

DIG DNA Labeling Kit

Version 1.10

Revision Date: 03-14-2022

Date of last issue: 10-08-2021 Date of first issue: 10-20-2015

SECTION 1. IDENTIFICATION

Product name	:	DIG DNA Labeling Kit	
Product code	:	11175033910	
Manufacturer or supplier's	deta	ails	
Company name of supplier	:	Roche Diagnostics Deutschlar	nd GmbH
Address	:	116 Sandhoferstrasse Mannheim, 68305 Germany	
Telephone Telefax E-mail address Emergency telephone	:	+496217590 +496217592890 info.dia-sds@roche.com	
In case of emergencies:	:	CHEMTREC	+1 703-741-5970 / 1-800-424-9300

Recommended use of the chemical and restrictions on use

Restrictions on use : For professional users only.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

The product is a kit consisting of individual ingredients. The classification of the ingredients can be obtained from section 3. Section GHS Label elements contains the resulting labelling for the kit

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Unlabeled Control DNA 1

GHS Classification

Not a hazardous substance or mixture.

Components

No hazardous ingredients

Unlabeled Control DNA 2

GHS Classification

Not a hazardous substance or mixture.



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Components

No hazardous ingredients

DNA Dilution buffer

GHS Classification

Not a hazardous substance or mixture.

Components

No hazardous ingredients

Labeled Control DNA

GHS Classification

Not a hazardous substance or mixture.

Components

Chemical name	CAS-No.	Concentration (% w/w)
1,2,3-Propanetriol	56-81-5	>= 1 - < 5
Proteinase K	39450-01-6	< 0.1

Actual concentration is withheld as a trade secret

Hexanucleotide Mix

GHS Classification

Not a hazardous substance or mixture.

Components

Chemical name	CAS-No.	Concentration (% w/w)
1,3-Propanediol, 2-amino-2-	1185-53-1	>= 5 - < 10
(hydroxymethyl)-, hydrochloride (1:1)		

Actual concentration is withheld as a trade secret

dNTP labeling mixture

GHS Classification

Not a hazardous substance or mixture.

Components

No hazardous ingredients

Klenow enzyme

GHS Classification

Not a hazardous substance or mixture.

Components

Chemical name	CAS-No.	Concentration (% w/w)
1,2,3-Propanetriol	56-81-5	>= 50 - < 70



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Phosphoric acid, potassium salt (1:2)	7758-11-4	>= 0.1 - < 1
DNA-dependent DNA polymerase	9012-90-2	< 0.1
Actual concentration is withheld as a t	rade secret	

SECTION 4. FIRST AID MEASURES

General advice	:	Do not leave the victim unattended.
If inhaled	:	Move to fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	:	If on skin, rinse well with water.
In case of eye contact	:	Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. If eye irritation persists, consult a specialist.
If swallowed	:	Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Rinse mouth with water.
Most important symptoms and effects, both acute and delayed	:	No information available.
Notes to physician	:	The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local cir- cumstances and the surrounding environment.
Specific hazards during fire fighting	:	No information available.
Further information	:	Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local cir- cumstances and the surrounding environment.
Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- :	Refer to protective measures listed in sections 7 and 8.
tive equipment and emer-	

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gency procedures						
Environmental preca	autions :	Local authorit	ties should be advised if significant spillages ntained.			
Methods and materi containment and cle			absorbent material (e.g. cloth, fleece). ble, closed containers for disposal.			
SECTION 7. HANDLING AND STORAGE						
Advice on protectior fire and explosion	against :	Normal meas	sures for preventive fire protection.			
Advice on safe hand	lling :		protection see section 8. ing and drinking should be prohibited in the ap			
Conditions for safe s	storage :		allations / working materials must comply with jical safety standards.			
Further information	on stor- :	See label, pa	ckage insert or internal guidelines			

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Advice on sale handling	•	Smoking, eating and drinking should be prohibited in the a plication area.
Conditions for safe storage	:	Electrical installations / working materials must comply with the technological safety standards.
Further information on stor- age conditions	:	See label, package insert or internal guidelines
Materials to avoid	:	No materials to be especially mentioned.
Further information on stor- age stability	:	No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Unlabeled Control DNA 1

Ingredients with workplace control parameters Contains no substances with occupational exposure limit values. **Unlabeled Control DNA 2**

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

DNA Dilution buffer

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Labeled Control DNA

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
1,2,3-Propanetriol	56-81-5	TWA (mist, respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (mist,	15 mg/m3	OSHA Z-1



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		total dust)		
		TWA (Mist -	10 mg/m3	OSHA P0
		total dust)		
		TWA (Mist - respirable fraction)	5 mg/m3	OSHA P0
Proteinase K	39450-01-6	IOEL	0.00006 mg/m3	Roche In- dustrial Hy- giene Com- mittee (RIHC)

