

SAFETY DATA SHEET

SureSelect Enzymatic Fragmentation Kit, 96 Reactions, Automation, Part Number 5191-6764

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

1.1 Product identifier

Product name	: SureSelect Enzymatic Fragmentation Kit, 96 Reactions, Automation, Part Number 5191-6764
Part no. (chemical kit)	: 5191-6764
Part no.	: 5X SureSelect 5191-4077 Fragmentation Buffer SureSelect 5191-6763 Fragmentation Enzyme

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

Identified uses	: <input type="checkbox"/> Analytical reagent. For research use only. <input checked="" type="checkbox"/> SureSelect Fragmentation Buffer 0.310 ml (96 reactions) SureSelect Fragmentation Enzyme 0.155 ml (96 reactions)
Uses advised against	: <input checked="" type="checkbox"/> Not for use in diagnostic procedures.

1.3 Details of the supplier of the safety data sheet

Agilent Technologies LDA UK Ltd.
5500 Lakeside Cheadle Royal Business Park,
Cheadle, Cheshire, SK8 3GR
United Kingdom
Tel: +44 (0) 345 712 5292

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

Product definition	: 5X SureSelect Mixture Fragmentation Buffer SureSelect Mixture Fragmentation Enzyme
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Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

<input checked="" type="checkbox"/> SureSelect Fragmentation Buffer	The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.
SureSelect Fragmentation Enzyme	The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Ingredients of unknown toxicity	: <input checked="" type="checkbox"/> SureSelect Fragmentation Buffer	Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 1 - 10%
	SureSelect Fragmentation Enzyme	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 30 - 60%
Ingredients of unknown ecotoxicity	: <input checked="" type="checkbox"/> SureSelect Fragmentation Buffer	Contains 2.5% of components with unknown hazards to the aquatic environment

SECTION 2: Hazards identification

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

Signal word	: <input checked="" type="checkbox"/> SureSelect	No signal word.
	Fragmentation Buffer	
	SureSelect	No signal word.
Hazard statements	Fragmentation Enzyme	
	: <input checked="" type="checkbox"/> SureSelect	No known significant effects or critical hazards.
	Fragmentation Buffer	
	SureSelect	No known significant effects or critical hazards.
	Fragmentation Enzyme	

Precautionary statements

Prevention	: <input checked="" type="checkbox"/> SureSelect	Not applicable.
	Fragmentation Buffer	
	SureSelect	Not applicable.
Response	Fragmentation Enzyme	
	: <input checked="" type="checkbox"/> SureSelect	Not applicable.
	Fragmentation Buffer	
Storage	SureSelect	Not applicable.
	Fragmentation Enzyme	
	: <input checked="" type="checkbox"/> SureSelect	Not applicable.
Disposal	Fragmentation Buffer	
	SureSelect	Not applicable.
	Fragmentation Enzyme	
Supplemental label elements	: <input checked="" type="checkbox"/> SureSelect	Safety data sheet available on request.
	Fragmentation Buffer	
	SureSelect	Safety data sheet available on request.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	Fragmentation Enzyme	
	: <input checked="" type="checkbox"/> SureSelect	Not applicable.
	Fragmentation Buffer	
	SureSelect	Not applicable.
	Fragmentation Enzyme	

Special packaging requirements

Containers to be fitted with child-resistant fastenings	: <input checked="" type="checkbox"/> SureSelect	Not applicable.
	Fragmentation Buffer	
	SureSelect	Not applicable.
Tactile warning of danger	Fragmentation Enzyme	
	: <input checked="" type="checkbox"/> SureSelect	Not applicable.
	Fragmentation Buffer	
	SureSelect	Not applicable.
	Fragmentation Enzyme	

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	: <input checked="" type="checkbox"/> SureSelect	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
	Fragmentation Buffer	
	SureSelect	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
	Fragmentation Enzyme	

SECTION 2: Hazards identification

Other hazards which do not result in classification :

5X SureSelect	None known.
Fragmentation Buffer	
SureSelect	None known.
Fragmentation Enzyme	

SECTION 3: Composition/information on ingredients

3.1 Substances :

5X SureSelect Fragmentation Buffer	Mixture
SureSelect Fragmentation Enzyme	Mixture

Product/ingredient name	Identifiers	%	Classification	Type
5X SureSelect Fragmentation Buffer Caesium chloride	EC: 231-600-2 CAS: 7647-17-8	<2.5	Repr. 2, H361f (Male) (oral) Aquatic Chronic 2, H411	[1]
SureSelect Fragmentation Enzyme Glycerol	UK (GB) REACH #: Annex V REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥50 - ≤75	Not classified. See Section 16 for the full text of the H statements declared above.	[1]

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type

5X SureSelect Fragmentation Buffer	[1] Substance classified with a health or environmental hazard
SureSelect Fragmentation Enzyme	[1] Substance with a workplace exposure limit

