

SAFETY DATA SHEET



DDD Labeling Kit

Section 1. Identification

Product identifier	:	DDD Labeling Kit	
Part No. (Chemical Kit)	:	930435, 930436	
Part No.	:	Nuclease Free Water	930435-52
		Random Primers	930435-51
		5X gDNA Reaction Buffer	930435-53
		10X dNTP Mix	930435-54
		Exo(-) Klenow	930435-55
		Cyanine-3-dUTP	5190-3389
		Cyanine-5-dUTP	5190-3390

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

Analytical reagent.

Nuclease Free Water	1.5 ml
Random Primers	1.21 ml
5X gDNA Reaction Buffer	1.127 ml
10X dNTP Mix	1.127 ml
Exo(-) Klenow	0.2255 ml
Cyanine-3-dUTP	10 x 78 µl
Cyanine-5-dUTP	10 x 78 µl

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

Note * : **Note**: A kit containing: PN 5190-3389 or PN 5190-3390

Section 2. Hazard(s) identification

Classification of the substance or mixture

Not classified.

Nuclease Free Water	Not applicable.
Random Primers	Not applicable.
5X gDNA Reaction Buffer	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 3.9%
10X dNTP Mix	Not applicable.
Exo(-) Klenow	Not applicable.
Cyanine-3-dUTP	Not applicable.
Cyanine-5-dUTP	Not applicable.
Nuclease Free Water	Not applicable.
Random Primers	Not applicable.
5X gDNA Reaction Buffer	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 3.9%
10X dNTP Mix	Not applicable.
Exo(-) Klenow	Not applicable.
Cyanine-3-dUTP	Not applicable.
Cyanine-5-dUTP	Not applicable.

GHS label elements

Section 2. Hazard(s) identification

Signal word	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	No signal word. No signal word. No signal word. No signal word. No signal word. No signal word. No signal word.
Hazard statements	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	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. No known significant effects or critical hazards. No known significant effects or critical hazards.
<u>Precautionary statements</u>		
Prevention	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Response	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Storage	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Disposal	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Supplemental label elements	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Other hazards which do not result in classification	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	None known. None known. None known. None known. None known. None known. None known.

Section 3. Composition and ingredient information

Substance/mixture	:	Nuclease Free Water	Substance
		Random Primers	Mixture
		5X gDNA Reaction Buffer	Mixture
		10X dNTP Mix	Mixture
		Exo(-) Klenow	Mixture
		Cyanine-3-dUTP	Mixture
		Cyanine-5-dUTP	Mixture

CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
Nuclease Free Water		
Water	100	7732-18-5
Exo(-) Klenow		
Glycerol	≥30 - ≤60	56-81-5

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	:	Nuclease Free Water	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.
		Random Primers	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 gDNA 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.
		10X dNTP Mix	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.
		Exo(-) Klenow	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.
		Cyanine-3-dUTP	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.
		Cyanine-5-dUTP	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	:	Nuclease Free Water	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		Random Primers	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		5X gDNA Reaction Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be

Section 4. First aid measures

delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

10X dNTP Mix

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

Exo(-) Klenow

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

Cyanine-3-dUTP

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

Cyanine-5-dUTP

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

Skin contact

: Nuclease Free Water

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Random Primers

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

5X gDNA Reaction Buffer

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

10X dNTP Mix

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Exo(-) Klenow

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Cyanine-3-dUTP

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Cyanine-5-dUTP

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion

: Nuclease Free Water

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.

Random Primers

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.

5X gDNA Reaction Buffer

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

10X dNTP Mix

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.

Section 4. First aid measures

Exo(-) Klenow	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.
Cyanine-3-dUTP	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.
Cyanine-5-dUTP	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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	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. No known significant effects or critical hazards. No known significant effects or critical hazards.
Inhalation	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	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. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	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. No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	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. No known significant effects or critical hazards. No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
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Section 4. First aid measures

Inhalation	:	Nuclease Free Water	No specific data.
		Random Primers	No specific data.
		5X gDNA Reaction Buffer	No specific data.
		10X dNTP Mix	No specific data.
		Exo(-) Klenow	No specific data.
		Cyanine-3-dUTP	No specific data.
		Cyanine-5-dUTP	No specific data.
Skin contact	:	Nuclease Free Water	No specific data.
		Random Primers	No specific data.
		5X gDNA Reaction Buffer	No specific data.
		10X dNTP Mix	No specific data.
		Exo(-) Klenow	No specific data.
		Cyanine-3-dUTP	No specific data.
		Cyanine-5-dUTP	No specific data.
Ingestion	:	Nuclease Free Water	No specific data.
		Random Primers	No specific data.
		5X gDNA Reaction Buffer	No specific data.
		10X dNTP Mix	No specific data.
		Exo(-) Klenow	No specific data.
		Cyanine-3-dUTP	No specific data.
		Cyanine-5-dUTP	No specific data.

