SAFETY DATA SHEET

Agilent Technologies

StrataPrep Plasmid Miniprep Kit, Part Number 400763

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

1.1 Product identifier

Product name : StrataPrep Plasmid Miniprep Kit, Part Number 400763

Part no. (chemical kit) : 400763

Part no. :

Solution 1	400763-13
Solution 2	400763-14
Solution 3	400763-15
Wash Buffer	400763-16
Nuclease Removal Buffer	400763-17

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

Material uses : Analytical reagent.

Solution 1	5 x 6 ml
Solution 2	5 x 6 ml
Solution 3	9 x 5 ml
Wash Buffer	25 x 5 ml
Nuclease Removal Buffer	5 x 40 ml

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 :

Solution 1	Mixture
Solution 2	Mixture
Solution 3	Mixture
Wash Buffer	Mixture
Nuclease Removal Buffer	Mixture

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

Solution 2

H314	SKIN CORROSION/IRRITATION	Category 1

Solution 3

H302	ACUTE TOXICITY (oral)	Category 4
H332	ACUTE TOXICITY (inhalation)	Category 4
H315	SKIN CORROSION/IRRITATION	Category 2
H319	SERIOUS EYE DAMAGE/EYE IRRITATION	Category 2
H412	LONG-TERM (CHRONIC) AQUATIC HAZARD	Category 3

Nuclease Removal Buffer

SECTION 2: Hazards identification

H225	FLAMMABLE LIQUIDS	Category 2
H319	SERIOUS EYE DAMAGE/EYE IRRITATION	Category 2
H336	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects)	Category 3

Ingredients of unknown toxicity :

Solution 2	Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 1 - 10%
Solution 3	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%
Wash Buffer	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 1 - 10%
Nuclease Removal 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%

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

Hazard pictograms :

Solution 2

Solution 3

Nuclease Removal Buffer

Signal word :

Solution 1	No signal word.
Solution 2	Danger
Solution 3	Warning
Wash Buffer	No signal word.
Nuclease Removal Buffer	Danger

Hazard statements :

Solution 1	No known significant effects or critical hazards.
Solution 2	H314 - Causes severe skin burns and eye damage.
Solution 3	H302 + H332 - Harmful if swallowed or if inhaled. H315 - Causes skin irritation. H319 - Causes serious eye irritation. H412 - Harmful to aquatic life with long lasting effects.
Wash Buffer	No known significant effects or critical hazards.
Nuclease Removal Buffer	H225 - Highly flammable liquid and vapour. H319 - Causes serious eye irritation. H336 - May cause drowsiness or dizziness.

Precautionary statements

SECTION 2: Hazards identification

Prevention	: Solution 1	Not applicable.
	Solution 2	P280 - Wear protective gloves, protective clothing and eye or face protection.
	Solution 3	P280 - Wear protective gloves. Wear eye or face protection. P273 - Avoid release to the environment. P261 - Avoid breathing vapour. P270 - Do not eat, drink or smoke when using this product.
	Wash Buffer	Not applicable.
	Nuclease Removal Buffer	P280 - Wear eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 - Avoid breathing vapour.
Response	: Solution 1	Not applicable.
	Solution 2	P304 + P310 - IF INHALED: Immediately call a POISON CENTER or doctor. P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. P303 + P361 + P353, P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor.
	Solution 3	P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
	Wash Buffer	Not applicable.
	Nuclease Removal Buffer	P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
Storage	: Solution 1	Not applicable.
	Solution 2	Not applicable.
	Solution 3	Not applicable.
	Wash Buffer	Not applicable.
	Nuclease Removal Buffer	P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
Disposal	: Solution 1	Not applicable.
	Solution 2	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	Solution 3	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	Wash Buffer	Not applicable.
	Nuclease Removal Buffer	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazardous ingredients	: Solution 2	- sodium hydroxide
	Solution 3	- salts of thiocyanic acid
	Wash Buffer	Not applicable.
	Nuclease Removal Buffer	- propan-2-ol
Supplemental label elements	: Solution 1	Not applicable.
	Solution 2	Not applicable.
	Solution 3	Not applicable.
	Wash Buffer	Safety data sheet available on request.
	Nuclease Removal Buffer	Not applicable.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: Solution 1	Not applicable.
	Solution 2	Not applicable.
	Solution 3	Not applicable.
	Wash Buffer	Not applicable.
	Nuclease Removal Buffer	Not applicable.

Special packaging requirements

Tactile warning of danger	: Solution 1	Not applicable.
	Solution 2	Not applicable.
	Solution 3	Not applicable.
	Wash Buffer	Not applicable.
	Nuclease Removal Buffer	Not applicable.