Hexanucleotide Mix

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

dNTP labeling mixture

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Klenow enzyme

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
1,2,3-Propanetriol	56-81-5	TWA (mist, respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (mist, total dust)	15 mg/m3	OSHA Z-1
		TWA (Mist - total dust)	10 mg/m3	OSHA P0
		TWA (Mist - respirable fraction)	5 mg/m3	OSHA P0
DNA-dependent DNA poly- merase	9012-90-2	IOEL	0.00006 mg/m3	Roche In- dustrial Hy- giene Com- mittee (RIHC)

Engineering measures : No d

: No data available

Personal protective equipment

Respiratory protection	:	No personal respiratory protective equipment normally required.
Hand protection		
		In case of contact through splashing:
Material	:	Nitrile rubber

Material	:	Nitrile rub
Break through time		> 30 min

break infough lime	. > 30 mm
Glove thickness	: > 0.11 mm



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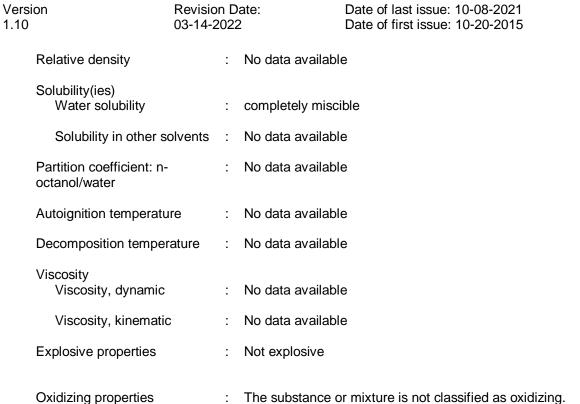
Break through time :	In case of full contact: butyl-rubber > 480 min > 0.4 mm
	Wear appropriate protective gloves to prevent skin contact. Replace torn or punctured gloves promptly.
Eye protection :	Safety glasses
Skin and body protection :	Protective suit
Hygiene measures :	Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Unlabeled Control DNA 1

Appearance	:	liquid
Color	:	colorless
Odor	:	none
Odor Threshold	:	No data available
рН	:	8.0 (68 °F / 20 °C)
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	does not flash
Flash point Evaporation rate	:	does not flash No data available
·	-	
Evaporation rate	:	No data available
Evaporation rate Flammability (liquids)	:	No data available Does not sustain combustion. No data available
Evaporation rate Flammability (liquids) Self-ignition Upper explosion limit / Upper	: :	No data available Does not sustain combustion. No data available No data available
Evaporation rate Flammability (liquids) Self-ignition Upper explosion limit / Upper flammability limit Lower explosion limit / Lower	: :	No data available Does not sustain combustion. No data available No data available

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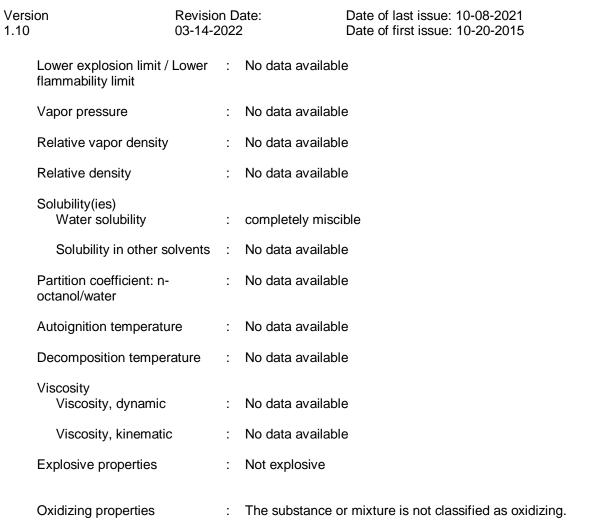


Unlabeled Control DNA 2

Appearance	:	liquid
Color	:	colorless
Odor	:	none
Odor Threshold	:	No data available
рН	:	8.0 (68 °F / 20 °C)
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	does not flash
Evaporation rate	:	No data available
Flammability (liquids)	:	Does not sustain combustion.
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available

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DNA Dilution buffer

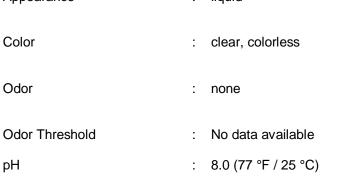
Appearance	:	liquid
Color	:	colorless
Odor	:	odorless
Odor Threshold	:	No data available
рН	:	No data available
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flach point		does not flash
Flash point	•	
Evaporation rate	:	No data available



