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if

## SECTION 4: First aid measures

		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.
	40mM dNTP Mix	Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if symptoms occur.
	RNase-free Water	Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if symptoms occur.
<b>Skin contact</b>	: RNase-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.
	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.
	10X RT-PCR Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	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.
<b>Ingestion</b>	: Reverse Transcriptase (RT)	Wash out mouth with water. Move exposed person to fresh air. Keep person warm and at rest. 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.
	Easy-A High-Fidelity PCR cloning enzyme	Wash out mouth with water. Move exposed person to fresh air. Keep person warm and at rest. 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.
	10× RT-PCR buffer	Wash out mouth with water. Move exposed person to fresh air. Keep person warm and at rest. 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.
	40mM dNTP Mix	Wash out mouth with water. Move exposed person to fresh air. Keep person warm and at rest. 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.
	RNase-free Water	Wash out mouth with water. Move exposed person to fresh air. Keep person warm and at rest. 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.

## SECTION 4: First aid measures

<b>Protection of first-aiders</b>	: RNase-Free Water RT Easy-A Hi-Fi PCR Cloning Enzyme 10X RT-PCR Buffer 40 mM dNTP Mix (10 mM each dNTP)	No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training.
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### 4.2 Most important symptoms and effects, both acute and delayed

#### Potential acute health effects

<b>Eye contact</b>	: RNase-Free Water RT Easy-A Hi-Fi PCR Cloning Enzyme 10X RT-PCR Buffer 40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Inhalation</b>	: RNase-Free Water RT Easy-A Hi-Fi PCR Cloning Enzyme 10X RT-PCR Buffer 40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Skin contact</b>	: RNase-Free Water RT Easy-A Hi-Fi PCR Cloning Enzyme 10X RT-PCR Buffer 40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Ingestion</b>	: RNase-Free Water RT Easy-A Hi-Fi PCR Cloning Enzyme 10X RT-PCR Buffer 40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

<b>Eye contact</b>	: RNase-Free Water RT Easy-A Hi-Fi PCR Cloning Enzyme 10X RT-PCR Buffer 40 mM dNTP Mix (10 mM each dNTP)	No specific data. No specific data. No specific data. No specific data. No specific data.
<b>Inhalation</b>	: RNase-Free Water RT Easy-A Hi-Fi PCR Cloning Enzyme 10X RT-PCR Buffer 40 mM dNTP Mix (10 mM each dNTP)	No specific data. No specific data. No specific data. No specific data. No specific data.

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**SECTION 4: First aid measures**

<b>Skin contact</b>	: RNase-Free Water	No specific data.
	RT	No specific data.
	Easy-A Hi-Fi PCR	No specific data.
	Cloning Enzyme	
	10X RT-PCR Buffer	No specific data.
	40 mM dNTP Mix (10 mM each dNTP)	No specific data.
<b>Ingestion</b>	: RNase-Free Water	No specific data.
	RT	No specific data.
	Easy-A Hi-Fi PCR	No specific data.
	Cloning Enzyme	
	10X RT-PCR Buffer	No specific data.
	40 mM dNTP Mix (10 mM each dNTP)	No specific data.

**4.3 Indication of any immediate medical attention and special treatment needed**

<b>Notes to physician</b>	: RNase-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	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Cloning Enzyme	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>	: RNase-Free Water	No specific treatment.
	RT	No specific treatment.
	Easy-A Hi-Fi PCR	No specific treatment.
	Cloning Enzyme	
	10X RT-PCR Buffer	No specific treatment.
	40 mM dNTP Mix (10 mM each dNTP)	No specific treatment.

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

<b>Suitable extinguishing media</b>	: RNase-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	Use an extinguishing agent suitable for the surrounding fire.
	Cloning Enzyme	
	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>	: RNase-Free Water	None known.
	RT	None known.
	Easy-A Hi-Fi PCR	None known.
	Cloning Enzyme	
	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**

## SECTION 5: Firefighting measures

<b>Hazards from the substance or mixture</b>	: RNase-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.	
<b>Hazardous combustion products</b>	40 mM dNTP Mix (10 mM each dNTP)	In a fire or if heated, a pressure increase will occur and the container may burst.	
	: RNase-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	
<b>5.3 Advice for firefighters</b>	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.	
	<b>Special precautions for fire-fighters</b>	: RNase-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.	
<b>Special protective equipment for fire-fighters</b>	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.	
	: RNase-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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.	
	RT	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.	
	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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a	



## SECTION 5: Firefighting measures

10X RT-PCR Buffer	basic level of protection for chemical incidents. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

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

<b>For non-emergency personnel</b>	: RNase-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 spilt 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 spilt material. Put on appropriate personal protective equipment.
	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 spilt material. 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 spilt 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 spilt material. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	: RNase-Free Water	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".
	RT	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".
	Easy-A Hi-Fi PCR Cloning Enzyme	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".
	10X RT-PCR Buffer	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".
	40 mM dNTP Mix (10 mM each dNTP)	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".