SECTION 2: Hazards identification

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII :

Solution 1	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Solution 2	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Solution 3	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Wash Buffer	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Nuclease Removal Buffer	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification :

Solution 1	None known.
Solution 2	Causes digestive tract burns.
Solution 3	Causes digestive tract burns.
Wash Buffer	None known.
Nuclease Removal Buffer	Causes digestive tract burns.

SECTION 3: Composition/information on ingredients

3.1 Substances

:

Solution 1	Mixture
Solution 2	Mixture
Solution 3	Mixture
Wash Buffer	Mixture
Nuclease Removal Buffer	Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
Solution 2				
Sodium dodecyl sulphate	EC: 205-788-1 CAS: 151-21-3	≤3	Flam. Sol. 2, H228 Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 3, H412	[1]
Sodium hydroxide	EC: 215-185-5 CAS: 1310-73-2 Index: 011-002-00-6	≤1	Skin Corr. 1A, H314	[1] [2]
Solution 3				
Guanidinium thiocyanate	EC: 209-812-1 CAS: 593-84-0 Index: 615-004-00-3	≥25 - ≤50	Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Aquatic Chronic 3, H412 EUH032	[1]
acetic acid	EC: 200-580-7 CAS: 64-19-7 Index: 607-002-00-6	≥10 - <25	Flam. Liq. 3, H226 Skin Corr. 1A, H314	[1] [2]
Wash Buffer				
Sodium chloride	EC: 231-598-3 CAS: 7647-14-5	≤3	Eye Irrit. 2, H319	[1]
Nuclease Removal Buffer				
Propan-2-ol	EC: 200-661-7 CAS: 67-63-0 Index: 603-117-00-0	≥50 - ≤75	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	[1] [2]
Guanidinium thiocyanate	EC: 209-812-1	≥10 - <25	Acute Tox. 4, H302	[1]

SECTION 3: Composition/information on ingredients

acetic acid	CAS: 593-84-0 Index: 615-004-00-3 EC: 200-580-7 CAS: 64-19-7 Index: 607-002-00-6	<10	Acute Tox. 4, H312 Acute Tox. 4, H332 Aquatic Chronic 3, H412 EUH032 Flam. Liq. 3, H226 Skin Corr. 1A, H314 **See Section 16 for the full text of the H statements declared above.**	[1] [2]

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

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

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact :

Solution 1: 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.

Solution 2: Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.

Solution 3: 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.

Wash 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.

Nuclease Removal 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.

Inhalation :

Solution 1: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Solution 2: Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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. 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.

Solution 3: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are

SECTION 4: First aid measures

			still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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 necessary, call a poison center or physician. 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.
		Wash Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		Nuclease Removal Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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 necessary, call a poison center or physician. 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.
Skin contact	:	Solution 1	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Solution 2	Get medical attention immediately. Call a poison center or physician. Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		Solution 3	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.
		Wash Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Nuclease Removal Buffer	Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	:	Solution 1	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.
		Solution 2	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink.

SECTION 4: First aid measures

		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. Chemical burns must be treated promptly by a physician. 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.
	Solution 3	Wash out mouth with water. Remove dentures if any. 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 necessary, call a poison center or physician. 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.
	Wash 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.
	Nuclease Removal Buffer	Wash out mouth with water. Remove dentures if any. 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 necessary, call a poison center or physician. 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.
Protection of first-aiders :	Solution 1	No action shall be taken involving any personal risk or without suitable training.
	Solution 2	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
	Solution 3	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	Wash Buffer	No action shall be taken involving any personal risk or without suitable training.
	Nuclease Removal Buffer	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

SECTION 4: First aid measures

Potential acute health effects

Eye contact :

Solution 1	No known significant effects or critical hazards.
Solution 2	Causes serious eye damage.
Solution 3	Causes serious eye irritation.
Wash Buffer	No known significant effects or critical hazards.
Nuclease Removal Buffer	Causes serious eye irritation.

Inhalation :

Solution 1	No known significant effects or critical hazards.
Solution 2	No known significant effects or critical hazards.
Solution 3	Harmful if inhaled.
Wash Buffer	No known significant effects or critical hazards.
Nuclease Removal Buffer	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact :

Solution 1	No known significant effects or critical hazards.
Solution 2	Causes severe burns. Defatting to the skin.
Solution 3	Causes skin irritation.
Wash Buffer	No known significant effects or critical hazards.
Nuclease Removal Buffer	Defatting to the skin. May cause skin dryness and irritation.

