

# SAFETY DATA SHEET



Easy-A High-Fidelity PCR Cloning Enzyme, Part Number 600402

## Section 1. Identification

**Product identifier** : Easy-A High-Fidelity PCR Cloning Enzyme, Part Number 600402  
**Part No. (Chemical Kit)** : 600402  
**Part No.** : Easy-A Hi-Fi PCR Cloning Enzyme 600402-51  
 10X Easy-A Reaction Buffer 600400-52

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

Analytical reagent.

Easy-A Hi-Fi PCR Cloning Enzyme 100 µl (500 U 5 U/µl)  
 10X Easy-A Reaction Buffer 2 ml (2 x 1 ml)

**Supplier/Manufacturer** : Agilent Technologies Australia Pty Ltd  
 679 Springvale Road  
 Mulgrave  
 Victoria 3170, Australia  
 1800 802 402

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +(61)-290372994

## Section 2. Hazard(s) identification

### Classification of the substance or mixture

#### 10X Easy-A Reaction Buffer

H315 SKIN CORROSION/IRRITATION - Category 2  
 H319 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A

Easy-A Hi-Fi PCR Cloning Enzyme	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 30 - 60%
10X Easy-A Reaction Buffer	Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 10 - 30%
	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 10 - 30%
	Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 10 - 30%
10X Easy-A Reaction Buffer	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 11%

### GHS label elements

**Hazard pictograms** : 10X Easy-A Reaction Buffer 

**Signal word** : Easy-A Hi-Fi PCR Cloning Enzyme No signal word.  
 10X Easy-A Reaction Buffer WARNING

**Hazard statements** : Easy-A Hi-Fi PCR Cloning Enzyme No known significant effects or critical hazards.  
 10X Easy-A Reaction Buffer H319 - Causes serious eye irritation.  
 H315 - Causes skin irritation.

### Precautionary statements

## Section 2. Hazard(s) identification

<b>Prevention</b>	: Easy-A Hi-Fi PCR Cloning Enzyme 10X Easy-A Reaction Buffer	Not applicable. P280 - Wear protective gloves. Wear eye or face protection. P264 - Wash hands thoroughly after handling.
<b>Response</b>	: Easy-A Hi-Fi PCR Cloning Enzyme 10X Easy-A Reaction Buffer	Not applicable. P302 + P352 + P362 + P363 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. P332 + P313 - If skin irritation occurs: Get medical attention. 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.
<b>Storage</b>	: Easy-A Hi-Fi PCR Cloning Enzyme 10X Easy-A Reaction Buffer	Not applicable.
<b>Disposal</b>	: Easy-A Hi-Fi PCR Cloning Enzyme 10X Easy-A Reaction Buffer	Not applicable.
<b>Supplemental label elements</b>	: Easy-A Hi-Fi PCR Cloning Enzyme 10X Easy-A Reaction Buffer	Not applicable.
<b>Other hazards which do not result in classification</b>	: Easy-A Hi-Fi PCR Cloning Enzyme 10X Easy-A Reaction Buffer	None known. None known.

## Section 3. Composition and ingredient information

<b>Substance/mixture</b>	: Easy-A Hi-Fi PCR Cloning Enzyme 10X Easy-A Reaction Buffer	Mixture Mixture
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### CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
Easy-A Hi-Fi PCR Cloning Enzyme Glycerol	≥30 - ≤60	56-81-5
10X Easy-A Reaction Buffer 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	≥10 - <20	1185-53-1

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.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

## Section 4. First aid measures

<b>Eye contact</b>	: 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 Easy-A Reaction Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
<b>Inhalation</b>	: Easy-A Hi-Fi PCR Cloning Enzyme	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	10X Easy-A Reaction Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
<b>Skin contact</b>	: 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 Easy-A Reaction Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Ingestion</b>	: Easy-A Hi-Fi PCR Cloning Enzyme	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.
	10X Easy-A Reaction Buffer	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.