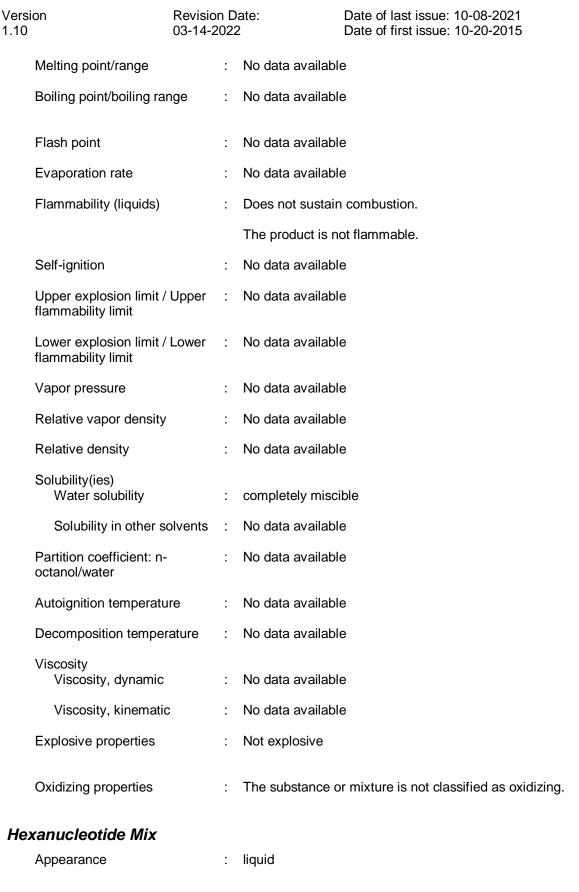
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Flammability (solid, gas)	: Th	ne product is not flammable.
Flammability (liquids)	: Do	pes not sustain combustion.
Self-ignition	: No	o data available
Upper explosion limit / L flammability limit	lpper : No	o data available
Lower explosion limit / L flammability limit	ower : No	o data available
Vapor pressure	: No	o data available
Relative vapor density	: No	o data available
Relative density	: No	o data available
Solubility(ies) Water solubility	: со	ompletely miscible
Solubility in other sol	vents : No	o data available
Partition coefficient: n- octanol/water	: No	o data available
Autoignition temperature	e : No	o data available
Decomposition tempera	ture : No	o data available
Viscosity Viscosity, dynamic	: No	o data available
Viscosity, kinematic	: No	o data available
Explosive properties	: No	ot explosive
Oxidizing properties	: Th	ne substance or mixture is not classified as oxidizing
Labeled Control DNA		
Appearance	: liq	uid

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Color

colorless

:

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Odor	:	none
Odor Threshold	:	No data available
рН	:	No data available
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	The product is not flammable.
Flammability (liquids)	:	Does not sustain combustion.
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	No data available
Solubility(ies) Water solubility	:	completely miscible
Solubility in other solvents	:	No data available
Partition coefficient: n- octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive





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Oxidizing properties	: The substance	or mixture is not classified as oxidizing.

dNTP labeling mixture

Appearance	:	liquid
Color	:	colorless
Odor	:	none
Odor Threshold	:	No data available
рН	:	7.5 (68 °F / 20 °C)
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	does not flash
Evaporation rate	:	No data available
Flammability (liquids)	:	Does not sustain combustion.
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	No data available
Solubility(ies) Water solubility	:	completely miscible
Solubility in other solvents	:	No data available
Partition coefficient: n- octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		

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Viscosity, dynamic	:	No data avai	lable
Viscosity, kinematic	:	No data avai	lable
Explosive properties	:	Not explosive	e
Oxidizing properties	:	The substan	ce or mixture is not classified as oxidizing.
Klenow enzyme			
Appearance	:	liquid	
Color	:	colorless	
Odor	:	none	
Odor Threshold	:	No data avai	lable
рН	:	7.0 (39 °F / 4	↓°C)
Melting point/range	:	No data avai	lable
Boiling point/boiling rang	je :	No data avai	lable
Flash point	:	does not flas	h
Evaporation rate	:	No data avai	lable
Flammability (liquids)	:	Does not sus	stain combustion.
Self-ignition	:	No data avai	lable
Upper explosion limit / L flammability limit	lpper :	No data avai	lable
Lower explosion limit / L flammability limit	ower :	No data avai	lable
Vapor pressure	:	No data avai	lable
Relative vapor density	:	No data avai	lable
Relative density	:	No data avai	lable
Solubility(ies) Water solubility	:	completely n	niscible
Solubility in other sol	vents :	No data avai	lable
Partition coefficient: n-	:	No data avai	lable

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octanol/water		
Autoignition temperate	ure : No data av	vailable
Decomposition tempe	rature : No data av	vailable
Viscosity Viscosity, dynamic	: No data av	vailable
Viscosity, kinemati	c : No data av	vailable
Explosive properties	: Not explos	sive
Oxidizing properties	: The subst	ance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reac- tions	:	No dangerous reaction known under conditions of normal use. Stable under recommended storage conditions. No hazards to be specially mentioned.
Conditions to avoid	:	No data available
Incompatible materials	:	No data available
Hazardous decomposition products	:	No data available

SECTION 11. TOXICOLOGICAL INFORMATION

Unlabeled Control DNA 1

Acute toxicity

Not classified based on available information.

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization



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Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

- **IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- **OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
- **NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Unlabeled Control DNA 2

Acute toxicity

Not classified based on available information.

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

- **IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- **OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
- **NTP** No ingredient of this product present at levels greater than or equal to 0.1% is



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identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

DNA Dilution buffer

Acute toxicity

Not classified based on available information.

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

- **IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- **OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
- **NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure



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Aspiration toxicity

Not classified based on available information.