Ingestion :

Solution 1	No known significant effects or critical hazards.
Solution 2	Corrosive to the digestive tract. Causes burns.
Solution 3	Harmful if swallowed. Corrosive to the digestive tract. Causes burns.
Wash Buffer	No known significant effects or critical hazards.
Nuclease Removal Buffer	Corrosive to the digestive tract. Causes burns. Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Eye contact :

Solution 1	No specific data.
Solution 2	Adverse symptoms may include the following: pain watering redness
Solution 3	Adverse symptoms may include the following: pain or irritation watering redness
Wash Buffer	No specific data.
Nuclease Removal Buffer	Adverse symptoms may include the following: pain or irritation watering redness

Inhalation :

Solution 1	No specific data.
Solution 2	No specific data.
Solution 3	No specific data.
Wash Buffer	No specific data.
Nuclease Removal Buffer	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness

Skin contact :

Solution 1	No specific data.
Solution 2	Adverse symptoms may include the following: pain or irritation redness dryness cracking blistering may occur
Solution 3	Adverse symptoms may include the following: irritation redness
Wash Buffer	No specific data.
Nuclease Removal Buffer	Adverse symptoms may include the following: irritation

SECTION 4: First aid measures

			dryness cracking
Ingestion	:	Solution 1	No specific data.
		Solution 2	Adverse symptoms may include the following: stomach pains
		Solution 3	Adverse symptoms may include the following: stomach pains
		Wash Buffer	No specific data.
		Nuclease Removal Buffer	Adverse symptoms may include the following: stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	:	Solution 1	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Solution 2	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Solution 3	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.
		Wash Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Nuclease Removal Buffer	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatments	:	Solution 1	No specific treatment.
		Solution 2	No specific treatment.
		Solution 3	No specific treatment.
		Wash Buffer	No specific treatment.
		Nuclease Removal Buffer	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Solution 1	Use an extinguishing agent suitable for the surrounding fire.
		Solution 2	Use an extinguishing agent suitable for the surrounding fire.
		Solution 3	Use an extinguishing agent suitable for the surrounding fire.
		Wash Buffer	Use an extinguishing agent suitable for the surrounding fire.
		Nuclease Removal Buffer	Use dry chemical, CO_2, water spray (fog) or foam.
Unsuitable extinguishing media	:	Solution 1	None known.
		Solution 2	None known.
		Solution 3	None known.
		Wash Buffer	None known.
		Nuclease Removal Buffer	Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	:	Solution 1	In a fire or if heated, a pressure increase will occur and the container may burst.
		Solution 2	In a fire or if heated, a pressure increase will occur and the container may burst.
		Solution 3	In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
		Wash Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
		Nuclease Removal Buffer	Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

SECTION 5: Firefighting measures

Hazardous combustion products :

Solution 1	No specific data.
Solution 2	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides metal oxide/oxides
Solution 3	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides metal oxide/oxides
Wash Buffer	Decomposition products may include the following materials: halogenated compounds metal oxide/oxides
Nuclease Removal Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides metal oxide/oxides

5.3 Advice for firefighters

Special precautions for fire-fighters :

Solution 1	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.
Solution 2	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.
Solution 3	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.
Wash 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.
Nuclease Removal 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters :

Solution 1	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Solution 2	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Solution 3	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Wash Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for

SECTION 5: Firefighting measures

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

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel :	Solution 1	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.
	Solution 2	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. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	Solution 3	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.
	Wash 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.
	Nuclease Removal 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders :	Solution 1	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".
	Solution 2	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".
	Solution 3	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".
	Wash 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".
	Nuclease Removal Buffer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and

SECTION 6: Accidental release measures

unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions :

Solution 1	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).
Solution 2	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).
Solution 3	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). Water polluting material. May be harmful to the environment if released in large quantities.
Wash 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).
Nuclease Removal 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).

6.3 Methods and material for containment and cleaning up

Methods for cleaning up :

Solution 1	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.
Solution 2	Stop leak if without risk. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Move containers from spill area. Dispose of via a licensed waste disposal contractor.
Solution 3	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.
Wash 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.
Nuclease Removal Buffer	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures	:	Solution 1	Put on appropriate personal protective equipment (see Section 8).
		Solution 2	Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container.
		Solution 3	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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.
		Wash Buffer	Put on appropriate personal protective equipment (see Section 8).
		Nuclease Removal 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. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	:	Solution 1	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.
		Solution 2	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.
		Solution 3	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.
		Wash 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.
		Nuclease Removal Buffer	Eating, drinking and smoking should be prohibited in areas

SECTION 7: Handling and storage

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	:	Solution 1	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.
		Solution 2	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. Store locked up. Separate from acids. 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.
		Solution 3	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.
		Wash 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.
		Nuclease Removal Buffer	Store in accordance with local regulations. Store in a segregated and approved area. 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. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. 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.

