

SAFETY DATA SHEET

AdvanceBio N-glycan deglycosylation kit (96 samples), Part Number 5190-8006

Section 1. Identification

Product identifier	: AdvanceBio N-glycan deglycosylation kit (96 samples), Part Number 5190-8006	
Part no. (chemical kit)	: 5190-8006	
Part no.	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	Not available.
	5X Tris Reaction Buffer	Not available.
	5X Phosphate Reaction Buffer	Not available.
	Denaturation Solution	Not available.
	Detergent Solution	Not available.

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

Material uses	: Reagents and Standards for Analytical Chemistry Laboratory Use	
	Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	0.04 ml
	5X Tris Reaction Buffer	1 ml
	5X Phosphate Reaction Buffer	1 ml
	Denaturation Solution	0.2 ml
	Detergent Solution	0.2 ml

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

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

Section 2. Hazard(s) identification

Classification of the substance or mixture

Denaturation Solution

H318 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
H317 SKIN SENSITISATION - Category 1
H412 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3





Detergent Solution

H315 SKIN CORROSION/IRRITATION - Category 2
H319 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A
H401 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 2
H411 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2

5X Phosphate Reaction Buffer	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10%
Detergent Solution	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 10 - 30%

GHS label elements

Section 2. Hazard(s) identification

Hazard pictograms	: Denaturation Solution	 
	Detergent Solution	 
Signal word	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	No signal word. No signal word. No signal word. DANGER WARNING
Hazard statements	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. H318 - Causes serious eye damage. H317 - May cause an allergic skin reaction. H412 - Harmful to aquatic life with long lasting effects. H319 - Causes serious eye irritation. H315 - Causes skin irritation. H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements		
Prevention	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	Not applicable. Not applicable. Not applicable. P280 - Wear protective gloves. Wear eye or face protection. P273 - Avoid release to the environment. P261 - Avoid breathing vapour. P272 - Contaminated work clothing should not be allowed out of the workplace. P280 - Wear protective gloves. Wear eye or face protection. P273 - Avoid release to the environment. P264 - Wash hands thoroughly after handling.
Response	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	Not applicable. Not applicable. Not applicable. P302 + P352 + P363 - IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. P333 + P313 - If skin irritation or rash occurs: Get medical attention. P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician. P391 - Collect spillage. P302 + P352 + P362 + P363 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated

Section 2. Hazard(s) identification

		clothing. Wash contaminated clothing before reuse. P332 + P313 - If skin irritation occurs: Get medical attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
Storage	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Disposal	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	Not applicable. Not applicable. Not applicable. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements		
Additional warning phrases	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Other hazards which do not result in classification	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	None known. None known. None known. None known. None known.

Section 3. Composition and ingredient information

Substance/mixture	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	Mixture Mixture Mixture Mixture Mixture
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CAS number/other identifiers

Section 3. Composition and ingredient information

Ingredient name	% (w/w)	CAS number
Denaturation Solution 2-Mercaptoethanol	≤7.2	60-24-2
Detergent Solution Nonylphenol, ethoxylated	≥10 - <20	9016-45-9

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	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.
	5X Tris Reaction 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.
	5X Phosphate Reaction 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.
	Denaturation Solution	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.
	Detergent Solution	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	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	5X Tris Reaction Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	5X Phosphate Reaction Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Denaturation Solution	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.
	Detergent Solution	Remove victim to fresh air and keep at rest in a

Section 4. First aid measures

Skin contact

: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)

5X Tris Reaction Buffer

5X Phosphate Reaction Buffer

Denaturation Solution

Detergent Solution

position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Flush contaminated skin with plenty of water.

Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Flush contaminated skin with plenty of water.

Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Flush contaminated skin with plenty of water.

Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. 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. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

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.

Ingestion

: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)

5X Tris Reaction Buffer

5X Phosphate Reaction Buffer

Denaturation Solution

Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce

Section 4. First aid measures

Detergent Solution

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. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. Causes serious eye damage. Causes serious eye irritation.
Inhalation	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. May cause an allergic skin reaction. Causes skin irritation.
Ingestion	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Over-exposure signs/symptoms

Section 4. First aid measures

Eye contact	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	No specific data.
	5X Tris Reaction Buffer	No specific data.
	5X Phosphate Reaction Buffer	No specific data.
	Denaturation Solution	Adverse symptoms may include the following: pain watering redness
	Detergent Solution	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	No specific data.
	5X Tris Reaction Buffer	No specific data.
	5X Phosphate Reaction Buffer	No specific data.
	Denaturation Solution	No specific data.
	Detergent Solution	No specific data.
Skin contact	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	No specific data.
	5X Tris Reaction Buffer	No specific data.
	5X Phosphate Reaction Buffer	No specific data.
	Denaturation Solution	Adverse symptoms may include the following: pain or irritation redness blistering may occur
	Detergent Solution	Adverse symptoms may include the following: irritation redness
Ingestion	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	No specific data.
	5X Tris Reaction Buffer	No specific data.
	5X Phosphate Reaction Buffer	No specific data.
	Denaturation Solution	Adverse symptoms may include the following: stomach pains
	Detergent Solution	No specific data.

