SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II - Europe

Rev A1: 23/07/2023

SECTION 1: Identification of the Substance and Company/Undertaking

1.1 **Product Identifier**

Product name:	egSEQ Enzymatic DNA Library Prep Kit v2	
Cat. No.	EG1002S	
Specification	96rxn	
Component Cat. No.	EG100201S	Enhancer Buffer E
	EG100202S	Fragment & ERA Buffer v2
	EG100203S	Fragment & ERA Enzyme Mix v2
	EG100204S	Adapter Ligation Buffer v2
	EG100205S	Adapter Ligase v2
	EG100206S	PCR Master Mix

1.2 **Relevant identified uses of the substance and uses advised against**

Identified Uses:	Analytical reagent
Restricted Uses:	For research use only. Not available for diagnostic procedures.
Mixture supplied to that use in form of:	A mixture
Product Category by type of chemical:	Analytical reagent

1.3 **Details of the supplier of the Safety data Sheet**

Address:	Edinburgh Genetics Limited Pentlands Science Park, Penicuik, United Kingdom EH26 0PZ
Telephone Number:	+44 1312616686
Email Address:	sales@eggenetics.com

1.4 **Emergency Telephone:** +44 1312616686

SECTION 2: Hazards Identification

2.1 **Classification of the mixture**

2.1.1	**Emergency Overview**	Enhanced Buffer E v2	Colourless, Liquid. H316-Causes mild skin irritation. H320-Causes eye irritation.
		Fragment & ERA Buffer v2	
		Fragment & ERA Enzyme Mix v2	
		Ada Ligation Buffer v2	
		Ada Ligase v2	
		PCR Master Mix	
2.1.2	**Classification according to Regulation (EC) No 1272/2008 (including amendments):**	Enhanced Buffer E v2	Category 3, Serious eye damage/eye irritation-Category 2B
		Fragment & ERA Buffer v2	
		Fragment & ERA Enzyme Mix v2	
		Ada Ligation Buffer v2	
		Ada Ligase v2	
		PCR Master Mix	
2.1.3	**Classification according to EU Directive 67/548/EEC (including amendments):**	Enhanced Buffer E v2	None
		Fragment & ERA Buffer v2	
		Fragment & ERA Enzyme Mix v2	
		Ada Ligation Buffer v2	
		Ada Ligase v2	
		PCR Master Mix	
2.2	**Label elements:**	Enhanced Buffer E v2	None
		Fragment & ERA Buffer v2	
		Fragment & ERA Enzyme Mix v2	
		Ada Ligation Buffer v2	
		Ada Ligase v2	

		PCR Master Mix	
	Signal word:	Enhanced Buffer E v2	Warning
		Fragment & ERA Buffer v2	
		Fragment & ERA Enzyme Mix v2	
		Ada Ligation Buffer v2	
		Ada Ligase v2	
		PCR Master Mix	
	Hazard statements:	Enhanced Buffer E v2	H316-Causes mild skin irritation H320-Causes eye irritation.
		Fragment & ERA Buffer v2	
		Fragment & ERA Enzyme Mix v2	
		Ada Ligation Buffer v2	
		Ada Ligase v2	
		PCR Master Mix	
	Precautionary statements:	Enhanced Buffer E v2	None
		Fragment & ERA Buffer v2	
		Fragment & ERA Enzyme Mix v2	
		Ada Ligation Buffer v2	
		Ada Ligase v2	
		PCR Master Mix	
	Prevention:	Enhanced Buffer E v2	P264-Wash hands thoroughly after operation
		Fragment & ERA Buffer v2	
		Fragment & ERA Enzyme Mix v2	
		Ada Ligation Buffer v2	
		Ada Ligase v2	
		PCR Master Mix	
	Disposal:	Enhanced Buffer E v2	N/A
		Fragment & ERA Buffer v2	
		Fragment & ERA Enzyme Mix v2	
		Ada Ligation Buffer v2	
		Ada Ligase v2	
		PCR Master Mix	
	Storage:	Enhanced Buffer E v2	N/A
		Fragment & ERA Buffer v2	
		Fragment & ERA Enzyme Mix v2	
		Ada Ligation Buffer v2	
		Ada Ligase v2	
		PCR Master Mix	

2.3 **Other Hazards:** *The product is a mixture containing mostly water with various other ingredients producing slight risk of irritation in their pure state*

2.4 **Additional Information:** The product is not classified as hazardous according to EC and National Regulations.