Seveso Directive - Reporting thresholds

Danger criteria

SECTION 7: Handling and storage

Category	Notification and MAPP threshold	Safety report threshold
Nuclease Removal Buffer P5c	5000 tonne	50000 tonne

7.3 Specific end use(s)

Recommendations :

Solution 1	Industrial applications, Professional applications.
Solution 2	Industrial applications, Professional applications.
Solution 3	Industrial applications, Professional applications.
Wash Buffer	Industrial applications, Professional applications.
Nuclease Removal Buffer	Industrial applications, Professional applications.

Industrial sector specific solutions :

Solution 1	Not available.
Solution 2	Not available.
Solution 3	Not available.
Wash Buffer	Not available.
Nuclease Removal Buffer	Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Solution 2	
Sodium hydroxide	**EH40/2005 WELs (United Kingdom (UK), 1/2020).** STEL: 2 mg/m³ 15 minutes.
Solution 3	
acetic acid	**EH40/2005 WELs (United Kingdom (UK), 1/2020).** STEL: 50 mg/m³ 15 minutes. STEL: 20 ppm 15 minutes. TWA: 25 mg/m³ 8 hours. TWA: 10 ppm 8 hours.
Nuclease Removal Buffer	
Propan-2-ol	**EH40/2005 WELs (United Kingdom (UK), 1/2020).** STEL: 1250 mg/m³ 15 minutes. STEL: 500 ppm 15 minutes. TWA: 999 mg/m³ 8 hours. TWA: 400 ppm 8 hours.
acetic acid	**EH40/2005 WELs (United Kingdom (UK), 1/2020).** STEL: 50 mg/m³ 15 minutes. STEL: 20 ppm 15 minutes. TWA: 25 mg/m³ 8 hours. TWA: 10 ppm 8 hours.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

SECTION 8: Exposure controls/personal protection

Product/ingredient name	Type	Exposure	Value	Population	Effects
Solution 2					
Sodium dodecyl sulphate	DNEL	Long term Oral	24 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	85 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	285 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	2440 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	4060 mg/kg bw/day	Workers	Systemic
Sodium hydroxide	DNEL	Long term Inhalation	1 mg/m³	General population	Local
	DNEL	Long term Inhalation	1 mg/m³	Workers	Local
Solution 3					
acetic acid	DNEL	Short term Inhalation	25 mg/m³	General population	Local
	DNEL	Long term Inhalation	25 mg/m³	General population	Local
	DNEL	Short term Inhalation	25 mg/m³	Workers	Local
	DNEL	Long term Inhalation	25 mg/m³	Workers	Local
Wash Buffer					
Sodium chloride	DNEL	Short term Oral	126.65 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	126.65 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	126.65 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	126.65 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	295.52 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	295.52 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	443.28 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	443.28 mg/m³	General population	Systemic
	DNEL	Short term Inhalation	2068.62 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	2068.62 mg/m³	Workers	Systemic
Nuclease Removal Buffer					
Propan-2-ol	DNEL	Long term Oral	26 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	89 mg/m³	General population	Systemic
	DNEL	Long term Dermal	319 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	500 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	888 mg/kg bw/day	Workers	Systemic
acetic acid	DNEL	Short term Inhalation	25 mg/m³	General population	Local
	DNEL	Long term	25 mg/m³	General	Local

SECTION 8: Exposure controls/personal protection

		Inhalation		population	
	DNEL	Short term Inhalation	25 mg/m³	Workers	Local
	DNEL	Long term Inhalation	25 mg/m³	Workers	Local

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

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. 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

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	:	Solution 1	Liquid.
		Solution 2	Liquid.
		Solution 3	Liquid.
		Wash Buffer	Liquid.
		Nuclease Removal Buffer	Liquid.
Colour	:	Solution 1	Not available.
		Solution 2	Not available.
		Solution 3	Not available.
		Wash Buffer	Not available.
		Nuclease Removal Buffer	Not available.
Odour	:	Solution 1	Not available.
		Solution 2	Not available.
		Solution 3	Not available.
		Wash Buffer	Not available.
		Nuclease Removal Buffer	Not available.
Odour threshold	:	Solution 1	Not available.
		Solution 2	Not available.
		Solution 3	Not available.
		Wash Buffer	Not available.
		Nuclease Removal Buffer	Not available.
Melting point/freezing point	:	Solution 1	0°C
		Solution 2	0°C
		Solution 3	Not available.
		Wash Buffer	0°C
		Nuclease Removal Buffer	Not available.
Initial boiling point and boiling range	:	Solution 1	100°C (212°F)
		Solution 2	100°C (212°F)
		Solution 3	Not available.
		Wash Buffer	100°C (212°F)
		Nuclease Removal Buffer	Not available.
Flammability (solid, gas)	:	Solution 1	Not applicable.
		Solution 2	Not applicable.
		Solution 3	Not applicable.
		Wash Buffer	Not applicable.
		Nuclease Removal Buffer	Not applicable.
Upper/lower flammability or explosive limits	:	Solution 1	Not available.
		Solution 2	Not available.
		Solution 3	Not available.
		Wash Buffer	Not available.
		Nuclease Removal Buffer	Not available.
Flash point	:	Solution 1	Not available.
		Solution 2	Not available.
		Solution 3	Not available.
		Wash Buffer	Not available.
		Nuclease Removal Buffer	Closed cup: 12 to 23°C (53.6 to 73.4°F)