## SECTION 6: Accidental release measures

<b>6.2 Environmental precautions</b>	: RNase-Free Water	Avoid dispersal of spilt 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).
	RT	Avoid dispersal of spilt 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).
	Easy-A Hi-Fi PCR Cloning Enzyme	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	10X RT-PCR Buffer	Avoid dispersal of spilt 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).
	40 mM dNTP Mix (10 mM each dNTP)	Avoid dispersal of spilt 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 material for containment and cleaning up

<b>Methods for cleaning up</b>	: RNase-Free Water	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.
	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.
	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.

<b>6.4 Reference to other sections</b>	: See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.
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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

<b>Protective measures</b>	: RNase-Free Water	Put on appropriate personal protective equipment (see Section 8).
	RT	Put on appropriate personal protective equipment (see Section 8).
	Easy-A Hi-Fi PCR Cloning Enzyme	Put on appropriate personal protective equipment (see Section 8).
	10X RT-PCR Buffer	Put on appropriate personal protective equipment (see Section 8).
	40 mM dNTP Mix (10 mM each dNTP)	Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	: RNase-Free Water	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.
	RT	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	Easy-A Hi-Fi PCR Cloning Enzyme	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	10X RT-PCR Buffer	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	40 mM dNTP Mix (10 mM each dNTP)	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

<b>Storage</b>	: Reverse Transcriptase (RT)	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.
	Easy-A High-Fidelity 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 unlabelled containers. Use appropriate containment to avoid environmental

## SECTION 7: Handling and storage

10× RT-PCR buffer	contamination. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.
40mM dNTP Mix	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 unlabelled containers. Use appropriate containment to avoid environmental contamination.
RNase-free Water	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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

### 7.3 Specific end use(s)

<b>Recommendations</b>	: RNase-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.
<b>Industrial sector specific solutions</b>	: 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.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
RT Glycerol	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist
Easy-A Hi-Fi PCR Cloning Enzyme Glycerol	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist

## SECTION 8: Exposure controls/personal protection

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

### DNELs/DMELs

No DNELs/DMELs available.

### PNECs

No PNECs available

## 8.2 Exposure controls

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

### 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 or dusts.

### 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.

**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.

## 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	Liquid.
	Cloning Enzyme	
	10X RT-PCR Buffer	Liquid.
<b>Colour</b>	40 mM dNTP Mix (10 mM each dNTP)	Liquid.
	: RNase-Free Water	Colourless.
	RT	Not available.
	Easy-A Hi-Fi PCR	Not available.
	Cloning Enzyme	
<b>Odour</b>	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.
	: RNase-Free Water	Odourless.
	RT	Not available.
	Easy-A Hi-Fi PCR	Not available.
<b>Odour threshold</b>	Cloning Enzyme	
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.
	: RNase-Free Water	Not available.
	RT	Not available.
<b>pH</b>	Easy-A Hi-Fi PCR	Not available.
	Cloning Enzyme	
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.
	: RNase-Free Water	7
<b>Melting point/freezing point</b>	RT	8
	Easy-A Hi-Fi PCR	8
	Cloning Enzyme	
	10X RT-PCR Buffer	8.3
	40 mM dNTP Mix (10 mM each dNTP)	7.5
<b>Initial boiling point and boiling range</b>	: RNase-Free Water	0°C
	RT	Not available.
	Easy-A Hi-Fi PCR	Not available.
	Cloning Enzyme	
	10X RT-PCR Buffer	Not available.
<b>Flash point</b>	40 mM dNTP Mix (10 mM each dNTP)	0°C
	: RNase-Free Water	100°C
	RT	Not available.
	Easy-A Hi-Fi PCR	Not available.
	Cloning Enzyme	
<b>Flash point</b>	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	100°C
	: RNase-Free Water	Not available.
	RT	Not available.
	Easy-A Hi-Fi PCR	Not available.
<b>Flash point</b>	Cloning Enzyme	
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.