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

SECTION 4: First aid measures**4.1 Description of first aid measures**

Eye contact	: 5X SureSelect Fragmentation 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.
	SureSelect Fragmentation 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.
Inhalation	: 5X SureSelect Fragmentation Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	SureSelect Fragmentation Enzyme	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	: 5X SureSelect Fragmentation Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	SureSelect Fragmentation Enzyme	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

SECTION 4: First aid measures

Ingestion	: 5X SureSelect Fragmentation Buffer	Wash out mouth with water. 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.
	SureSelect Fragmentation Enzyme	Wash out mouth with water. 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.
Protection of first-aiders	: 5X SureSelect Fragmentation Buffer	No action shall be taken involving any personal risk or without suitable training.
	SureSelect Fragmentation Enzyme	No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayedOver-exposure signs/symptoms

Eye contact	: 5X SureSelect Fragmentation Buffer	No specific data.
	SureSelect Fragmentation Enzyme	No specific data.
Inhalation	: 5X SureSelect Fragmentation Buffer	No specific data.
	SureSelect Fragmentation Enzyme	No specific data.
Skin contact	: 5X SureSelect Fragmentation Buffer	No specific data.
	SureSelect Fragmentation Enzyme	No specific data.
Ingestion	: 5X SureSelect Fragmentation Buffer	No specific data.
	SureSelect Fragmentation Enzyme	No specific data.

4.3 Indication of any immediate medical attention and special treatment needed



Notes to physician	: 5X SureSelect Fragmentation Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	SureSelect Fragmentation Enzyme	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: 5X SureSelect Fragmentation Buffer	No specific treatment.
	SureSelect Fragmentation Enzyme	No specific treatment.

SECTION 5: Firefighting measures**5.1 Extinguishing media**



Suitable extinguishing media	: 5X SureSelect Fragmentation Buffer	Use an extinguishing agent suitable for the surrounding fire.
	SureSelect Fragmentation Enzyme	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: 5X SureSelect Fragmentation Buffer	None known.
	SureSelect Fragmentation Enzyme	None known.

5.2 Special hazards arising from the substance or mixture

SECTION 5: Firefighting measures



Hazards from the substance or mixture	:  SureSelect Fragmentation Buffer SureSelect Fragmentation Enzyme	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.
Hazardous combustion products	:  SureSelect Fragmentation Buffer SureSelect Fragmentation Enzyme	Decomposition products may include the following materials: halogenated compounds metal oxide/oxides Decomposition products may include the following materials: carbon dioxide carbon monoxide

5.3 Advice for firefighters


Special protective actions for fire-fighters	:  SureSelect Fragmentation Buffer SureSelect Fragmentation 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. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	:  SureSelect Fragmentation Buffer SureSelect Fragmentation Enzyme	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

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:  SureSelect Fragmentation Buffer SureSelect Fragmentation 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. 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.
For emergency responders	:  SureSelect Fragmentation Buffer SureSelect Fragmentation 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". 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".

6.2 Environmental precautions

:  SureSelect Fragmentation 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).
SureSelect Fragmentation 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).

6.3 Methods and material for containment and cleaning up

SECTION 6: Accidental release measures

Methods for cleaning up	5X SureSelect Fragmentation 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.
	SureSelect Fragmentation 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.

6.4 Reference to other sections	: 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

Protective measures	5X SureSelect Fragmentation Buffer	Put on appropriate personal protective equipment (see Section 8).
	SureSelect Fragmentation Enzyme	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	5X SureSelect Fragmentation 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.
	SureSelect Fragmentation 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.

7.2 Conditions for safe storage, including any incompatibilities

Storage	5X SureSelect Fragmentation 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.
	SureSelect Fragmentation 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.

7.3 Specific end use(s)

SECTION 7: Handling and storage

Recommendations	: 5X SureSelect Fragmentation Buffer	Industrial applications, Professional applications.
	SureSelect Fragmentation Enzyme	Industrial applications, Professional applications.
Industrial sector specific solutions	: <input checked="" type="checkbox"/> 5X SureSelect Fragmentation Buffer	Not available.
	SureSelect Fragmentation Enzyme	Not available.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Occupational exposure limits**

Product/ingredient name	Exposure limit values
<input checked="" type="checkbox"/> SureSelect Fragmentation Enzyme Glycerol	EH40/2005 WELs (United Kingdom (UK), 1/2020). TWA: 10 mg/m ³ 8 hours. Form: Mist

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures : ☒ Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
<input checked="" type="checkbox"/> 5X SureSelect Fragmentation Buffer Caesium chloride	DNEL	Long term Inhalation	1.47 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	4.18 mg/kg bw/day	Workers	Systemic
SureSelect Fragmentation Enzyme Glycerol	DNEL	Long term Inhalation	33 mg/m ³	General population	Local
	DNEL	Long term Inhalation	56 mg/m ³	Workers	Local
	DNEL	Long term Oral	229 mg/kg bw/day	General population	Systemic