Ingredient name	Closed cup °C	Closed cup °F	Closed cup Method	Open cup °C	Open cup °F	Open cup Method
Solution 1						
Edetic acid	>100	>212	DIN 51758			
Solution 3						
acetic acid	39	102.2				

SECTION 9: Physical and chemical properties

Wash Buffer						
Edetic acid	>100	>212	DIN 51758			

Auto-ignition temperature :

Solution 1	Not available.
Solution 2	Not available.
Solution 3	Not available.
Wash Buffer	Not available.
Nuclease Removal Buffer	Not available.

Ingredient name	°C	°F	Method
Solution 1			
Edetic acid	>400	>752	VDI 2263
Solution 2			
Sodium dodecyl sulphate	310.5	590.9	VDI 2263
Solution 3			
potassium acetate	>410	>770	EU A.16
acetic acid	463	865.4	
Wash Buffer			
Edetic acid	>400	>752	VDI 2263
Nuclease Removal Buffer			
potassium acetate	>410	>770	EU A.16
Propan-2-ol	456	852.8	

Decomposition temperature :

Solution 1	Not available.
Solution 2	Not available.
Solution 3	Not available.
Wash Buffer	Not available.
Nuclease Removal Buffer	Not available.

pH :

Solution 1	7.5
Solution 2	>12
Solution 3	4.4
Wash Buffer	7.5
Nuclease Removal Buffer	4.4

Viscosity :

Solution 1	Not available.
Solution 2	Not available.
Solution 3	Not available.
Wash Buffer	Not available.
Nuclease Removal Buffer	Not available.

Solubility(ies) :

Solution 1	Easily soluble in the following materials: cold water and hot water.
Solution 2	Easily soluble in the following materials: cold water and hot water.
Solution 3	Soluble in the following materials: cold water and hot water.
Wash Buffer	Easily soluble in the following materials: cold water and hot water.
Nuclease Removal Buffer	Easily soluble in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water :

Solution 1	Not applicable.
Solution 2	Not applicable.
Solution 3	Not applicable.
Wash Buffer	Not applicable.
Nuclease Removal Buffer	Not applicable.

SECTION 9: Physical and chemical properties

Vapour pressure :

Solution 1	Not available.
Solution 2	Not available.
Solution 3	Not available.
Wash Buffer	Not available.
Nuclease Removal Buffer	Not available.

Ingredient name	Vapour Pressure at 20˚C			Vapour pressure at 50˚C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Solution 1						
Water	23.8	3.2				
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0	0		0.000007501	0.000001	
Solution 2						
Water	23.8	3.2				
Sodium dodecyl sulphate	≤0.0013501	≤0.00018				
Solution 3						
Water	23.8	3.2				
acetic acid	15.59	2.1				
Wash Buffer						
Water	23.8	3.2				
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0	0		0.000007501	0.000001	
Nuclease Removal Buffer						
Propan-2-ol	33	4.4		177	23.6	
Water	23.8	3.2				

Evaporation rate :

Solution 1	Not available.
Solution 2	Not available.
Solution 3	Not available.
Wash Buffer	Not available.
Nuclease Removal Buffer	Not available.

Relative density :

Solution 1	Not available.
Solution 2	Not available.
Solution 3	Not available.
Wash Buffer	Not available.
Nuclease Removal Buffer	Not available.

Vapour density :

Solution 1	Not available.
Solution 2	Not available.
Solution 3	Not available.
Wash Buffer	Not available.
Nuclease Removal Buffer	Not available.

Oxidising properties :

Solution 1	Not available.
Solution 2	Not available.
Solution 3	Not available.
Wash Buffer	Not available.
Nuclease Removal Buffer	Not available.