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

Notes to physician	:	Nuclease Free Water	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Random Primers	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		5X gDNA Reaction 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.
		10X dNTP Mix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Exo(-) Klenow	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Cyanine-3-dUTP	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Cyanine-5-dUTP	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	:	Nuclease Free Water	No specific treatment.
		Random Primers	No specific treatment.
		5X gDNA Reaction Buffer	No specific treatment.
		10X dNTP Mix	No specific treatment.
		Exo(-) Klenow	No specific treatment.
		Cyanine-3-dUTP	No specific treatment.
		Cyanine-5-dUTP	No specific treatment.
Protection of first-aiders	:	Nuclease Free Water	No action shall be taken involving any personal risk or without suitable training.
		Random Primers	No action shall be taken involving any personal risk or without suitable training.
		5X gDNA Reaction Buffer	No action shall be taken involving any personal risk or without suitable training.
		10X dNTP Mix	No action shall be taken involving any personal risk or without suitable training.
		Exo(-) Klenow	No action shall be taken involving any personal risk or without suitable training.

Section 4. First aid measures

Cyanine-3-dUTP	No action shall be taken involving any personal risk or without suitable training.
Cyanine-5-dUTP	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media

: Nuclease Free Water	Use an extinguishing agent suitable for the surrounding fire.
Random Primers	Use an extinguishing agent suitable for the surrounding fire.
5X gDNA Reaction Buffer	Use an extinguishing agent suitable for the surrounding fire.
10X dNTP Mix	Use an extinguishing agent suitable for the surrounding fire.
Exo(-) Klenow	Use an extinguishing agent suitable for the surrounding fire.
Cyanine-3-dUTP	Use an extinguishing agent suitable for the surrounding fire.
Cyanine-5-dUTP	Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media

: Nuclease Free Water	None known.
Random Primers	None known.
5X gDNA Reaction Buffer	None known.
10X dNTP Mix	None known.
Exo(-) Klenow	None known.
Cyanine-3-dUTP	None known.
Cyanine-5-dUTP	None known.

Specific hazards arising from the chemical

: Nuclease Free Water	In a fire or if heated, a pressure increase will occur and the container may burst.
Random Primers	In a fire or if heated, a pressure increase will occur and the container may burst.
5X gDNA Reaction Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
10X dNTP Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
Exo(-) Klenow	In a fire or if heated, a pressure increase will occur and the container may burst.
Cyanine-3-dUTP	In a fire or if heated, a pressure increase will occur and the container may burst.
Cyanine-5-dUTP	In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products

: Nuclease Free Water	No specific data.
Random Primers	No specific data.
5X gDNA Reaction Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds
10X dNTP Mix	No specific data.
Exo(-) Klenow	Decomposition products may include the following materials: carbon dioxide carbon monoxide
Cyanine-3-dUTP	No specific data.
Cyanine-5-dUTP	No specific data.

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Special protective actions for fire-fighters

: Nuclease Free Water	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.
Random Primers	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.
5X gDNA Reaction Buffer	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
10X dNTP Mix	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.
Exo(-) Klenow	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.
Cyanine-3-dUTP	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.
Cyanine-5-dUTP	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

: Nuclease Free Water	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Random Primers	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
5X gDNA Reaction Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
10X dNTP Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Exo(-) Klenow	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Cyanine-3-dUTP	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Cyanine-5-dUTP	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 5. Firefighting measures

Hazchem code	: Nuclease Free Water	Not available.
	Random Primers	Not available.
	5X gDNA Reaction Buffer	Not available.
	10X dNTP Mix	Not available.
	Exo(-) Klenow	Not available.
	Cyanine-3-dUTP	Not available.
	Cyanine-5-dUTP	Not available.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: Nuclease Free Water	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.
	Random Primers	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 gDNA 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.
	10X dNTP Mix	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	Exo(-) Klenow	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.
	Cyanine-3-dUTP	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.
	Cyanine-5-dUTP	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
For emergency responders	: Nuclease Free Water	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".
	Random Primers	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 gDNA Reaction Buffer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on

Section 6. Accidental release measures

10X dNTP Mix	suitable and unsuitable materials. See also the information in "For non-emergency personnel". If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Exo(-) Klenow	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".
Cyanine-3-dUTP	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".
Cyanine-5-dUTP	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".