SECTION 3: Composition / Information on Ingredients

3.1 **Substances**

Enhanced Buffer E v2	Mixture
Fragment & ERA Buffer v2	Mixture
Fragment & ERA Enzyme Mix v2	Mixture
Ada Ligation Buffer v2	Mixture
Ada Ligase v2	Mixture
PCR Master Mix	Mixture

3.2 **Composition**

Product identifier type in accordance with Article 18(2) of Regulation (EC) No 1272/2008	**Proportion**	**Identifiers**	**EC Number**
Ada Ligation Buffer v2			Classified 200-289-5
Dithiothreitol	0.01 to 0.5	EC: 248-531-9 CAS: 27565-41-9	Eye Irrit. 2, H319 Acute Tox. 4, H302 Skin Irrit. 2, H315 STOT SE 3, H335

Ada Ligase v2			
Glycerol	2 to 15	EC: 200-289-5 CAS: 56-81-5	Eye Irrit. 2, H319
PCR Master Mix			
Glycerol	2 to 15	EC: 200-289-5 CAS: 56-81-5	Eye Irrit. 2, H319
2-Amino-2-hydroxymethyl-1,3-propanediol	1 to 5	EC: 201-064-4 CAS: 77-86-1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335

SECTION 4: First-Aid Measures

4.1 **Description of First Aid Measures**

Ingestion: Wash mouth with water. Move exposed person to fresh air. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs, keep the head down to avoid vomit entering the lungs. Get medical attention if adverse health effects persist or are severe.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention if adverse health effects persist or are severe. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation: Move exposed person to fresh air. Get medical attention if adverse health effects persist or are severe.

First Aider Protection: None specific

4.2 **Most important symptoms and effects, both acute and delayed**

Potential acute health effects:

Enhanced Buffer E v2	Causes mild skin irritation. Causes eye irritation.
Fragment & ERA Buffer v2	Causes mild skin irritation. Causes eye irritation.
Fragment & ERA Enzyme Mix v.	Causes mild skin irritation. Causes eye irritation.
Ada Ligation Buffer v2	Causes mild skin irritation. Causes eye irritation.
Ada Ligase v2	Causes mild skin irritation. Causes eye irritation.
PCR Master Mix	Causes mild skin irritation. Causes eye irritation.

Over-exposure signs/symptoms:

Enhanced Buffer E v2	Skin irritation and redness. Eye pain or irritation, tears and redness.
Fragment & ERA Buffer v2	Skin irritation and redness. Eye pain or irritation, tears and redness.
Fragment & ERA Enzyme Mix v.	Skin irritation and redness. Eye pain or irritation, tears and redness.
Ada Ligation Buffer v2	Skin irritation and redness. Eye pain or irritation, tears and redness.
Ada Ligase v2	Skin irritation and redness. Eye pain or irritation, tears and redness.
PCR Master Mix	Skin irritation and redness. Eye pain or irritation, tears and redness.

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

Specific Treatments

Enhanced Buffer E v2	None Specific
Fragment & ERA Buffer v2	None Specific
Fragment & ERA Enzyme Mix v.	None Specific
Ada Ligation Buffer v2	None Specific
Ada Ligase v2	None Specific
PCR Master Mix	None Specific

Notes to Physician

Enhanced Buffer E v2	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Fragment & ERA Buffer v2	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Fragment & ERA Enzyme Mix v	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Ada Ligation Buffer v2	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Ada Ligase v2	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
PCR Master Mix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

No action shall be taken involving any personal risk or without suitable training.

SECTION 5: Fire-Fighting Measures

5.1 **Extinguishing media (small and large fires)**

Small Fire:	Use an extinguishing agent suitable for the surrounding fire.
Large Fire:	Use an extinguishing agent suitable for the surrounding fire.
Avoid:	None

5.2.1 **Specific Hazards:** In a fire or if heated, a pressure increase will occur and the container may burst

5.2.2 **Protective equipment and advice for fire fighters:** 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. 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 measures**

6.1.1 **For non-emergency personnel:**

Enhanced Buffer E v2
Fragment & ERA Buffer v2
Fragment & ERA Enzyme Mix v
Ada Ligation Buffer v2
Ada Ligase v2
PCR Master Mix

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 (see Section 8).