Particle characteristics

SECTION 9: Physical and chemical properties

Median particle size	:	Solution 1	Not applicable.
		Solution 2	Not applicable.
		Solution 3	Not applicable.
		Wash Buffer	Not applicable.
		Nuclease Removal Buffer	Not applicable.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	:	Solution 1	No specific test data related to reactivity available for this product or its ingredients.
		Solution 2	No specific test data related to reactivity available for this product or its ingredients.
		Solution 3	No specific test data related to reactivity available for this product or its ingredients.
		Wash Buffer	No specific test data related to reactivity available for this product or its ingredients.
		Nuclease Removal Buffer	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	:	Solution 1	The product is stable.
		Solution 2	The product is stable.
		Solution 3	The product is stable.
		Wash Buffer	The product is stable.
		Nuclease Removal Buffer	The product is stable.
10.3 Possibility of hazardous reactions	:	Solution 1	Under normal conditions of storage and use, hazardous reactions will not occur.
		Solution 2	Under normal conditions of storage and use, hazardous reactions will not occur.
		Solution 3	Under normal conditions of storage and use, hazardous reactions will not occur.
		Wash Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
		Nuclease Removal Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	:	Solution 1	No specific data.
		Solution 2	No specific data.
		Solution 3	No specific data.
		Wash Buffer	No specific data.
		Nuclease Removal Buffer	Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
10.5 Incompatible materials	:	Solution 1	May react or be incompatible with oxidising materials.
		Solution 2	Reactive or incompatible with the following materials: acids
		Solution 3	May react or be incompatible with oxidising materials.
		Wash Buffer	May react or be incompatible with oxidising materials.
		Nuclease Removal Buffer	Reactive or incompatible with the following materials: oxidising materials

SECTION 10: Stability and reactivity

10.6 Hazardous decomposition products :

Solution 1	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Solution 2	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Solution 3	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Wash Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Nuclease Removal Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Solution 2				
Sodium dodecyl sulphate	LD50 Oral	Rat	1288 mg/kg	-
Solution 3				
acetic acid	LC50 Inhalation Vapour	Rat	11000 mg/m³	4 hours
	LD50 Dermal	Rabbit	1060 mg/kg	-
	LD50 Oral	Rat	3310 mg/kg	-
Wash Buffer				
Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-
Nuclease Removal Buffer				
Propan-2-ol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
acetic acid	LC50 Inhalation Vapour	Rat	11000 mg/m³	4 hours
	LD50 Dermal	Rabbit	1060 mg/kg	-
	LD50 Oral	Rat	3310 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)
Solution 2					
Solution 2	128800	N/A	N/A	N/A	150
Sodium dodecyl sulphate	1288	N/A	N/A	N/A	1.5
Solution 3					
Solution 3	1057.1	2325.6	N/A	N/A	3.2
Guanidinium thiocyanate	500	1100	N/A	N/A	1.5
acetic acid	3310	N/A	N/A	N/A	N/A
Wash Buffer					
Sodium chloride	3000	N/A	N/A	N/A	N/A
Nuclease Removal Buffer					
Nuclease Removal Buffer	2118.6	4661	N/A	N/A	6.4
Propan-2-ol	5000	12800	N/A	72.2	N/A
Guanidinium thiocyanate	500	1100	N/A	N/A	1.5
acetic acid	3310	N/A	N/A	N/A	N/A

Irritation/Corrosion

SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Solution 2					
Sodium dodecyl sulphate	Eyes - Mild irritant	Rabbit	-	250 ug	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Skin - Mild irritant	Guinea pig	-	24 hours 25 mg	-
	Skin - Moderate irritant	Mouse	-	24 hours 25 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 50 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 25 mg	-
Sodium hydroxide	Eyes - Severe irritant	Rabbit	-	24 hours 50 ug	-
	Eyes - Severe irritant	Rabbit	-	1 %	-
	Eyes - Severe irritant	Rabbit	-	0.5 minutes 1 mg	-
	Skin - Severe irritant	Rabbit	-	24 hours 500 mg	-
Solution 3					
acetic acid	Skin - Severe irritant	Rabbit	-	525 mg	-
Wash Buffer					
Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Nuclease Removal Buffer					
Propan-2-ol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
acetic acid	Skin - Severe irritant	Rabbit	-	525 mg	-

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)

Product/ingredient name	Category	Route of exposure	Target organs
Solution 2			
Sodium dodecyl sulphate	Category 3	-	Respiratory tract irritation
Nuclease Removal Buffer			
Propan-2-ol	Category 3	-	Narcotic effects

Specific target organ toxicity (repeated exposure)