Environmental precautions : Nuclease Free Water

Random Primers	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 gDNA 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).
10X dNTP Mix	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).
Exo(-) Klenow	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).
Cyanine-3-dUTP	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).
Cyanine-5-dUTP	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Section 6. Accidental release measures

Methods for cleaning up	: Nuclease Free Water	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.
	Random Primers	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 gDNA 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.
	10X dNTP Mix	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.
	Exo(-) Klenow	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.
	Cyanine-3-dUTP	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.
	Cyanine-5-dUTP	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	: Nuclease Free Water	Put on appropriate personal protective equipment (see Section 8).
	Random Primers	Put on appropriate personal protective equipment (see Section 8).
	5X gDNA Reaction Buffer	Put on appropriate personal protective equipment (see Section 8).
	10X dNTP Mix	Put on appropriate personal protective equipment (see Section 8).
	Exo(-) Klenow	Put on appropriate personal protective equipment (see Section 8).
	Cyanine-3-dUTP	Put on appropriate personal protective equipment (see Section 8).
	Cyanine-5-dUTP	Put on appropriate personal protective equipment (see Section 8).

Section 7. Handling and storage

Advice on general occupational hygiene

: Nuclease Free Water

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.

Random Primers

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 gDNA 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.

10X dNTP Mix

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.

Exo(-) Klenow

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.

Cyanine-3-dUTP

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.

Cyanine-5-dUTP

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.

Conditions for safe storage, including any incompatibilities

: Nuclease Free Water

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.

Random Primers

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from

Section 7. Handling and storage

	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.
5X gDNA 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.
10X dNTP Mix	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.
Exo(-) Klenow	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.
Cyanine-3-dUTP	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.
Cyanine-5-dUTP	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.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Exo(-) Klenow Glycerol	Safe Work Australia (Australia, 1/2014). TWA: 10 mg/m ³ 8 hours.

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

- Physical state** :
- Nuclease Free Water Liquid.
 - Random Primers Liquid.
 - 5X gDNA Reaction Buffer Liquid.
 - 10X dNTP Mix Liquid.
 - Exo(-) Klenow Liquid.
 - Cyanine-3-dUTP Liquid.
 - Cyanine-5-dUTP Liquid.
- Colour** :
- Nuclease Free Water Colourless.
 - Random Primers Not available.
 - 5X gDNA Reaction Buffer Not available.
 - 10X dNTP Mix Not available.
 - Exo(-) Klenow Not available.
 - Cyanine-3-dUTP Not available.
 - Cyanine-5-dUTP Not available.

Section 9. Physical and chemical properties

Odour	: Nuclease Free Water	Odourless.
	Random Primers	Not available.
	5X gDNA Reaction Buffer	Not available.
	10X dNTP Mix	Not available.
	Exo(-) Klenow	Not available.
	Cyanine-3-dUTP	Not available.
Odour threshold	: Nuclease Free Water	Not available.
	Random Primers	Not available.
	5X gDNA Reaction Buffer	Not available.
	10X dNTP Mix	Not available.
	Exo(-) Klenow	Not available.
	Cyanine-3-dUTP	Not available.
pH	: Nuclease Free Water	7
	Random Primers	8
	5X gDNA Reaction Buffer	7.5
	10X dNTP Mix	8
	Exo(-) Klenow	7.5
	Cyanine-3-dUTP	7.6
Melting point	: Nuclease Free Water	0°C (32°F)
	Random Primers	0°C (32°F)
	5X gDNA Reaction Buffer	0°C (32°F)
	10X dNTP Mix	0°C (32°F)
	Exo(-) Klenow	Not available.
	Cyanine-3-dUTP	0°C (32°F)
Boiling point	: Nuclease Free Water	100°C (212°F)
	Random Primers	100°C (212°F)
	5X gDNA Reaction Buffer	100°C (212°F)
	10X dNTP Mix	100°C (212°F)
	Exo(-) Klenow	Not available.
	Cyanine-3-dUTP	100°C (212°F)
Flash point	: Nuclease Free Water	Not applicable.
	Random Primers	Not available.
	5X gDNA Reaction Buffer	Not available.
	10X dNTP Mix	Not available.
	Exo(-) Klenow	Not available.
	Cyanine-3-dUTP	Not available.
Evaporation rate	: Nuclease Free Water	Not available.
	Random Primers	Not available.
	5X gDNA Reaction Buffer	Not available.
	10X dNTP Mix	Not available.
	Exo(-) Klenow	Not available.
	Cyanine-3-dUTP	Not available.
Flammability (solid, gas)	: Nuclease Free Water	Not applicable.
	Random Primers	Not applicable.
	5X gDNA Reaction Buffer	Not applicable.
	10X dNTP Mix	Not applicable.
	Exo(-) Klenow	Not applicable.
	Cyanine-3-dUTP	Not applicable.
	Cyanine-5-dUTP	Not applicable.