Labeled Control DNA

Acute toxicity

Not classified based on available information.

Components:

1,2,3-Propanetriol:

Acute oral toxicity	:	LC50 (Mouse): 11,500 mg/kg
Acute inhalation toxicity	:	LC50 (Rat, male): 275000 mg/m3 Exposure time: 7 h Test atmosphere: vapor GLP: no Assessment: The component/mixture is minimally toxic after short term inhalation.
Acute dermal toxicity	:	LD50 (Guinea pig, male and female): 56,750 mg/kg GLP: no

Skin corrosion/irritation

Not classified based on available information.

Components:

1,2,3-Propanetriol:

Species	:	Rabbit
Exposure time	:	24 h
Result	:	No skin irritation
GLP	:	no

Proteinase K:

Result	:	Irritating to skin.
Remarks	:	May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation

Not classified based on available information.

Components:

1,2,3-Propanetriol:

Species	:	Rabbit
Result	:	No eye irritation
Exposure time	:	7 d
GLP	:	no

Proteinase K:

Result	:	Irritating to eyes.
Remarks	:	May cause irreversible eye damage.



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Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Components:

1,2,3-Propanetriol:

Assessment

: Mild eye irritant, Mild respiratory irritant, No skin irritation

Proteinase K:

Assessment Remarks	:	May cause sensitization by skin contact. Causes sensitization.
Assessment	:	May cause sensitization by inhalation.

Germ cell mutagenicity

Not classified based on available information.

Components:

1,2,3-Propanetriol:

Genotoxicity in vitro	Test Type: Microbial mutagenesis Test system: Salmonella typhimu Metabolic activation: with and with Result: negative GLP: No information available.	rium
	Test Type: In vitro mammalian ce Test system: Chinese hamster ov Metabolic activation: with and with Method: OECD Test Guideline 47 Result: negative GLP: No information available.	ary cells hout metabolic activation

Carcinogenicity

Not classified based on available information.

Components:

1,2,3-Propanetriol:

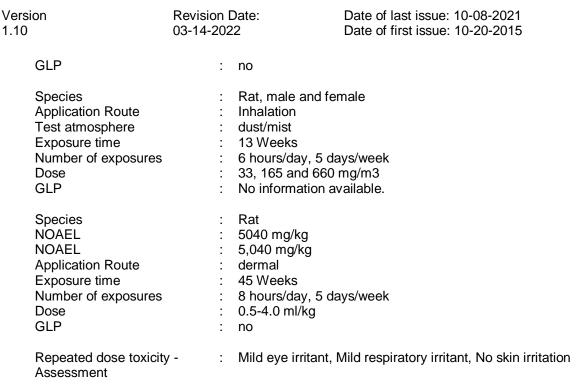
Species Application Route		Rat, male and female Oral
Exposure time	:	2 Years
GLP	:	No information available.
Remarks	:	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.



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OSHA	No component of this product present at levels greater than or equal to 0. on OSHA's list of regulated carcinogens.		
NTP			ent at levels greater than or equal to 0.1% is d carcinogen by NTP.
Reproductiv Not classified	e toxicity I based on available	e information.	
Components	<u>s:</u>		
1,2,3-Propan	etriol:		
Effects on fer		Species: Rat, m Application Rou Dose: 2000 mg	te: Oral
Effects on fet	al development :	Application Rou Dose: 11.8, 54. Duration of Sing	
STOT-single Not classified	e exposure I based on available	e information.	
<u>Components</u>	<u>s:</u>		
Proteinase k	K :		
Assessment	:	May cause resp	iratory irritation.
•	ted exposure I based on available	e information.	
Components	<u>s:</u>		
Proteinase P Assessment	«: :		or mixture is not classified as specific target repeated exposure.
Repeated do	ose toxicity		
Components	<u>s:</u>		
1,2,3-Propan	etriol:		
Species NOAEL NOAEL Application R Exposure tim Number of ex Dose	oute :	Rat, male and f 4580 mg/kg 4,580 mg/kg Oral 90 d daily 4580 - 25,800 n	

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Aspiration toxicity

Not classified based on available information.

Components:

Proteinase K:

No data available

Hexanucleotide Mix

Acute toxicity

Not classified based on available information.

Components:

1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride (1:1):

Acute oral toxicity	:	LD50 (Rat, female): > 5,000 mg/kg Method: OECD Test Guideline 425 GLP: yes
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Skin corrosion/irritation

Not classified based on available information.

Components:

1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride (1:1):

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Serious eye damage/eye irritation

Not classified based on available information.

Components:

1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride (1:1):

Species	:	Bovine cornea
Result	:	No eye irritation
Exposure time	:	240 min
Method	:	OECD Test Guideline 437
GLP	:	yes

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Components:

1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride (1:1):

Test Type	:	Maximization Test
Species	:	Guinea pig
Assessment	:	Does not cause skin sensitization.
Method	:	OECD Test Guideline 406
GLP	:	yes

Germ cell mutagenicity

Not classified based on available information.