## SECTION 9: Physical and chemical properties

<b>Evaporation rate</b>	: RNase-Free Water	Not available.
	RT	Not available.
	Easy-A Hi-Fi PCR	Not available.
	Cloning Enzyme	
	10X RT-PCR Buffer	Not available.
<b>Flammability (solid, gas)</b>	40 mM dNTP Mix (10 mM each dNTP)	Not available.
	: 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
<b>Upper/lower flammability or explosive limits</b>	RNase-free Water	Not applicable
	: RNase-Free Water	Not available.
	RT	Not available.
	Easy-A Hi-Fi PCR	Not available.
	Cloning Enzyme	
<b>Vapour pressure</b>	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.
	: RNase-Free Water	Not available.
	RT	Not available.
	Easy-A Hi-Fi PCR	Not available.
<b>Vapour density</b>	Cloning Enzyme	
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.
	: RNase-Free Water	Not available.
	RT	Not available.
<b>Relative density</b>	Easy-A Hi-Fi PCR	Not available.
	Cloning Enzyme	
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.
	: RNase-Free Water	Not available.
<b>Solubility(ies)</b>	RT	Not available.
	Easy-A Hi-Fi PCR	Not available.
	Cloning Enzyme	
	10X RT-PCR Buffer	Easily soluble in the following materials: cold water and hot water.
	40 mM dNTP Mix (10 mM each dNTP)	Soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	Easy-A Hi-Fi PCR	Soluble in the following materials: cold water and hot water.
	Cloning Enzyme	
	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.
	: RNase-Free Water	Not available.
<b>Partition coefficient: n-octanol/water</b>	RT	Not available.
	Easy-A Hi-Fi PCR	Not available.
	Cloning Enzyme	
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.

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**SECTION 9: Physical and chemical properties**

<b>Auto-ignition temperature</b>	: RNase-Free Water	Not available.
	RT	Not available.
	Easy-A Hi-Fi PCR	Not available.
	Cloning Enzyme	
	10X RT-PCR Buffer	Not available.
<b>Decomposition temperature</b>	40 mM dNTP Mix (10 mM each dNTP)	Not available.
	: RNase-Free Water	Not available.
	RT	Not available.
	Easy-A Hi-Fi PCR	Not available.
	Cloning Enzyme	
<b>Viscosity</b>	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.
	: RNase-Free Water	Not available.
	RT	Not available.
	Easy-A Hi-Fi PCR	Not available.
<b>Explosive properties</b>	Cloning Enzyme	
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.
	: RNase-Free Water	Not available.
	RT	Not available.
<b>Oxidising properties</b>	Easy-A Hi-Fi PCR	Not available.
	Cloning Enzyme	
	10X RT-PCR Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.

**9.2 Other information**

No additional information.

**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	: RNase-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	No specific test data related to reactivity available for this product or its ingredients.
	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.
<b>10.2 Chemical stability</b>	40 mM dNTP Mix (10 mM each dNTP)	No specific test data related to reactivity available for this product or its ingredients.
	: RNase-Free Water	The product is stable.
	RT	The product is stable.
	Easy-A Hi-Fi PCR	The product is stable.
	Cloning Enzyme	
	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>	: RNase-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>	: RNase-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>	: RNase-Free Water	May react or be incompatible with oxidising materials.
	RT	May react or be incompatible with oxidising materials.
	Easy-A Hi-Fi PCR Cloning Enzyme	May react or be incompatible with oxidising materials.
	10X RT-PCR Buffer	May react or be incompatible with oxidising materials.
	40 mM dNTP Mix (10 mM each dNTP)	May react or be incompatible with oxidising materials.
<b>10.6 Hazardous decomposition products</b>	: RNase-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

Product/ingredient name	Result	Species	Dose	Exposure
<b>Easy-A Hi-Fi PCR Cloning Enzyme</b> Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	LD50 Oral	Rat	2800 mg/kg	-
<b>10X RT-PCR Buffer</b> Trometamol	LD50 Dermal LD50 Oral	Rat Rat	>5000 mg/kg 5000 mg/kg	- -

#### Acute toxicity estimates

Not available.

#### Irritation/Corrosion

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**SECTION 11: Toxicological information**

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>Easy-A Hi-Fi PCR Cloning Enzyme</b> Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-. omega.-hydroxy-	Eyes - Severe irritant	Rabbit	-	1%	-
<b>10X RT-PCR Buffer</b> Trometamol	Skin - Moderate irritant Skin - Severe irritant	Rabbit Rabbit	- -	25 Percent 500 milligrams	- -

Sensitiser

**Conclusion/Summary** : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
<b>10X RT-PCR Buffer</b> Trometamol	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure

: RNase-Free Water	Not available.
RT	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

<b>Inhalation</b>	: RNase-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>Ingestion</b>	: RNase-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>Skin contact</b>	: RNase-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>Eye contact</b>	: RNase-Free Water	No known significant effects or critical hazards.
	RT	No known significant effects or critical hazards.
	Easy-A Hi-Fi PCR	No known significant effects or critical hazards.
	Cloning Enzyme	
	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

<b>Inhalation</b>	: RNase-Free Water	No specific data.
	RT	No specific data.
	Easy-A Hi-Fi PCR	No specific data.
	Cloning Enzyme	
	10X RT-PCR Buffer	No specific data.
	40 mM dNTP Mix (10 mM each dNTP)	No specific data.