SECTION 11: Toxicological information

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure	:	Solution 1	Not available.
		Solution 2	Routes of entry anticipated: Oral, Dermal, Inhalation.
		Solution 3	Routes of entry anticipated: Oral, Dermal, Inhalation.
		Wash Buffer	Not available.
		Nuclease Removal Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Inhalation	:	Solution 1	No known significant effects or critical hazards.
		Solution 2	No known significant effects or critical hazards.
		Solution 3	Harmful if inhaled.
		Wash Buffer	No known significant effects or critical hazards.
		Nuclease Removal Buffer	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
Ingestion	:	Solution 1	No known significant effects or critical hazards.
		Solution 2	Corrosive to the digestive tract. Causes burns.
		Solution 3	Harmful if swallowed. Corrosive to the digestive tract. Causes burns.
		Wash Buffer	No known significant effects or critical hazards.
		Nuclease Removal Buffer	Corrosive to the digestive tract. Causes burns. Can cause central nervous system (CNS) depression.
Skin contact	:	Solution 1	No known significant effects or critical hazards.
		Solution 2	Causes severe burns. Defatting to the skin.
		Solution 3	Causes skin irritation.
		Wash Buffer	No known significant effects or critical hazards.
		Nuclease Removal Buffer	Defatting to the skin. May cause skin dryness and irritation.
Eye contact	:	Solution 1	No known significant effects or critical hazards.
		Solution 2	Causes serious eye damage.
		Solution 3	Causes serious eye irritation.
		Wash Buffer	No known significant effects or critical hazards.
		Nuclease Removal Buffer	Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	:	Solution 1	No specific data.
		Solution 2	No specific data.
		Solution 3	No specific data.
		Wash Buffer	No specific data.
		Nuclease Removal Buffer	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Ingestion	:	Solution 1	No specific data.
		Solution 2	Adverse symptoms may include the following: stomach pains
		Solution 3	Adverse symptoms may include the following: stomach pains
		Wash Buffer	No specific data.
		Nuclease Removal Buffer	Adverse symptoms may include the following: stomach pains
Skin contact	:	Solution 1	No specific data.
		Solution 2	Adverse symptoms may include the following: pain or irritation redness dryness cracking blistering may occur
		Solution 3	Adverse symptoms may include the following: irritation

SECTION 11: Toxicological information

		redness
	Wash Buffer	No specific data.
	Nuclease Removal Buffer	Adverse symptoms may include the following: irritation dryness cracking
Eye contact :	Solution 1	No specific data.
	Solution 2	Adverse symptoms may include the following: pain watering redness
	Solution 3	Adverse symptoms may include the following: pain or irritation watering redness
	Wash Buffer	No specific data.
	Nuclease Removal Buffer	Adverse symptoms may include the following: pain or irritation watering redness

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

General :	Solution 1	No known significant effects or critical hazards.
	Solution 2	Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
	Solution 3	No known significant effects or critical hazards.
	Wash Buffer	No known significant effects or critical hazards.
	Nuclease Removal Buffer	Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
Carcinogenicity :	Solution 1	No known significant effects or critical hazards.
	Solution 2	No known significant effects or critical hazards.
	Solution 3	No known significant effects or critical hazards.
	Wash Buffer	No known significant effects or critical hazards.
	Nuclease Removal Buffer	No known significant effects or critical hazards.
Mutagenicity :	Solution 1	No known significant effects or critical hazards.
	Solution 2	No known significant effects or critical hazards.
	Solution 3	No known significant effects or critical hazards.
	Wash Buffer	No known significant effects or critical hazards.
	Nuclease Removal Buffer	No known significant effects or critical hazards.
Reproductive toxicity :	Solution 1	No known significant effects or critical hazards.
	Solution 2	No known significant effects or critical hazards.
	Solution 3	No known significant effects or critical hazards.
	Wash Buffer	No known significant effects or critical hazards.
	Nuclease Removal Buffer	No known significant effects or critical hazards.
Other information :	Solution 1	Not available.
	Solution 2	Not available.
	Solution 3	Not available.
	Wash Buffer	Not available.
	Nuclease Removal Buffer	Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Solution 2			
Sodium dodecyl sulphate	Acute EC50 1200 µg/l Marine water	Algae - Skeletonema costatum	96 hours
	Acute LC50 900 µg/l Marine water	Crustaceans - Artemia salina - Adult	48 hours
	Acute LC50 1400 µg/l Fresh water	Daphnia - Daphnia pulex - Neonate	48 hours
	Acute LC50 590 µg/l Fresh water	Fish - Cirrhinus mrigala - Larvae	96 hours
	Chronic NOEC 1.25 mg/l Marine water	Algae - Ulva fasciata - Zoea	96 hours
	Chronic NOEC 1 mg/l Fresh water	Crustaceans - Pseudosida ramosa - Neonate	21 days
	Chronic NOEC 3.2 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC >1357 µg/l Fresh water	Fish - Pimephales promelas	42 days
Sodium hydroxide	Acute LC50 125 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours
Solution 3			
acetic acid	Acute EC50 73400 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 65000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 32 mg/l Marine water	Crustaceans - Artemia salina	48 hours
	Acute LC50 75000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
Wash Buffer			
Sodium chloride	Acute EC50 4.74 g/L Fresh water	Algae - Chlamydomonas reinhardtii	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
	Chronic LC10 781 mg/l Fresh water	Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	3 weeks
	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days
	Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks
Nuclease Removal Buffer			
Propan-2-ol	Acute EC50 7550 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 1400000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - Rasbora heteromorpha	96 hours
acetic acid	Acute EC50 73400 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 65000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 32 mg/l Marine water	Crustaceans - Artemia salina	48 hours
	Acute LC50 75000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Solution 2				
Sodium dodecyl sulphate	OECD 301B Ready Biodegradability - CO2 Evolution Test	95 % - Readily - 28 days	20 mg/l	Activated sludge