Components:

1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride (1:1):

Genotoxicity in vitro :	Test Type: Microbial mutagenesis assay (Ames test) Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative GLP: yes		
	Test Type: Microbial mutagenesis assay (Ames test) Test system: Escherichia coli Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative GLP: yes		
	Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative GLP: yes		



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Test Type: Chromosome aberration test in vitro Test system: Chinese hamster lung cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative GLP: yes

Carcinogenicity

Not classified based on available information.

- **IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- **OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
- **NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

Components:

1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride (1:1):

Effects on fertility

Species: Rat, male and female Application Route: Oral Dose: 100, 300, 1000 mg/kg bw/day Duration of Single Treatment: 54 d General Toxicity F1: NOAEL: > 1,000 mg/kg body weight Method: OECD Test Guideline 421 Result: No effects on fertility. GLP: yes

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride (1:1):

Species NOAEL Application Route Exposure time Dose	:	Rat, male and female > 1000 mg/kg Oral 54 d 100, 300, 1000 mg/kg bw/day
Dose	:	100, 300, 1000 mg/kg bw/day
Method	:	OECD Test Guideline 421
GLP	:	yes

Aspiration toxicity



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dNTP labeling mixture

Acute toxicity

Not classified based on available information.

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

- **OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
- **NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Klenow enzyme

Acute toxicity

Not classified based on available information.

Components:

1,2,3-Propanetriol:

Acute oral toxicity : LC50 (Mouse): 11,500 mg/kg

Acute inhalation toxicity

: LC50 (Rat, male): 275000 mg/m3



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		GLP: no	phere: vapor nt: The component/mixture is minimally toxic afte
Acute dermal toxicity	:	LD50 (Guir GLP: no	nea pig, male and female): 56,750 mg/kg
Phosphoric acid, po		. ,	
Acute oral toxicity	:	LD50 Oral	(Rat): 8,000 mg/kg
			(Rat, female): > 2,000 mg/kg ECD Test Guideline 420
Acute inhalation toxic	ity :	Test atmos	ity estimate: > 5.1 mg/l phere: dust/mist pert judgment
		Exposure t Test atmos Method: O	male and female): > 0.83 mg/l ime: 4 h phere: dust/mist ECD Test Guideline 403 Based on data from similar materials
Acute dermal toxicity	:	LD50 Dern	nal (Rabbit): > 4,640 mg/kg
Chin correction/irrite	(1 1 1		

Roche

Skin corrosion/irritation

Not classified based on available information.

Components:

1,2,3-Propanetriol:

Rabbit
24 h
No skin irritation
no

Phosphoric acid, potassium salt (1:2):

Species	:	Rabbit
Result	:	Mild skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:

1,2,3-Propanetriol:

Species	:	Rabbit
Result	:	No eye irritation
Exposure time	:	7 d
GLP	:	no



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Phosphoric acid, potassium salt (1:2):

Species	: Rabbit
Result	: No eye irritation
Exposure time	: 24 h
Method	: OECD Test Guideline 405

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Components:

1,2,3-Propanetriol:

Assessment : Mild eye irritant, Mild respiratory irritant, No skin irritation

Phosphoric acid, potassium salt (1:2):

Test Type	:	Local lymph node assay (LLNA)
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	negative

Germ cell mutagenicity

Not classified based on available information.

Components:

1,2,3-Propanetriol:

Genotoxicity in vitro	 Test Type: Microbial mutagenesis assay (Ames test) Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Result: negative GLP: No information available.
	Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative GLP: No information available.

Phosphoric acid, potassium salt (1:2):

Genotoxicity in vitro	: Test Type: Micronucleus test Test system: Human lymphocytes Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 487 Result: negative
	Test Type: In vitro mammalian cell gene mutation test Test system: mouse lymphoma cells Metabolic activation: with and without metabolic activation



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Method: OECD Test Guideline 490 Result: negative

Test Type: Microbial mutagenesis assay (Ames test) Test system: Escherichia coli Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative

Carcinogenicity

Not classified based on available information.

Components:

1,2,3-Propanetriol: Rat, male and female Species Application Route Oral Exposure time 2 Years GLP No information available. 1 Remarks No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. **OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens. NTP No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

Components:

1,2,3-Propanetriol:

Effects on fertility	:	Test Type: Two-generation study Species: Rat, male and female Application Route: Oral Dose: 2000 mg/kg bw/day Fertility: NOAEL: 2,000 mg/kg body weight GLP: no
Effects on fetal development	:	Species: Rabbit, female Application Route: Oral Dose: 11.8, 54.8, 254.5, 1180 mg/kg bw/day Duration of Single Treatment: 29 d Developmental Toxicity: NOAEL: 1,180 mg/kg bw/day GLP: no

STOT-single exposure



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Components:

DNA-dependent DNA polymerase:

Assessment

The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT-repeated exposure

Not classified based on available information.