6.1.2 **For emergency responders:**

Enhanced Buffer E v2
Fragment & ERA Buffer v2
Fragment & ERA Enzyme Mix v
Ada Ligation Buffer v2
Ada Ligase v2
PCR Master Mix

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. 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 (see Section 8).

6.2 **Environmental Precautions:**

Enhanced Buffer E v2
Fragment & ERA Buffer v2
Fragment & ERA Enzyme Mix v
Ada Ligation Buffer v2
Ada Ligase v2
PCR Master Mix

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:**

Enhanced Buffer E v2
Fragment & ERA Buffer v2
Fragment & ERA Enzyme Mix v
Ada Ligation Buffer v2
Ada Ligase v2
PCR Master Mix

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up. Dispose of via a licensed waste disposal contractor.

SECTION 7: Handling and Storage

7.1 **Precautions for safe handling**

Enhanced Buffer E v2
Fragment & ERA Buffer v2
Fragment & ERA Enzyme Mix v
Ada Ligation Buffer v2

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

Ada Ligase v2
PCR Master Mix

compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

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

Enhanced Buffer E v2
Fragment & ERA Buffer v2
Fragment & ERA Enzyme Mix v.
Ada Ligation Buffer v2
Ada Ligase v2
PCR Master 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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

7.3 **Specific end use(s) recommendations:**

Enhanced Buffer E v2
Fragment & ERA Buffer v2
Fragment & ERA Enzyme Mix v.
Ada Ligation Buffer v2
Ada Ligase v2
PCR Master Mix

Industrial applications, Professional applications.

SECTION 8: Exposure Controls/Personal Protection

8.1 **Control Parameters**

Product/ingredient name	Component in the Kit	Exposure limit values
Enhanced Buffer E v2	N/A	N/A
Fragment & ERA Buffer v2	N/A	N/A
Fragment & ERA Enzyme Mix v	N/A	N/A
Ada Ligation Buffer v2	N/A	N/A
Ada Ligase v2	N/A	N/A
PCR Master Mix	N/A	N/A

8.2 **Exposure controls**

Appropriate engineering controls:	If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
Respiratory protection:	Wear medical protective mask.
Hand protection:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products.
Eye protection:	If contact is possible, the following protection should be worn: chemical splash goggles and/or face shield.
Skin 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.Generally, it is recommended to wear a white coat, disposable head cover and disposable shoe cover for protection.
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**

Physical State:

Enhanced Buffer E v2	Liquid
Fragment & ERA Buffer v2	Liquid
Fragment & ERA Enzyme Mix v.	Liquid
Ada Ligation Buffer v2	Liquid
Ada Ligase v2	Liquid
PCR Master Mix	Liquid

9.2 **Colour:**

Enhanced Buffer E v2	Coulourless
Fragment & ERA Buffer v2	Coulourless
Fragment & ERA Enzyme Mix v.	Coulourless
Ada Ligation Buffer v2	Coulourless
Ada Ligase v2	Coulourless
PCR Master Mix	Coulourless