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

#### Potential acute health effects

## Section 4. First aid measures

<b>Eye contact</b>	: Easy-A Hi-Fi PCR Cloning Enzyme 10X Easy-A Reaction Buffer	No known significant effects or critical hazards. Causes serious eye irritation.
<b>Inhalation</b>	: Easy-A Hi-Fi PCR Cloning Enzyme 10X Easy-A Reaction Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Skin contact</b>	: Easy-A Hi-Fi PCR Cloning Enzyme 10X Easy-A Reaction Buffer	No known significant effects or critical hazards. Causes skin irritation.
<b>Ingestion</b>	: Easy-A Hi-Fi PCR Cloning Enzyme 10X Easy-A Reaction Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.

### Over-exposure signs/symptoms

<b>Eye contact</b>	: Easy-A Hi-Fi PCR Cloning Enzyme 10X Easy-A Reaction Buffer	No specific data. Adverse symptoms may include the following: pain or irritation watering redness
<b>Inhalation</b>	: Easy-A Hi-Fi PCR Cloning Enzyme 10X Easy-A Reaction Buffer	No specific data. No specific data.
<b>Skin contact</b>	: Easy-A Hi-Fi PCR Cloning Enzyme 10X Easy-A Reaction Buffer	No specific data. Adverse symptoms may include the following: irritation redness
<b>Ingestion</b>	: Easy-A Hi-Fi PCR Cloning Enzyme 10X Easy-A Reaction Buffer	No specific data. No specific data.

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

<b>Notes to physician</b>	: Easy-A Hi-Fi PCR Cloning Enzyme 10X Easy-A Reaction Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. 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.
<b>Specific treatments</b>	: Easy-A Hi-Fi PCR Cloning Enzyme 10X Easy-A Reaction Buffer	No specific treatment. No specific treatment.
<b>Protection of first-aiders</b>	: Easy-A Hi-Fi PCR Cloning Enzyme 10X Easy-A Reaction Buffer	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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Firefighting measures

### Extinguishing media

<b>Suitable extinguishing media</b>	: Easy-A Hi-Fi PCR Cloning Enzyme 10X Easy-A Reaction Buffer	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: Easy-A Hi-Fi PCR Cloning Enzyme 10X Easy-A Reaction Buffer	None known. None known.
<b>Specific hazards arising from the chemical</b>	: Easy-A Hi-Fi PCR Cloning Enzyme 10X Easy-A Reaction Buffer	In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous thermal decomposition products</b>	: Easy-A Hi-Fi PCR Cloning Enzyme  10X Easy-A Reaction Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds
<b>Special protective actions for fire-fighters</b>	: Easy-A Hi-Fi PCR Cloning Enzyme  10X Easy-A Reaction 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. 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>	: Easy-A Hi-Fi PCR Cloning Enzyme  10X Easy-A Reaction Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	: Easy-A Hi-Fi PCR Cloning Enzyme  10X Easy-A Reaction 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. 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. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
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## Section 6. Accidental release measures

<b>For emergency responders</b>	: 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 Easy-A Reaction 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".
<b>Environmental precautions</b>	: 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 Easy-A Reaction 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).

### Methods and material for containment and cleaning up

<b>Methods for cleaning up</b>	: 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 Easy-A Reaction 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.

## Section 7. Handling and storage

### Precautions for safe handling

<b>Protective measures</b>	: Easy-A Hi-Fi PCR Cloning Enzyme	Put on appropriate personal protective equipment (see Section 8).
	10X Easy-A Reaction Buffer	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour 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.
<b>Advice on general occupational hygiene</b>	: 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 Easy-A Reaction 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.

## Section 7. Handling and storage

**Conditions for safe storage, including any incompatibilities** : 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

10X Easy-A Reaction 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls and personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Easy-A Hi-Fi PCR Cloning Enzyme Glycerol	<b>Safe Work Australia (Australia, 1/2014).</b> TWA: 10 mg/m <sup>3</sup> 8 hours.