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

Notes to physician	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	5X Tris Reaction Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	5X Phosphate Reaction Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Denaturation Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Detergent Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Section 4. First aid measures

Specific treatments	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment.
Protection of first-aiders	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. 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. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	None known. None known. None known. None known. None known.
Specific hazards arising from the chemical	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	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. 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. 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. In a fire or if heated, a pressure increase will occur

Section 5. Firefighting measures

Hazardous thermal decomposition products

: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)
5X Tris Reaction Buffer
5X Phosphate Reaction Buffer

Denaturation Solution

Detergent Solution

and the container may burst. This material is toxic 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.

No specific data.

No specific data.

Decomposition products may include the following materials:

phosphorus oxides
metal oxide/oxides

Decomposition products may include the following materials:

carbon dioxide
carbon monoxide
sulfur oxides
metal oxide/oxides

Decomposition products may include the following materials:

carbon dioxide
carbon monoxide

Special protective actions for fire-fighters

: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)

5X Tris Reaction Buffer

5X Phosphate Reaction Buffer

Denaturation Solution

Detergent Solution

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.

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Special protective equipment for fire-fighters

: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)

5X Tris Reaction Buffer

5X Phosphate Reaction Buffer

Denaturation Solution

Detergent Solution

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.

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Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	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.
	5X Tris Reaction Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	5X Phosphate Reaction Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	Denaturation Solution	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.
	Detergent Solution	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.
For emergency responders	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	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".
	5X Tris Reaction Buffer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	5X Phosphate Reaction Buffer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Denaturation Solution	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".
	Detergent Solution	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	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).
	5X Tris Reaction Buffer	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	5X Phosphate Reaction Buffer	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Denaturation Solution	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.
	Detergent Solution	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. Collect spillage.

Methods and material for containment and cleaning up

Methods for cleaning up	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	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.
	5X Tris Reaction Buffer	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	5X Phosphate Reaction Buffer	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	Denaturation Solution	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.
	Detergent Solution	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	Put on appropriate personal protective equipment (see Section 8).
5X Tris Reaction Buffer	Put on appropriate personal protective equipment (see Section 8).
5X Phosphate Reaction Buffer	Put on appropriate personal protective equipment (see Section 8).
Denaturation Solution	Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. 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. Empty containers retain product residue and can be hazardous. Do not reuse container.
Detergent Solution	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. 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.

Advice on general occupational hygiene

Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	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.
5X Tris Reaction Buffer	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
5X Phosphate Reaction Buffer	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Denaturation Solution	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.
Detergent Solution	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

Section 7. Handling and storage

additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)

Store between the following temperatures: 2 to 8°C (35.6 to 46.4°F). 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.

5X Tris Reaction Buffer

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

5X Phosphate Reaction Buffer

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Denaturation Solution

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. 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.

Detergent Solution

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

None.

- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. 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.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	Liquid. [Clear.]
	5X Tris Reaction Buffer	Liquid.
	5X Phosphate Reaction Buffer	Liquid.
	Denaturation Solution	Liquid. [Clear.]
	Detergent Solution	Liquid.

Section 9. Physical and chemical properties

Colour	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	Not available.
	5X Tris Reaction Buffer	Not available.
	5X Phosphate Reaction Buffer	Colourless.
	Denaturation Solution	Not available.
	Detergent Solution	Not available.
Odour	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	Not available.
	5X Tris Reaction Buffer	Not available.
	5X Phosphate Reaction Buffer	Not available.
	Denaturation Solution	Stench.
	Detergent Solution	Not available.
Odour threshold	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	Not available.
	5X Tris Reaction Buffer	Not available.
	5X Phosphate Reaction Buffer	Not available.
	Denaturation Solution	Not available.
	Detergent Solution	Not available.
pH	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	7.5
	5X Tris Reaction Buffer	Not available.
	5X Phosphate Reaction Buffer	7.5
	Denaturation Solution	Not available.
	Detergent Solution	Not available.
Melting point	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	0°C (32°F)
	5X Tris Reaction Buffer	0°C (32°F)
	5X Phosphate Reaction Buffer	0°C (32°F)
	Denaturation Solution	0°C (32°F)
	Detergent Solution	Not available.
Boiling point	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	100°C (212°F)
	5X Tris Reaction Buffer	100°C (212°F)
	5X Phosphate Reaction Buffer	100°C (212°F)
	Denaturation Solution	100°C (212°F)
	Detergent Solution	Not available.
Flash point	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	Not available.
	5X Tris Reaction Buffer	Not available.
	5X Phosphate Reaction Buffer	Not available.
	Denaturation Solution	Not available.
	Detergent Solution	Not available.
Evaporation rate	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	Not available.
	5X Tris Reaction Buffer	Not available.
	5X Phosphate Reaction Buffer	Not available.
	Denaturation Solution	Not available.
	Detergent Solution	Not available.