Components:

DNA-dependent DNA polymerase:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

1,2,3-Propanetriol:

Species NOAEL NOAEL Application Route Exposure time Number of exposures Dose GLP	 Rat, male and female 4580 mg/kg 4,580 mg/kg Oral 90 d daily 4580 - 25,800 mg/kg/day no
Species Application Route Test atmosphere Exposure time Number of exposures Dose GLP	 Rat, male and female Inhalation dust/mist 13 Weeks 6 hours/day, 5 days/week 33, 165 and 660 mg/m3 No information available.
Species NOAEL NOAEL Application Route Exposure time Number of exposures Dose GLP	 Rat 5040 mg/kg 5,040 mg/kg dermal 45 Weeks 8 hours/day, 5 days/week 0.5-4.0 ml/kg no
Repeated dose toxicity - Assessment	: Mild eye irritant, Mild respiratory irritant, No skin irritation

Aspiration toxicity



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Components:

DNA-dependent DNA polymerase: No data available

SECTION 12. ECOLOGICAL INFORMATION

Unlabeled Control DNA 1

Ecotoxicity No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Unlabeled Control DNA 2

Ecotoxicity No data available Persistence and degradability No data available Bioaccumulative potential No data available Mobility in soil

No data available

Other adverse effects

DNA Dilution buffer

Ecotoxicity No data available Persistence and degradability No data available Bioaccumulative potential No data available Mobility in soil No data available Other adverse effects



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Labeled Control DNA

Ecotoxicity		
Components:		
1,2,3-Propanetriol: Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 54,000 mg/l End point: mortality Exposure time: 96 h Test Type: static test GLP: no
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna (Water flea)): 1,955 mg/l End point: mortality Exposure time: 48 h Test Type: static test Analytical monitoring: no GLP: no
Toxicity to algae/aquatic plants	:	(Scenedesmus quadricauda (Green algae)): > 10,000 mg/l End point: Growth rate Exposure time: 8 d Test Type: static test GLP: no
Toxicity to microorganisms	:	EC50 (Pseudomonas putida): > 10,000 mg/l End point: Growth rate Exposure time: 16 h Test Type: static test GLP: No information available.
Ecotoxicology Assessment		
Acute aquatic toxicity	:	This product has no known ecotoxicological effects.
Chronic aquatic toxicity	:	This product has no known ecotoxicological effects.
Toxicity Data on Soil	:	Not expected to adsorb on soil.
Other organisms relevant to the environment	:	No data available
Proteinase K:		
Ecotoxicology Assessment Toxicity Data on Soil	:	Not expected to adsorb on soil.
Other organisms relevant to the environment	:	No data available



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Persistence and degradability

Components:

1,2,3-Propanetriol:

Biodegradability : aerobic Inoculum: activated sludge Concentration: 226 mg/l Result: Readily biodegradable. Biodegradation: 94 % Exposure time: 24 h GLP: no

Bioaccumulative potential

Components:

1,2,3-Propanetriol:

Partition coefficient: n-	: log Pow: -1.75 (77 °F / 25 °C)	
octanol/water	pH: 7.4	
	Method: OECD Test Guideline 107	
	GLP: no	

Proteinase K:

Partition coefficient: n-	:	Remarks: No data available
octanol/water		

Mobility in soil

No data available

Other adverse effects

Hexanucleotide Mix

Ecotoxicity

Components:

1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride (1:1):

Toxicity to fish	:	LC50 (Leuciscus idus (Golden orfe)): 460 mg/l End point: mortality Exposure time: 96 h Test Type: static test Analytical monitoring: no Method: OECD Test Guideline 203 GLP: No information available.
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 117 mg/l End point: Immobilization Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes

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plants		EC50 (Pseudokirchneriella subcapitata (green algae)): 397 mg/l Exposure time: 72 h Test Type: static test Analytical monitoring: no Method: OECD Test Guideline 201 GLP: No information available.		
Toxicity to microorganis	ms :	Exposure time: Test Type: stati Analytical moni	ic test	
Ecotoxicology Assess	ment			
Acute aquatic toxicity	:	This product ha	as no known ecotoxicological effects.	
Chronic aquatic toxicity	:	This product ha	as no known ecotoxicological effects.	
Toxicity Data on Soil	:	Not expected to	o adsorb on soil.	
Other organisms relevant the environment			o data available	
Persistence and degra	adability			
Components:				
1,3-Propanediol, 2-am	ino-2-(hy	droxymethyl)-, l	hydrochloride (1:1):	
Biodegradability	:	Concentration: Result: Readily Biodegradation Exposure time:	biodegradable. : 97.1 %	
Bioaccumulative poter	ntial			
Components:				

Roche

1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride (1:1):			
Bioaccumulation	:	Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.	
Partition coefficient: n- octanol/water	:	log Pow: -3.6 (68 °F / 20 °C) pH: 5 - 7 Method: OECD Test Guideline 107 GLP: no	



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Mobility in soil No data available

Other adverse effects

dNTP labeling mixture

Ecotoxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Klenow enzyme

Ecotoxicity

Components:

1.2.3-	Propar	netriol:
_, ∠ ,J-	ιιομαι	ieu ioi.