SECTION 12: Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Solution 2			
Sodium dodecyl sulphate	-	-	Readily
Sodium hydroxide	-	-	Readily
Solution 3			
Guanidinium thiocyanate	-	-	Inherent
acetic acid	-	-	Readily
Nuclease Removal Buffer			
Propan-2-ol	-	-	Readily
Guanidinium thiocyanate	-	-	Inherent
acetic acid	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Solution 2			
Sodium dodecyl sulphate	-2.03	-	low
Solution 3			
acetic acid	-0.17	3.16	low
Nuclease Removal Buffer			
Propan-2-ol	0.05	-	low
acetic acid	-0.17	3.16	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 : The classification of the product may meet the criteria for a hazardous waste.

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.

SECTION 13: Disposal considerations

Special precautions : 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. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. 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	UN3316	UN3316	UN3316
14.2 UN proper shipping name	CHEMICAL KIT	CHEMICAL KIT	Chemical kit
14.3 Transport hazard class(es)	9 	9 	9 
14.4 Packing group	II	II	II
14.5 Environmental hazards	No.	No.	No.

Additional information

ADR/RID : **Hazard identification number** 90
Limited quantity See SP 251
Special provisions 251, 340, 671
Tunnel code (E)

IMDG : **Emergency schedules** F-A, _S-P_
Special provisions 251, 340

IATA : **Quantity limitation** Passenger and Cargo Aircraft: 10 kg. Packaging instructions: 960. Cargo Aircraft Only: 10 kg. Packaging instructions: 960. Limited Quantities - Passenger Aircraft: 1 kg. Packaging instructions: Y960.
Special provisions A44, A163

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

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

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

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

SECTION 15: Regulatory information

Label	:	Solution 1	Not applicable.
		Solution 2	Not applicable.
		Solution 3	Not applicable.
		Wash Buffer	Not applicable.
		Nuclease Removal Buffer	Not applicable.

Other EU regulations

Ozone depleting substances (1005/2009/EU)

Not listed.

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

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
Nuclease Removal Buffer P5c

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

Australia	:	Not determined.
Canada	:	All components are listed or exempted.
China	:	All components are listed or exempted.
Europe	:	All components are listed or exempted.
Japan	:	**Japan inventory (CSCL)**: Not determined. **Japan inventory (ISHL)**: All components are listed or exempted.
New Zealand	:	All components are listed or exempted.
Philippines	:	Not determined.
Republic of Korea	:	Not determined.
Taiwan	:	All components are listed or exempted.
Thailand	:	Not determined.
Turkey	:	Not determined.
United States	:	All components are active or exempted.
Viet Nam	:	Not determined.

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

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
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
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

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

Classification	Justification
Solution 2	
Skin Corr. 1, H314	On basis of test data
Solution 3	
Acute Tox. 4, H302	Calculation method
Acute Tox. 4, H332	Calculation method
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Aquatic Chronic 3, H412	Calculation method
Nuclease Removal Buffer	
Flam. Liq. 2, H225	On basis of test data
Eye Irrit. 2, H319	Calculation method
STOT SE 3, H336	Calculation method

Full text of abbreviated H statements

Solution 2	
H228	Flammable solid.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.
Solution 3	
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H412	Harmful to aquatic life with long lasting effects.
EUH032	Contact with acids liberates very toxic gas.
Wash Buffer	
H319	Causes serious eye irritation.
Nuclease Removal Buffer	
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.

SECTION 16: Other information

H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.
EUH032	Contact with acids liberates very toxic gas.

Full text of classifications [CLP/GHS]

Solution 2	
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Flam. Sol. 2	FLAMMABLE SOLIDS - Category 2
Skin Corr. 1	SKIN CORROSION/IRRITATION - Category 1
Skin Corr. 1A	SKIN CORROSION/IRRITATION - Category 1A
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3
Solution 3	
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Skin Corr. 1A	SKIN CORROSION/IRRITATION - Category 1A
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Wash Buffer	
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Nuclease Removal Buffer	
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Skin Corr. 1A	SKIN CORROSION/IRRITATION - Category 1A
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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