Section 9. Physical and chemical properties

Lower and upper explosive (flammable) limits	: Nuclease Free Water	Not available.
	Random Primers	Not available.
	5X gDNA Reaction Buffer	Not available.
	10X dNTP Mix	Not available.
	Exo(-) Klenow	Not available.
	Cyanine-3-dUTP Cyanine-5-dUTP	Not available. Not available.
Vapour pressure	: Nuclease Free Water	3.2 kPa (23.8 mm Hg) [room temperature]
	Random Primers	Not available.
	5X gDNA Reaction Buffer	Not available.
	10X dNTP Mix	Not available.
	Exo(-) Klenow	Not available.
	Cyanine-3-dUTP Cyanine-5-dUTP	Not available. Not available.
Vapour density	: Nuclease Free Water	0.62 [Air = 1]
	Random Primers	Not available.
	5X gDNA Reaction Buffer	Not available.
	10X dNTP Mix	Not available.
	Exo(-) Klenow	Not available.
	Cyanine-3-dUTP Cyanine-5-dUTP	Not available. Not available.
Relative density	: Nuclease Free Water	1
	Random Primers	Not available.
	5X gDNA Reaction Buffer	Not available.
	10X dNTP Mix	Not available.
	Exo(-) Klenow	Not available.
	Cyanine-3-dUTP Cyanine-5-dUTP	Not available. Not available.
Solubility	: Nuclease Free Water	Easily soluble in the following materials: cold water and hot water.
	Random Primers	Easily soluble in the following materials: cold water and hot water.
	5X gDNA Reaction Buffer	Easily soluble in the following materials: cold water and hot water.
	10X dNTP Mix	Easily soluble in the following materials: cold water and hot water.
	Exo(-) Klenow	Soluble in the following materials: cold water and hot water.
	Cyanine-3-dUTP Cyanine-5-dUTP	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	: Nuclease Free Water	-1.38
	Random Primers	Not available.
	5X gDNA Reaction Buffer	Not available.
	10X dNTP Mix	Not available.
	Exo(-) Klenow	Not available.
	Cyanine-3-dUTP Cyanine-5-dUTP	Not available. Not available.
Auto-ignition temperature	: Nuclease Free Water	Not applicable.
	Random Primers	Not available.
	5X gDNA Reaction Buffer	Not available.
	10X dNTP Mix	Not available.
	Exo(-) Klenow	Not available.
	Cyanine-3-dUTP Cyanine-5-dUTP	Not available. Not available.

Section 9. Physical and chemical properties

Decomposition temperature	: Nuclease Free Water	>1200°C (>2192°F)
	Random Primers	Not available.
	5X gDNA Reaction Buffer	Not available.
	10X dNTP Mix	Not available.
	Exo(-) Klenow	Not available.
	Cyanine-3-dUTP	Not available.
	Cyanine-5-dUTP	Not available.
Viscosity	: Nuclease Free Water	Not available.
	Random Primers	Not available.
	5X gDNA Reaction Buffer	Not available.
	10X dNTP Mix	Not available.
	Exo(-) Klenow	Not available.
	Cyanine-3-dUTP	Not available.
	Cyanine-5-dUTP	Not available.