**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 and 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

### Appearance

- Physical state** : Easy-A Hi-Fi PCR Cloning Enzyme Liquid.  
10X Easy-A Reaction Buffer Liquid.
- Colour** : Easy-A Hi-Fi PCR Cloning Enzyme Not available.  
10X Easy-A Reaction Buffer Not available.
- Odour** : Easy-A Hi-Fi PCR Cloning Enzyme Not available.  
10X Easy-A Reaction Buffer Not available.
- Odour threshold** : Easy-A Hi-Fi PCR Cloning Enzyme Not available.  
10X Easy-A Reaction Buffer Not available.
- pH** : Easy-A Hi-Fi PCR Cloning Enzyme 8  
10X Easy-A Reaction Buffer 8.5
- Melting point** : Easy-A Hi-Fi PCR Cloning Enzyme Not available.  
10X Easy-A Reaction Buffer Not available.
- Boiling point** : Easy-A Hi-Fi PCR Cloning Enzyme Not available.  
10X Easy-A Reaction Buffer Not available.
- Flash point** : Easy-A Hi-Fi PCR Cloning Enzyme Not available.  
10X Easy-A Reaction Buffer Not available.
- Evaporation rate** : Easy-A Hi-Fi PCR Cloning Enzyme Not available.  
10X Easy-A Reaction Buffer Not available.
- Flammability (solid, gas)** : Easy-A Hi-Fi PCR Cloning Enzyme Not applicable.  
10X Easy-A Reaction Buffer Not applicable.
- Lower and upper explosive (flammable) limits** : Easy-A Hi-Fi PCR Cloning Enzyme Not available.  
10X Easy-A Reaction Buffer Not available.
- Vapour pressure** : Easy-A Hi-Fi PCR Cloning Enzyme Not available.  
10X Easy-A Reaction Buffer Not available.
- Vapour density** :



## Section 9. Physical and chemical properties

	Easy-A Hi-Fi PCR Cloning Enzyme	Not available.
	10X Easy-A Reaction Buffer	Not available.
<b>Relative density</b>	Easy-A Hi-Fi PCR Cloning Enzyme	Not available.
	10X Easy-A Reaction Buffer	Not available.
<b>Solubility</b>	Easy-A Hi-Fi PCR Cloning Enzyme	Easily soluble in the following materials: cold water and hot water.
	10X Easy-A Reaction Buffer	Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	Easy-A Hi-Fi PCR Cloning Enzyme	Not available.
	10X Easy-A Reaction Buffer	Not available.
<b>Auto-ignition temperature</b>	Easy-A Hi-Fi PCR Cloning Enzyme	Not available.
	10X Easy-A Reaction Buffer	Not available.
<b>Decomposition temperature</b>	Easy-A Hi-Fi PCR Cloning Enzyme	Not available.
	10X Easy-A Reaction Buffer	Not available.
<b>Viscosity</b>	Easy-A Hi-Fi PCR Cloning Enzyme	Not available.
	10X Easy-A Reaction Buffer	Not available.

## Section 10. Stability and reactivity

<b>Reactivity</b>	Easy-A Hi-Fi PCR Cloning Enzyme	No specific test data related to reactivity available for this product or its ingredients.
	10X Easy-A Reaction Buffer	No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	Easy-A Hi-Fi PCR Cloning Enzyme	The product is stable.
	10X Easy-A Reaction Buffer	The product is stable.
<b>Possibility of hazardous reactions</b>	Easy-A Hi-Fi PCR Cloning Enzyme	Under normal conditions of storage and use, hazardous reactions will not occur.
	10X Easy-A Reaction Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	Easy-A Hi-Fi PCR Cloning Enzyme	No specific data.
	10X Easy-A Reaction Buffer	No specific data.
<b>Incompatible materials</b>	Easy-A Hi-Fi PCR Cloning Enzyme	May react or be incompatible with oxidising materials.
	10X Easy-A Reaction Buffer	May react or be incompatible with oxidising materials.
<b>Hazardous decomposition products</b>	Easy-A Hi-Fi PCR Cloning Enzyme	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	10X Easy-A Reaction Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Easy-A Hi-Fi PCR Cloning Enzyme Glycerol	LD50 Oral	Rat	12600 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Easy-A Hi-Fi PCR Cloning Enzyme Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

#### Sensitisation

Not available.

#### Mutagenicity

Not available.

#### Carcinogenicity

Not available.

#### Reproductive toxicity

Not available.

#### Teratogenicity

Not available.

#### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
10X Easy-A Reaction Buffer 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	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** : Easy-A Hi-Fi PCR Cloning Enzyme Routes of entry anticipated: Oral, Dermal, Inhalation.  
10X Easy-A Reaction Buffer Routes of entry anticipated: Oral, Dermal, Inhalation.