Section 9. Physical and chemical properties

Flammability (solid, gas)	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Lower and upper explosive (flammable) limits	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	Not available. Not available. Not available. Not available. Not available.
Vapour pressure	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	Not available. Not available. Not available. Not available. Not available.
Vapour density	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	Not available. Not available. Not available. Not available. Not available.
Relative density	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	Not available. Not available. Not available. Not available. Not available.
Solubility	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	Not available. Not available. Not available. Not available. Not available.
Auto-ignition temperature	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	Not available. Not available. Not available. Not available. Not available.

Section 9. Physical and chemical properties

Decomposition temperature	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	Not available.
	5X Tris Reaction Buffer	Not available.
	5X Phosphate Reaction Buffer	Not available.
	Denaturation Solution	Not available.
	Detergent Solution	Not available.
Viscosity	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	Not available.
	5X Tris Reaction Buffer	Not available.
	5X Phosphate Reaction Buffer	Not available.
	Denaturation Solution	Not available.
	Detergent Solution	Not available.

Section 10. Stability and reactivity

Reactivity	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	No specific test data related to reactivity available for this product or its ingredients.
	5X Tris Reaction Buffer	No specific test data related to reactivity available for this product or its ingredients.
	5X Phosphate Reaction Buffer	No specific test data related to reactivity available for this product or its ingredients.
	Denaturation Solution	No specific test data related to reactivity available for this product or its ingredients.
	Detergent Solution	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	The product is stable.
	5X Tris Reaction Buffer	The product is stable.
	5X Phosphate Reaction Buffer	The product is stable.
	Denaturation Solution	The product is stable.
	Detergent Solution	The product is stable.
Possibility of hazardous reactions	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	Under normal conditions of storage and use, hazardous reactions will not occur.
	5X Tris Reaction Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
	5X Phosphate Reaction Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
	Denaturation Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
	Detergent Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	No specific data.
	5X Tris Reaction Buffer	No specific data.
	5X Phosphate Reaction Buffer	No specific data.
	Denaturation Solution	No specific data.
	Detergent Solution	No specific data.

Section 10. Stability and reactivity

Incompatible materials	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
Hazardous decomposition products	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Denaturation Solution 2-Mercaptoethanol	LD50 Dermal LD50 Oral	Rabbit Rat	167.1 mg/kg 244 mg/kg	- -
Detergent Solution Nonylphenol, ethoxylated	LD50 Dermal LD50 Oral	Rabbit Rat	2000 mg/kg 1310 mg/kg	- -

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Denaturation Solution 2-Mercaptoethanol	Eyes - Severe irritant	Rabbit	-	2 milligrams	-
Detergent Solution Nonylphenol, ethoxylated	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
	Eyes - Severe irritant	Guinea pig	-	20 milligrams	-
	Eyes - Severe irritant	Mouse	-	20 milligrams	-

Sensitisation

Not available.

Conclusion/Summary

- Skin** : Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) - May cause sensitisation by skin contact.
- Respiratory** : Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) - May cause sensitisation by inhalation.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Section 11. Toxicological information

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Denaturation Solution 2-Mercaptoethanol	Category 3	Not applicable.	Respiratory tract irritation
Detergent Solution Nonylphenol, ethoxylated	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure :

Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	Not available.
5X Tris Reaction Buffer	Not available.
5X Phosphate Reaction Buffer	Not available.
Denaturation Solution	Routes of entry anticipated: Oral, Dermal, Inhalation.
Detergent Solution	Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact	Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	No known significant effects or critical hazards.
	5X Tris Reaction Buffer	No known significant effects or critical hazards.
	5X Phosphate Reaction Buffer	No known significant effects or critical hazards.
	Denaturation Solution	Causes serious eye damage.
	Detergent Solution	Causes serious eye irritation.
Inhalation	Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	No known significant effects or critical hazards.
	5X Tris Reaction Buffer	No known significant effects or critical hazards.
	5X Phosphate Reaction Buffer	No known significant effects or critical hazards.
	Denaturation Solution	No known significant effects or critical hazards.
	Detergent Solution	No known significant effects or critical hazards.
Skin contact	Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	No known significant effects or critical hazards.
	5X Tris Reaction Buffer	No known significant effects or critical hazards.
	5X Phosphate Reaction Buffer	No known significant effects or critical hazards.
	Denaturation Solution	May cause an allergic skin reaction.
	Detergent Solution	Causes skin irritation.
Ingestion	Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	No known significant effects or critical hazards.
	5X Tris Reaction Buffer	No known significant effects or critical hazards.
	5X Phosphate Reaction Buffer	No known significant effects or critical hazards.
	Denaturation Solution	No known significant effects or critical hazards.
	Detergent Solution	No known significant effects or critical hazards.

Section 11. Toxicological information

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	No specific data.
	5X Tris Reaction Buffer	No specific data.
	5X Phosphate Reaction Buffer	No specific data.
	Denaturation Solution	Adverse symptoms may include the following: pain watering redness
	Detergent Solution	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	No specific data.
	5X Tris Reaction Buffer	No specific data.
	5X Phosphate Reaction Buffer	No specific data.
	Denaturation Solution	No specific data.
	Detergent Solution	No specific data.
Skin contact	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	No specific data.
	5X Tris Reaction Buffer	No specific data.
	5X Phosphate Reaction Buffer	No specific data.
	Denaturation Solution	Adverse symptoms may include the following: pain or irritation redness blistering may occur
	Detergent Solution	Adverse symptoms may include the following: irritation redness
Ingestion	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free)	No specific data.
	5X Tris Reaction Buffer	No specific data.
	5X Phosphate Reaction Buffer	No specific data.
	Denaturation Solution	Adverse symptoms may include the following: stomach pains
	Detergent Solution	No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Section 11. Toxicological information

General	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels. No known significant effects or critical hazards.
Carcinogenicity	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Teratogenicity	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Developmental effects	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Fertility effects	: Peptide -N-Glycosidase F (PNGaseF) (EDTA - Free) 5X Tris Reaction Buffer 5X Phosphate Reaction Buffer Denaturation Solution Detergent Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Denaturation Solution	
Oral	3300.8 mg/kg
Dermal	2055.7 mg/kg
Inhalation (vapours)	28.52 mg/l
Detergent Solution	
Oral	8717.7 mg/kg
Dermal	13309.5 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
<input checked="" type="checkbox"/> Detergent Solution Nonylphenol, ethoxylated	Acute EC50 12 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute LC50 1.23 mg/l Marine water	Crustaceans - Americamysis bahia	48 hours
	Acute LC50 0.148 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 1300 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic NOEC 8 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Chronic NOEC 35 µg/l Fresh water	Fish - Oryzias latipes - Fry	100 days

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<input checked="" type="checkbox"/> Denaturation Solution 2-Mercaptoethanol	OECD 310 Ready Biodegradability - CO2 in Sealed Vessels (Headspace Test)	69 % - Inherent - 60 days	20 mg/l	-

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
<input checked="" type="checkbox"/> Denaturation Solution 2-Mercaptoethanol	-0.056	-	low

Mobility in soil

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

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

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

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

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of Marpol and the IBC Code : Not available.

Section 15. Regulatory information

Standard Uniform Schedule of Medicine and Poisons



Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia	: Not determined.
Canada	: Not determined.
China	: Not determined.
Europe	: <input checked="" type="checkbox"/> Not determined.
Japan	: <input checked="" type="checkbox"/> Japan inventory (ENCS): Not determined. Japan inventory (ISHL): Not determined.
Malaysia	: Not determined.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
Thailand	: <input checked="" type="checkbox"/> Not determined.
Turkey	: <input checked="" type="checkbox"/> Not determined.
United States	: Not determined.
Viet Nam	: <input checked="" type="checkbox"/> Not determined.

Section 16. Any other relevant information

History

Date of issue/Date of revision : 27/04/2018
Date of previous issue : 20/11/2014
Version : 2

Key to abbreviations

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

Procedure used to derive the classification

Classification	Justification
<input checked="" type="checkbox"/> Denaturation Solution Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412	Calculation method Calculation method Calculation method
Detergent Solution Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Aquatic Acute 2, H401 Aquatic Chronic 2, H411	Calculation method Calculation method Calculation method Calculation method

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

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