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 54,000 mg/l End point: mortality Exposure time: 96 h Test Type: static test GLP: no
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna (Water flea)): 1,955 mg/l End point: mortality

aquatic invertebrates		End point: mortality Exposure time: 48 h Test Type: static test Analytical monitoring: no GLP: no
Toxicity to algae/aquatic plants	:	(Scenedesmus quadricauda (Green algae)): > 10,000 mg/l End point: Growth rate Exposure time: 8 d Test Type: static test GLP: no
Toxicity to microorganisms	:	EC50 (Pseudomonas putida): > 10,000 mg/l End point: Growth rate Exposure time: 16 h

Ecotoxicology Assessment

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Test Type: static test

GLP: No information available.

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Chronic aquatic toxicity	:	This product h	nas no known ecotoxicological effects.
Toxicity Data on Soil	:	Not expected	to adsorb on soil.
Other organisms relevant the environment	t to :	No data availa	able
Phosphoric acid, potas	sium sa	lt (1:2):	
Toxicity to fish	:	LC0 (Leuciscu Exposure time	us idus (Golden orfe)): ca. 900 mg/l e: 48 h
		Exposure time Test Type: se	
Toxicity to daphnia and o aquatic invertebrates	other :	Exposure time Test Type: sta	
Toxicity to algae/aquatic plants	:	Exposure time Test Type: sta	
Toxicity to microorganisr	ns :	Exposure time	ed sludge): > 1,000 mg/l e: 3 h D Test Guideline 209
		Exposure time	ted sludge): 1,000 mg/l e: 3 h D Test Guideline 209
Ecotoxicology Assessi			
Acute aquatic toxicity	:		nas no known ecotoxicological effects.
Chronic aquatic toxicity	:	This product h	nas no known ecotoxicological effects.
Toxicity Data on Soil	:	Not expected	to adsorb on soil.
Other organisms relevan the environment	t to :	No data availa	able
DNA-dependent DNA p	olymera	ISE:	
Ecotoxicology Assessi	nent		
T I I I I I I I			

Roche

Toxicity Data on Soil	:	Not expected to adsorb on soil.
Other organisms relevant to the environment	:	No data available



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Persistence and degradability

Components:

1,2,3-Propanetriol:

Biodegradability : aerobic Inoculum: activated sludge Concentration: 226 mg/l Result: Readily biodegradable. Biodegradation: 94 % Exposure time: 24 h GLP: no

Phosphoric acid, potassium salt (1:2):

Biodegradability	:	Remarks: The methods for determining biodegradability are
		not applicable to inorganic substances.

Bioaccumulative potential

Components:

1,2,3-Propanetriol:

artition coefficient: n- ctanol/water	:	log Pow: -1.75 (77 °F / 25 °C) pH: 7.4
		Method: OECD Test Guideline 107 GLP: no

Phosphoric acid, potassium salt (1:2):

Partition coefficient: n- : Remarks: Not applicable octanol/water

DNA-dependent DNA polymerase:

Partition coefficient: n- : Remarks: No data available octanol/water

1

Mobility in soil

No data available

Other adverse effects

Components:

Phosphoric acid, potassium salt (1:2): Additional ecological infor- : No data available mation

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues

The product has to be disposed of as laboratory chemical in accordance with local regulations.



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Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

Not applicable

Domestic regulation

49 CFR Not regulated as a dangerous good

Special precautions for user

Remarks

Not dangerous goods in the meaning of ADR/RID, ADN, IMDG-Code, ICAO/IATA-DGR

SECTION 15. REGULATORY INFORMATION

Unlabeled Control DNA 1

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

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SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards	:	No SARA Hazards
SARA 313	:	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

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7732-18-5

Roche

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F). This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

US State Regulations

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

Water

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

Product does not contain any listed chemicals

Washington Chemicals of High Concern

Product does not contain any listed chemicals

The ingredients of this product are reported in the following inventories:

AIIC	:	On the inventory, or in compliance with the inventory
DSL	:	All components of this product are on the Canadian DSL
NZIoC	:	On the inventory, or in compliance with the inventory
ENCS	:	Not in compliance with the inventory
ISHL	:	Not in compliance with the inventory
KECI	:	Not in compliance with the inventory
PICCS	:	Not in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	Product contains substance(s) not listed on TSCA inventory.
TECI	:	Not in compliance with the inventory

TSCA list

No substances are subject to a Significant New Use Rule.



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No substances are subject to TSCA 12(b) export notification requirements.

Unlabeled Control DNA 2

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302	2 Extremely	Hazardous	Substances	Threshold	d P	lanning	Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards	:	No SARA Hazards
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SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

US State Regulations

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Water

7732-18-5

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

Product does not contain any listed chemicals

Washington Chemicals of High Concern

Product does not contain any listed chemicals



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The ingredients AIIC	•	d in the following inventories: entory, or in compliance with the inventory
DSL	: All compon	ents of this product are on the Canadian DSL
NZIoC	: On the inve	entory, or in compliance with the inventory
ENCS	: Not in com	pliance with the inventory
ISHL	: Not in com	pliance with the inventory
KECI	: Not in com	pliance with the inventory
PICCS	: Not in com	pliance with the inventory
IECSC	: On the inve	entory, or in compliance with the inventory
TCSI	: On the inve	entory, or in compliance with the inventory
TSCA	: Product co	ntains substance(s) not listed on TSCA inventory.
TECI	: Not in com	pliance with the inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

DNA Dilution buffer

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards	:	No SARA Hazards

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).