#### Potential acute health effects

**Eye contact** : Easy-A Hi-Fi PCR Cloning Enzyme No known significant effects or critical hazards.  
10X Easy-A Reaction Buffer Causes serious eye irritation.

**Inhalation** : Easy-A Hi-Fi PCR Cloning Enzyme No known significant effects or critical hazards.  
10X Easy-A Reaction Buffer No known significant effects or critical hazards.

**Skin contact** : Easy-A Hi-Fi PCR Cloning Enzyme No known significant effects or critical hazards.  
10X Easy-A Reaction Buffer Causes skin irritation.

## Section 11. Toxicological information

<b>Ingestion</b>	: Easy-A Hi-Fi PCR Cloning Enzyme	No known significant effects or critical hazards.
	: 10X Easy-A Reaction Buffer	No known significant effects or critical hazards.

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

<b>Eye contact</b>	: Easy-A Hi-Fi PCR Cloning Enzyme	No specific data.
	: 10X Easy-A Reaction Buffer	Adverse symptoms may include the following: pain or irritation watering redness
<b>Inhalation</b>	: Easy-A Hi-Fi PCR Cloning Enzyme	No specific data.
	: 10X Easy-A Reaction Buffer	No specific data.
<b>Skin contact</b>	: Easy-A Hi-Fi PCR Cloning Enzyme	No specific data.
	: 10X Easy-A Reaction Buffer	Adverse symptoms may include the following: irritation redness
<b>Ingestion</b>	: Easy-A Hi-Fi PCR Cloning Enzyme	No specific data.
	: 10X Easy-A Reaction Buffer	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

Not available.

<b>General</b>	: Easy-A Hi-Fi PCR Cloning Enzyme	No known significant effects or critical hazards.
	: 10X Easy-A Reaction Buffer	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: Easy-A Hi-Fi PCR Cloning Enzyme	No known significant effects or critical hazards.
	: 10X Easy-A Reaction Buffer	No known significant effects or critical hazards.
<b>Mutagenicity</b>	: Easy-A Hi-Fi PCR Cloning Enzyme	No known significant effects or critical hazards.
	: 10X Easy-A Reaction Buffer	No known significant effects or critical hazards.
<b>Teratogenicity</b>	: Easy-A Hi-Fi PCR Cloning Enzyme	No known significant effects or critical hazards.
	: 10X Easy-A Reaction Buffer	No known significant effects or critical hazards.
<b>Developmental effects</b>	: Easy-A Hi-Fi PCR Cloning Enzyme	No known significant effects or critical hazards.
	: 10X Easy-A Reaction Buffer	No known significant effects or critical hazards.
<b>Fertility effects</b>	: Easy-A Hi-Fi PCR Cloning Enzyme	No known significant effects or critical hazards.
	: 10X Easy-A Reaction Buffer	No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

## Section 11. Toxicological information

Not available.

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
Easy-A Hi-Fi PCR Cloning Enzyme Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

### Persistence and degradability

Not available.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Easy-A Hi-Fi PCR Cloning Enzyme Glycerol	-1.76	-	low

### Mobility in soil

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

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

## Section 13. Disposal considerations

**Disposal methods** :  The generation of waste should be avoided or minimised 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

**ADG / IMDG / IATA** : Not regulated as Dangerous Goods according to the ADG Code .

**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

### Standard Uniform Schedule of Medicine and Poisons

Not regulated.

### Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

### 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>	: All components are listed or exempted.
<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.

## Section 16. Any other relevant information

### History

**Date of issue/Date of revision** : 29/06/2017

**Date of previous issue** : 30/01/2015.

**Version** : 4


### Key to abbreviations

ADG = Australian Dangerous Goods  
 ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container  
 IMDG = International Maritime Dangerous Goods  
 LogPow = logarithm of the octanol/water partition coefficient  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 NOHSC = National Occupational Health and Safety Commission

## Section 16. Any other relevant information

SUSMP = Standard Uniform Schedule of Medicine and Poisons  
UN = United Nations

### Procedure used to derive the classification

Classification	Justification
 10X Easy-A Reaction Buffer Skin Irrit. 2, H315 Eye Irrit. 2A, H319	Calculation method Calculation method

**References** : Not available.

 Indicates information that has changed from previously issued version.

### Notice to reader

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