9.3 **Odour:**

Enhanced Buffer E v2	Odourless
Fragment & ERA Buffer v2	Odourless

	Fragment & ERA Enzyme Mix v.	Odourless	
	Ada Ligation Buffer v2	Odourless	
	Ada Ligase v2	Odourless	
	PCR Master Mix	Irritating odour	
9.4	**Odour threshold:**		
	Enhanced Buffer E v2	N/A	
	Fragment & ERA Buffer v2	N/A	
	Fragment & ERA Enzyme Mix v.	N/A	
	Ada Ligation Buffer v2	N/A	
	Ada Ligase v2	N/A	
	PCR Master Mix		
9.5	**pH:**		
	Enhanced Buffer E v2		7.5
	Fragment & ERA Buffer v2		7.5
	Fragment & ERA Enzyme Mix v.	N/A	
	Ada Ligation Buffer v2		7.6
	Ada Ligase v2	N/A	
	PCR Master Mix	N/A	
9.6	**Melting/Freezing point:**		
	Enhanced Buffer E v2	N/A	
	Fragment & ERA Buffer v2	N/A	
	Fragment & ERA Enzyme Mix v.	N/A	
	Ada Ligation Buffer v2	N/A	
	Ada Ligase v2	N/A	
	PCR Master Mix	N/A	
9.7	**Initial boiling point and boiling range:**		
	Enhanced Buffer E v2	100˚C	
	Fragment & ERA Buffer v2	N/A	
	Fragment & ERA Enzyme Mix v.	N/A	
	Ada Ligation Buffer v2	N/A	
	Ada Ligase v2	N/A	
	PCR Master Mix	N/A	
9.8	**Flash point:**		
	Enhanced Buffer E v2	N/A	
	Fragment & ERA Buffer v2	N/A	
	Fragment & ERA Enzyme Mix v.	N/A	
	Ada Ligation Buffer v2	N/A	
	Ada Ligase v2	N/A	
	PCR Master Mix	N/A	
9.9	**Evaporation rate:**		
	Enhanced Buffer E v2	N/A	
	Fragment & ERA Buffer v2	N/A	
	Fragment & ERA Enzyme Mix v.	N/A	
	Ada Ligation Buffer v2	N/A	
	Ada Ligase v2	N/A	
	PCR Master Mix	N/A	
9.1	**Flammability:**		
	Enhanced Buffer E v2	N/A	
	Fragment & ERA Buffer v2	N/A	
	Fragment & ERA Enzyme Mix v.	N/A	
	Ada Ligation Buffer v2	N/A	
	Ada Ligase v2	N/A	
	PCR Master Mix	N/A	
9.11	**Upper/lower flammability or explosive limits:**		
	Enhanced Buffer E v2	N/A	
	Fragment & ERA Buffer v2	N/A	
	Fragment & ERA Enzyme Mix v.	N/A	
	Ada Ligation Buffer v2	N/A	
	Ada Ligase v2	N/A	
	PCR Master Mix	N/A	
9.12	**Vapour pressure:**		
	Enhanced Buffer E v2	N/A	
	Fragment & ERA Buffer v2	N/A	
	Fragment & ERA Enzyme Mix v.	N/A	
	Ada Ligation Buffer v2	N/A	
	Ada Ligase v2	N/A	
	PCR Master Mix	N/A	

9.13	**Vapour density**	
	Enhanced Buffer E v2	N/A
	Fragment & ERA Buffer v2	N/A
	Fragment & ERA Enzyme Mix v2	N/A
	Ada Ligation Buffer v2	N/A
	Ada Ligase v2	N/A
	PCR Master Mix	N/A
9.14	**Relative vapour density (air=1):**	
	Enhanced Buffer E v2	N/A
	Fragment & ERA Buffer v2	N/A
	Fragment & ERA Enzyme Mix v2	N/A
	Ada Ligation Buffer v2	N/A
	Ada Ligase v2	N/A
	PCR Master Mix	N/A
9.15	**Solubility:**	
	Enhanced Buffer E v2	Soluble in water
	Fragment & ERA Buffer v2	Soluble in water
	Fragment & ERA Enzyme Mix v2	Soluble in water
	Ada Ligation Buffer v2	Soluble in water
	Ada Ligase v2	Soluble in water
	PCR Master Mix	Soluble in water
9.16	**Partition coefficient (n-octanol/water):**	
	Enhanced Buffer E v2	N/A
	Fragment & ERA Buffer v2	N/A
	Fragment & ERA Enzyme Mix v2	N/A
	Ada Ligation Buffer v2	N/A
	Ada Ligase v2	N/A
	PCR Master Mix	N/A
9.17	**Auto-ignition temperature:**	
	Enhanced Buffer E v2	N/A
	Fragment & ERA Buffer v2	N/A
	Fragment & ERA Enzyme Mix v2	N/A
	Ada Ligation Buffer v2	N/A
	Ada Ligase v2	N/A
	PCR Master Mix	N/A
9.18	**Decomposition temperature:**	
	Enhanced Buffer E v2	N/A
	Fragment & ERA Buffer v2	N/A
	Fragment & ERA Enzyme Mix v2	N/A
	Ada Ligation Buffer v2	N/A
	Ada Ligase v2	N/A
	PCR Master Mix	N/A
9.19	**Viscosity:**	
	Enhanced Buffer E v2	N/A
	Fragment & ERA Buffer v2	N/A
	Fragment & ERA Enzyme Mix v2	N/A
	Ada Ligation Buffer v2	N/A
	Ada Ligase v2	N/A
	PCR Master Mix	N/A