<b>Ingestion</b>	: RNase-Free Water	No specific data.
	RT	No specific data.
	Easy-A Hi-Fi PCR	No specific data.
	Cloning Enzyme	
	10X RT-PCR Buffer	No specific data.
	40 mM dNTP Mix (10 mM each dNTP)	No specific data.

<b>Skin contact</b>	: RNase-Free Water	No specific data.
	RT	No specific data.
	Easy-A Hi-Fi PCR	No specific data.
	Cloning Enzyme	
	10X RT-PCR Buffer	No specific data.
	40 mM dNTP Mix (10 mM each dNTP)	No specific data.

<b>Eye contact</b>	: RNase-Free Water	No specific data.
	RT	No specific data.
	Easy-A Hi-Fi PCR	No specific data.
	Cloning Enzyme	
	10X RT-PCR Buffer	No specific data.
	40 mM dNTP Mix (10 mM each dNTP)	No specific data.

### Delayed and immediate effects as well as 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>	: RNase-Free Water	No known significant effects or critical hazards.
	RT	No known significant effects or critical hazards.
	Easy-A Hi-Fi PCR	No known significant effects or critical hazards.
	Cloning Enzyme	
	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.

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

**SECTION 12: Ecological information**

**12.1 Toxicity**

Product/ingredient name	Result	Species	Exposure
<b>Easy-A Hi-Fi PCR Cloning Enzyme</b> Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Acute EC50 210 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute LC50 10800 µg/l Marine water	Crustaceans - Pandalus montagui - Adult	48 hours
	Acute LC50 8600 to 9800 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 7200 µg/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

**12.2 Persistence and degradability**

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## SECTION 12: Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
RNase-Free Water Water	-	100 % - 28 days	-	-
Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability	
RNase-Free Water Water	-	-	Readily	

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
RNase-Free Water Water	-1.38	-	low
Easy-A Hi-Fi PCR Cloning Enzyme Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3, 3-tetramethylbutyl)phenyl]-. omega.-hydroxy-	3.77	78.67	low
10X RT-PCR Buffer Trometamol	-1.56	-	low

### 12.4 Mobility in soil

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

Mobility : Not available.

### 12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

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

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

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## SECTION 14: Transport information

ADR/RID / IMDG / IATA : Not regulated.

**14.6 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.

**14.7 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**

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
<b>Easy-A Hi-Fi PCR Cloning Enzyme</b> Poly(oxy-1,2-ethanediyl), .alpha.-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Substance of equivalent concern for environment	Recommended	ED/169/2012	2/10/2014

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : 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.

Other EU regulations

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

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.

**Date of issue/Date of revision** : 30/06/2017

22/24

## SECTION 15: Regulatory information

### Inventory list

<b>Australia</b>	: Not determined.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Europe</b>	: All components are listed or exempted.
<b>Japan</b>	: <b>Japan inventory (ENCS)</b> : Not determined. <b>Japan inventory (ISHL)</b> : Not determined.
<b>Malaysia</b>	: Not determined.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: All components are listed or exempted.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are listed or exempted.
<b>Viet Nam</b>	: Not determined.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

## SECTION 16: Other information

✓ Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
DNEL = Derived No Effect Level  
EUH statement = CLP-specific Hazard statement  
PNEC = Predicted No Effect Concentration  
RRN = REACH Registration Number

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

<b>Classification</b>	<b>Justification</b>
Not classified.	

### Full text of abbreviated H statements

<b>Easy-A Hi-Fi PCR Cloning Enzyme</b> H315 H318 H411	Causes skin irritation. Causes serious eye damage. Toxic to aquatic life with long lasting effects.
<b>10X RT-PCR Buffer</b> H315 H319 H335	Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

### Full text of classifications [CLP/GHS]

Easy-A One-Tube RT-PCR System, Part Number 600182

## SECTION 16: Other information

### Easy-A Hi-Fi PCR Cloning Enzyme

Aquatic Chronic 2, H411  
Eye Dam. 1, H318  
Skin Irrit. 2, H315

LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2  
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1  
SKIN CORROSION/IRRITATION - Category 2

### 10X RT-PCR Buffer

Eye Irrit. 2, H319  
Skin Irrit. 2, H315  
STOT SE 3, H335

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2  
SKIN CORROSION/IRRITATION - Category 2  
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE  
(Respiratory tract irritation) - Category 3

**Date of issue/ Date of revision** : 30/06/2017

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**Version** : 1

#### Notice to reader

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