Section 10. Stability and reactivity

Reactivity	: Nuclease Free Water	No specific test data related to reactivity available for this product or its ingredients.
	Random Primers	No specific test data related to reactivity available for this product or its ingredients.
	5X gDNA Reaction Buffer	No specific test data related to reactivity available for this product or its ingredients.
	10X dNTP Mix	No specific test data related to reactivity available for this product or its ingredients.
	Exo(-) Klenow	No specific test data related to reactivity available for this product or its ingredients.
	Cyanine-3-dUTP	No specific test data related to reactivity available for this product or its ingredients.
	Cyanine-5-dUTP	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: Nuclease Free Water	The product is stable.
	Random Primers	The product is stable.
	5X gDNA Reaction Buffer	The product is stable.
	10X dNTP Mix	The product is stable.
	Exo(-) Klenow	The product is stable.
	Cyanine-3-dUTP	The product is stable.
	Cyanine-5-dUTP	The product is stable.
Possibility of hazardous reactions	: Nuclease Free Water	Under normal conditions of storage and use, hazardous reactions will not occur.
	Random Primers	Under normal conditions of storage and use, hazardous reactions will not occur.
	5X gDNA Reaction Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
	10X dNTP Mix	Under normal conditions of storage and use, hazardous reactions will not occur.
	Exo(-) Klenow	Under normal conditions of storage and use, hazardous reactions will not occur.
	Cyanine-3-dUTP	Under normal conditions of storage and use, hazardous reactions will not occur.
	Cyanine-5-dUTP	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Nuclease Free Water	No specific data.
	Random Primers	No specific data.
	5X gDNA Reaction Buffer	No specific data.
	10X dNTP Mix	No specific data.
	Exo(-) Klenow	No specific data.
	Cyanine-3-dUTP	No specific data.
	Cyanine-5-dUTP	No specific data.

Section 10. Stability and reactivity

Incompatible materials	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	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. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
Hazardous decomposition products	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	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. 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
Exo(-) Klenow Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Exo(-) Klenow Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitisation

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Section 11. Toxicological information

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	Not available. Not available. Routes of entry anticipated: Oral, Dermal, Inhalation. Not available. Routes of entry anticipated: Oral, Dermal, Inhalation. Not available. Not available.
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Potential acute health effects

Eye contact	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	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. No known significant effects or critical hazards. No known significant effects or critical hazards.
Inhalation	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	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. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	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. No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	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. No known significant effects or critical hazards. No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
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Section 11. Toxicological information

Inhalation	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Skin contact	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Ingestion	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	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. No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	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. No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	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. No known significant effects or critical hazards. No known significant effects or critical hazards.

Section 11. Toxicological information

Teratogenicity	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	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. No known significant effects or critical hazards. No known significant effects or critical hazards.
Developmental effects	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	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. No known significant effects or critical hazards. No known significant effects or critical hazards.
Fertility effects	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	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. No known significant effects or critical hazards. No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Exo(-) Klenow Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Nuclease Free Water Water	-	100 % - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Nuclease Free Water Water	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Nuclease Free Water Water	-1.38	-	low
Exo(-) Klenow Glycerol	-1.76	-	low

Mobility in soil

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

Section 12. Ecological information

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. 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

Regulatory 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

6

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

Australia inventory (AICS) : Not determined.

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 Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

Canada : Not determined.

China : Not determined.

Europe : All components are listed or exempted.

Section 15. Regulatory information

Japan	: <input checked="" type="checkbox"/> Japan inventory (ENCS): Not determined. <input checked="" type="checkbox"/> Japan inventory (ISHL): Not determined.
Malaysia	: <input checked="" type="checkbox"/> Not determined.
New Zealand	: <input checked="" type="checkbox"/> Not determined.
Philippines	: <input checked="" type="checkbox"/> Not determined.
Republic of Korea	: <input checked="" type="checkbox"/> Not determined.
Taiwan	: <input checked="" type="checkbox"/> All components are listed or exempted.
Turkey	: <input checked="" type="checkbox"/> Not determined.
United States	: <input checked="" type="checkbox"/> All components are listed or exempted.

Section 16. Any other relevant information

History

Date of issue/Date of revision	: 12/02/2016
Date of previous issue	: 25/06/2014.
Version	: 3

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
Not classified.	

References : Not available.

Indicates information that has changed from previously issued version.

Note * : **Nota:** A kit containing: PN 5190-3389 or PN 5190-3390

Notice to reader

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