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, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

SECTION 8: Exposure controls/personal protection**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** : 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.
- 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

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties**Appearance**

- | | | |
|---|---|-----------------|
| Physical state | : 5X SureSelect
Fragmentation Buffer | Liquid. |
| | SureSelect
Fragmentation Enzyme | Liquid. |
| Colour | : 5X SureSelect
Fragmentation Buffer | Not available. |
| | SureSelect
Fragmentation Enzyme | Not available. |
| Odour | : 5X SureSelect
Fragmentation Buffer | Not available. |
| | SureSelect
Fragmentation Enzyme | Not available. |
| Odour threshold | : 5X SureSelect
Fragmentation Buffer | Not available. |
| | SureSelect
Fragmentation Enzyme | Not available. |
| Melting point/freezing point | : 5X SureSelect
Fragmentation Buffer | Not available. |
| | SureSelect
Fragmentation Enzyme | Not available. |
| Initial boiling point and boiling range | : 5X SureSelect
Fragmentation Buffer | Not available. |
| | SureSelect
Fragmentation Enzyme | Not available. |
| Flammability | : 5X SureSelect
Fragmentation Buffer | Not applicable. |
| | SureSelect
Fragmentation Enzyme | Not applicable. |
| Upper/lower flammability or explosive limits | : 5X SureSelect
Fragmentation Buffer | Not available. |
| | SureSelect
Fragmentation Enzyme | Not available. |
| Flash point | : | |

SECTION 9: Physical and chemical properties**Auto-ignition temperature**

Ingredient name	Closed cup		Open cup	
	°C	Method	°C	Method
 SureSelect Fragmentation Enzyme				
Glycerol	-	-	177	-

Decomposition temperature

5X SureSelect Fragmentation Buffer	Not available.
SureSelect Fragmentation Enzyme	Not available.


pH

5X SureSelect Fragmentation Buffer	7.5
SureSelect Fragmentation Enzyme	7.5

Viscosity

5X SureSelect Fragmentation Buffer	Not available.
SureSelect Fragmentation Enzyme	Not available.


Solubility(ies)

Media	Result
 SureSelect Fragmentation Buffer water	Soluble
SureSelect Fragmentation Enzyme water	Soluble

Partition coefficient: n-octanol/water

5X SureSelect Fragmentation Buffer	Not applicable.
SureSelect Fragmentation Enzyme	Not applicable.

Vapour pressure

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
 SureSelect Fragmentation Buffer water	17.5	2.3	-	92.258	12.3	-
SureSelect Fragmentation Enzyme water	17.5	2.3	-	92.258	12.3	-
Glycerol	0.000075	0.00001	-	0.0025	0.00033	-

Evaporation rate

5X SureSelect Fragmentation Buffer	Not available.
SureSelect Fragmentation Enzyme	Not available.

SECTION 9: Physical and chemical properties

Relative density	: 5X SureSelect	Not available.
	Fragmentation Buffer	
	SureSelect	Not available.
Vapour density	: 5X SureSelect	Not available.
	Fragmentation Buffer	
	SureSelect	Not available.
Explosive properties	: 5X SureSelect	Not available.
	Fragmentation Buffer	
	SureSelect	Not available.
Oxidising properties	: 5X SureSelect	Not available.
	Fragmentation Buffer	
	SureSelect	Not available.
Particle characteristics		
Median particle size	: 5X SureSelect	Not applicable.
	Fragmentation Buffer	
	SureSelect	Not applicable.
	Fragmentation Enzyme	


9.2 Other information

No additional information.


SECTION 10: Stability and reactivity

10.1 Reactivity	: 5X SureSelect	No specific test data related to reactivity available for this product or its ingredients.
	Fragmentation Buffer	
	SureSelect	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: 5X SureSelect	The product is stable.
	Fragmentation Buffer	
	SureSelect	The product is stable.
10.3 Possibility of hazardous reactions	: 5X SureSelect	Under normal conditions of storage and use, hazardous reactions will not occur.
	Fragmentation Buffer	
	SureSelect	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: 5X SureSelect	No specific data.
	Fragmentation Buffer	
	SureSelect	No specific data.
10.5 Incompatible materials	: 5X SureSelect	May react or be incompatible with oxidising materials.
	Fragmentation Buffer	
	SureSelect	May react or be incompatible with oxidising materials.
10.6 Hazardous decomposition products	: 5X SureSelect	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Fragmentation Buffer	
	SureSelect	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Fragmentation Enzyme	


SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
 SureSelect Fragmentation Buffer Caesium chloride	LD50 Oral	Rat	2004 mg/kg	-
SureSelect Fragmentation Enzyme Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
 SureSelect Fragmentation Buffer Caesium chloride	2004	N/A	N/A	N/A	N/A
SureSelect Fragmentation Enzyme Glycerol	12600	N/A	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
 SureSelect Fragmentation Enzyme Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

Conclusion/Summary : Not available.**Sensitiser****Conclusion/Summary** : Not available.**Mutagenicity****Conclusion/Summary** : Not available.**Carcinogenicity****Conclusion/Summary** : Not available.**Reproductive toxicity****Conclusion/Summary** : Not available.**Teratogenicity****Conclusion/Summary** : Not available.**Specific target organ toxicity (single exposure)**

Not available.


Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure

 **SureSelect Fragmentation Buffer**
SureSelect Fragmentation Enzyme

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

SECTION 11: Toxicological information

Inhalation	: <input checked="" type="checkbox"/> SureSelect	No known significant effects or critical hazards.
	Fragmentation Buffer	
	SureSelect	No known significant effects or critical hazards.
Ingestion	Fragmentation Enzyme	
	: <input checked="" type="checkbox"/> SureSelect	No known significant effects or critical hazards.
	Fragmentation Buffer	
Skin contact	SureSelect	No known significant effects or critical hazards.
	Fragmentation Enzyme	
	: <input checked="" type="checkbox"/> SureSelect	No known significant effects or critical hazards.
Eye contact	Fragmentation Buffer	
	SureSelect	No known significant effects or critical hazards.
	Fragmentation Enzyme	

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	: <input checked="" type="checkbox"/> SureSelect	No specific data.
	Fragmentation Buffer	
	SureSelect	No specific data.
Ingestion	Fragmentation Enzyme	
	: <input checked="" type="checkbox"/> SureSelect	No specific data.
	Fragmentation Buffer	
Skin contact	SureSelect	No specific data.
	Fragmentation Enzyme	
	: <input checked="" type="checkbox"/> SureSelect	No specific data.
Eye contact	Fragmentation Buffer	
	SureSelect	No specific data.
	Fragmentation Enzyme	

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

Conclusion/Summary : Not available.


General	: <input checked="" type="checkbox"/> SureSelect	No known significant effects or critical hazards.
	Fragmentation Buffer	
	SureSelect	No known significant effects or critical hazards.
Carcinogenicity	Fragmentation Enzyme	
	: <input checked="" type="checkbox"/> SureSelect	No known significant effects or critical hazards.
	Fragmentation Buffer	
Mutagenicity	SureSelect	No known significant effects or critical hazards.
	Fragmentation Enzyme	
	: <input checked="" type="checkbox"/> SureSelect	No known significant effects or critical hazards.
	Fragmentation Buffer	
	SureSelect	No known significant effects or critical hazards.
	Fragmentation Enzyme	

SECTION 11: Toxicological information

Reproductive toxicity :  SureSelect
Fragmentation Buffer
SureSelect
Fragmentation Enzyme


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
 SureSelect Fragmentation Buffer Caesium chloride	Acute EC50 135000 µg/l Fresh water	Crustaceans - Calanoid copepod - <i>Eudiaptomus padanus</i> ssp. <i>padanus</i> - Adult Daphnia - Water flea - <i>Daphnia hyalina</i> - Adult	48 hours
	Acute LC50 7400 µg/l Fresh water		48 hours
SureSelect Fragmentation Enzyme Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Trout - <i>Oncorhynchus mykiss</i>	96 hours


Conclusion/Summary : Not available.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
 SureSelect Fragmentation Enzyme Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
 SureSelect Fragmentation Enzyme Glycerol	-1.76	-	Low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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. 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.
- 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.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No.	No.	No.

Additional information

- 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 IMO instruments** : Not available.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****UK (GB)/REACH****Annex XIV - List of substances subject to authorisation****Annex XIV**

None of the components are listed.

Substances of very high concern

None of the components are listed.

Ozone depleting substances

SECTION 15: Regulatory information

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

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

No listed substance

Label : ☒ SureSelect Fragmentation Not applicable.
Buffer
SureSelect Fragmentation Not applicable.
Enzyme

Seveso Directive

☒ This product is not controlled under the Seveso Directive.

EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

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

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

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

United States : All components are active or exempted.

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]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration

SECTION 16: Other information

RRN = REACH Registration Number

vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

Classification	Justification
Not classified.	

Full text of abbreviated H statements

5X SureSelect Fragmentation Buffer	
H361f	Suspected of damaging fertility.
H411	Toxic to aquatic life with long lasting effects.

Full text of classifications

5X SureSelect Fragmentation Buffer	
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Repr. 2	REPRODUCTIVE TOXICITY - Category 2

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Notice to reader

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