SECTION 10: Stability and Reactivity

10.1	**Reactivity:**	
	Enhanced Buffer E v2	Stable
	Fragment & ERA Buffer v2	Stable
	Fragment & ERA Enzyme Mix v2	Stable
	Ada Ligation Buffer v2	Stable
	Ada Ligase v2	Stable
	PCR Master Mix	Stable
10.2	**Chemical stability:**	
	Enhanced Buffer E v2	Stable
	Fragment & ERA Buffer v2	Stable
	Fragment & ERA Enzyme Mix v2	Stable
	Ada Ligation Buffer v2	Stable
	Ada Ligase v2	Stable
	PCR Master Mix	Stable
10.3	**Possibility of hazardous reactions:**	
	Enhanced Buffer E v2	Under normal conditions of storage and use, hazardous lreactions will not occur.

Fragment & ERA Buffer v2	Under normal conditions of storage and use, hazardous lreactions will not occur.
Fragment & ERA Enzyme Mix v	Under normal conditions of storage and use, hazardous lreactions will not occur.
Ada Ligation Buffer v2	Under normal conditions of storage and use, hazardous lreactions will not occur.
Ada Ligase v2	Under normal conditions of storage and use, hazardous lreactions will not occur.
PCR Master Mix	Under normal conditions of storage and use, hazardous lreactions will not occur.

10.4 **Conditions to Avoid:**

Enhanced Buffer E v2	No specific data
Fragment & ERA Buffer v2	No specific data
Fragment & ERA Enzyme Mix v	No specific data
Ada Ligation Buffer v2	No specific data
Ada Ligase v2	No specific data
PCR Master Mix	No specific data

10.5 **Incompatible materials:**

Enhanced Buffer E v2	No specific data
Fragment & ERA Buffer v2	No specific data
Fragment & ERA Enzyme Mix v	No specific data
Ada Ligation Buffer v2	No specific data
Ada Ligase v2	No specific data
PCR Master Mix	No specific data

10.6 **Hazardous decomposition products:**

Enhanced Buffer E v2	Under normal conditions of storage and use, hazardous ldecomposition products should not be produced.
Fragment & ERA Buffer v2	Under normal conditions of storage and use, hazardous ldecomposition products should not be produced.
Fragment & ERA Enzyme Mix v	Under normal conditions of storage and use, hazardous ldecomposition products should not be produced.
Ada Ligation Buffer v2	Under normal conditions of storage and use, hazardous ldecomposition products should not be produced.
Ada Ligase v2	Under normal conditions of storage and use, hazardous ldecomposition products should not be produced.
PCR Master Mix	Under normal conditions of storage and use, hazardous ldecomposition products should not be produced.

SECTION 11: Toxicological Information

11.1 **Information on toxicological effects**

Acute toxicity:

Product/ingredient name	Result	Species	Dose	Exposure
Ada Ligation Buffer v2				
Dithiothreitol	LD50 Skin	Mouse	333 mg/kg	/
Ada Ligase v2				
Glycerol	LD50 Oral	Rat	12600 mg/kg	/
PCR Master Mix				
Glycerol	LD50 Oral	Rat	12600 mg/kg	/
2-Amino-2-hydroxymethyl-1,3-propanediol	LD50 Skin	Rat	>5000 mg/kg	/

11.2 **Irritation/Corrosion**

Product/ingredient name	Result	Species	Exposure
Ada Ligation Buffer			
Dithiothreitol	N/A	N/A	N/A
Ada Ligase			
Glycerol	Eyes - mild irritant	Rabbit	24 h 500 mg
	Skin - mild irritant	Rabbit	24 h 500 mg
PCR Master Mix			

Glycerol	Eyes - mild irritant	Rabbit	24 h 500 mg
	Skin - mild irritant	Rabbit	24 h 500 mg
2-Amino-2-hydroxymethyl-1,3-propanediol	Skin - moderate irritant	Rabbit	0.25
	Skin - severe irritant	Rabbit	500 mg

11.3 **Senitiser**

Enhanced Buffer E v2	N/A
Fragment & ERA Buffer v2	N/A
Fragment & ERA Enzyme Mix v.	N/A
Ada Ligation Buffer v2	N/A
Ada Ligase v2	N/A
PCR Master Mix	N/A

11.4 **Mutagenicity:**

Enhanced Buffer E v2	N/A
Fragment & ERA Buffer v2	N/A
Fragment & ERA Enzyme Mix v.	N/A
Ada Ligation Buffer v2	N/A
Ada Ligase v2	N/A
PCR Master Mix	N/A

11.5 **Carcinogenicity:**

Enhanced Buffer E v2	N/A
Fragment & ERA Buffer v2	N/A
Fragment & ERA Enzyme Mix v.	N/A
Ada Ligation Buffer v2	N/A
Ada Ligase v2	N/A
PCR Master Mix	N/A

11.6 **Reproductive toxicity:**

Enhanced Buffer E v2	N/A
Fragment & ERA Buffer v2	N/A
Fragment & ERA Enzyme Mix v.	N/A
Ada Ligation Buffer v2	N/A
Ada Ligase v2	N/A
PCR Master Mix	N/A

11.7 **Specific target organ toxicity (single exposure):**

Enhanced Buffer E v2	N/A
Fragment & ERA Buffer v2	N/A
Fragment & ERA Enzyme Mix v.	N/A
Ada Ligation Buffer v2	N/A
Ada Ligase v2	N/A
PCR Master Mix	N/A

11.8 **Specific target organ toxicity (repeated exposure):**

Enhanced Buffer E v2	N/A
Fragment & ERA Buffer v2	N/A
Fragment & ERA Enzyme Mix v.	N/A
Ada Ligation Buffer v2	N/A
Ada Ligase v2	N/A
PCR Master Mix	N/A

11.9 **Aspiration hazard:**

Enhanced Buffer E v2	N/A
Fragment & ERA Buffer v2	N/A
Fragment & ERA Enzyme Mix v.	N/A
Ada Ligation Buffer v2	N/A
Ada Ligase v2	N/A
PCR Master Mix	N/A

SECTION 12: Ecological Information

12.1 **Toxicity**

Product/ingredient name	Result	Species	Exposure
Ada Ligation Buffer v2			
Dithiothreitol	N/A	N/A	N/A
Ada Ligase v2			
Glycerol	Acute EC50 >980 mg/L Fresh water	Fish - Oncorhynchus mykiss	24 h 500 mg
PCR Master Mix			
Glycerol	Acute EC50 >980 mg/L Fresh water	Fish - Oncorhynchus mykiss	96h

2-Amino-2-hydroxymethyl-1,3-propanediol	Acute EC50 >980 mg/L Fresh water	Daphnia	48h
	Acute NOEC 520 mg/L Fresh water	Daphnia	48h

12.2 **Persistence and degradability:** N/A

12.3 **Bioaccumulative potential:** N/A

12.4 **Mobility in soil:** N/A

12.5 **Results of PBT and vPvB assessment:** N/A

12.6 **Other adverse effects:** N/A

SECTION 13: Disposal Considerations

13.1 **Waste treatment 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. 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

14.1 **Precautions for transportation:** 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.

SECTION 15: Regulatory Information

Nation	Regulation	Information
International	Chemical Weapon Convention List Schedules I, II & III Chemicals	Not listed.
International	Montreal Protocol (Annexes A, B, C, E)	Not listed.
International	Stockholm Convention on Persistent Organic Pollutants	Not listed.
International	Rotterdam Convention on Prior Inform Consent (PIC)	Not listed.
International	UNECE Aarhus Protocol on POPs and Heavy Metals	Not listed.
Europe	Regulation (EC) No 1907/2006 of the European Parliament and of the Council (REACH)	All components are not listed in the list.
United States	Toxic Substances Control Act (TSCA)	Not listed.
United States	TSCA Chemical Substance Inventory	All components are not listed in the list.
Japan	Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.	All components are not listed in the list.
Turkey	Regulation on the Export and Import of Certain Hazardous Chemicals	All components are not listed in the list.
Turkey	Regulation of Registration, Evaluation, Authorization, and Restriction of Chemicals (KKDIK)	All components are not listed in the list.
China	Inventory of the Existing Chemical Substances in China (IECSC)	All components are listed or exempted.
China	Provisions on Environmental Administration of New Chemical Substances	Not listed.
China	Regulations on Safe Management of Hazardous Chemicals in China	Not listed.

China	Catalog of Hazardous Chemicals	All components are not listed in the list.
China	Catalog of Goods Prohibited from Import	All components are not listed in the list.
China	Catalog of Goods Prohibited from Export	All components are not listed in the list.
China	China Inventory of Severely Restricted Toxic Chemicals	All components are not listed in the list.

SECTION 16: Other Information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.Edinburgh Genetics Limited and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.