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This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

US State Regulations

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

Water

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

Product does not contain any listed chemicals

Washington Chemicals of High Concern

Product does not contain any listed chemicals

The ingredients of this product are reported in the following inventories:				
AIIC	:	On the inventory, or in compliance with the inventory		
DSL	:	All components of this product are on the Canadian DSL		
NZIoC	:	On the inventory, or in compliance with the inventory		
ENCS	:	Not in compliance with the inventory		
ISHL	:	Not in compliance with the inventory		
KECI	:	Not in compliance with the inventory		
PICCS	:	Not in compliance with the inventory		
IECSC	:	On the inventory, or in compliance with the inventory		
TCSI	:	On the inventory, or in compliance with the inventory		
TSCA	:	Product contains substance(s) not listed on TSCA inventory.		
TECI	:	Not in compliance with the inventory		

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.



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Labeled Control DNA

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards	:	No SARA Hazards
SARA 313	:	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

1,2,3-Propanetriol 56-81-5 >= 1 - < 5 %

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

US State Regulations

Massachusetts Right To Know	
1,2,3-Propanetriol	56-81-5
Pennsylvania Right To Know	
Water 1,2,3-Propanetriol	7732-18-5 56-81-5
Maine Chemicals of High Concern	
Product does not contain any listed chemicals	
Vermont Chemicals of High Concern	

Product does not contain any listed chemicals

Washington Chemicals of High Concern

Product does not contain any listed chemicals



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С	alifornia Permissible	Exposure	e Limits for Cher	nical Contaminants
	1,2,3-Propane	etriol		56-81-5
т	he ingredients of this	s product	are reported in t	he following inventories:
A	lic	:	Not in complianc	e with the inventory
D	DSL	:	This product con on the Canadian	tains the following components that are not DSL nor NDSL.
			Proteinase K	
Ν	IZIoC	:	On the inventory	, or in compliance with the inventory
E	INCS	:	Not in complianc	e with the inventory
18	SHL	:	Not in complianc	e with the inventory
К	(ECI	:	Not in complianc	e with the inventory
Р	PICCS	:	Not in complianc	e with the inventory
IE	ECSC	:	On the inventory	, or in compliance with the inventory
Т	CSI	:	On the inventory	, or in compliance with the inventory
Т	SCA	:	Product contains	substance(s) not listed on TSCA inventory.
т	ECI	:	Not in complianc	e with the inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

Hexanucleotide Mix

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards	:	No SARA Hazards
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SARA 313	:	This material does not contain any chemical components with
		known CAS numbers that exceed the threshold (De Minimis)
		reporting levels established by SARA Title III, Section 313.



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Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

US State Regulations

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

Water	7732-18-5
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride	1185-53-1
(1:1)	

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

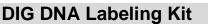
Product does not contain any listed chemicals

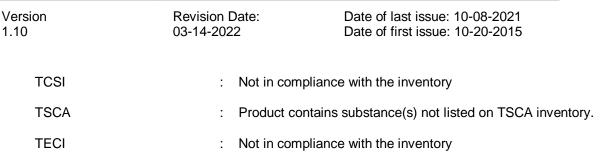
Washington Chemicals of High Concern

Product does not contain any listed chemicals

The ingredients of this product are reported in the following inventories:

AIIC	:	Not in compliance with the inventory
DSL	:	This product contains the following components that are not on the Canadian DSL nor NDSL.
		Primer / Oligonucleotide / Probe
NZIoC	:	On the inventory, or in compliance with the inventory
ENCS	:	Not in compliance with the inventory
ISHL	:	Not in compliance with the inventory
KECI	:	Not in compliance with the inventory
PICCS	:	Not in compliance with the inventory
IECSC	:	Not in compliance with the inventory





Roche

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

dNTP labeling mixture

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards	:	No SARA Hazards
SARA 313	:	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

US State Regulations

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.



				<u> </u>
DIC	G DNA Labeling	Kit		
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	Pennsylvania Right Water	To Know		7732-18-5
	Maine Chemicals of Product do	•	ern in any listed chemic	cals
	Vermont Chemicals Product do	-	n cern in any listed chemic	cals
	Washington Chemic Product do	-	Concern in any listed chemic	cals
	-	nis product	-	e following inventories:
	AIIC	:	Not in compliance	with the inventory
	DSL	:	This product conta on the Canadian D	ins the following components that are not SL nor NDSL.
			Guanosine 5'-(tetra	ahydrogen triphosphate), 2'-deoxy-
			Adenosine 5'-(tetra	ahydrogen triphosphate), 2'-deoxy-
			Cytidine 5'-(tetrahy	/drogen triphosphate), 2'-deoxy-
			2'-Deoxythymidine	-5'-triphosphate-trisodium salt
			Digoxigenin-11-2-0	JUTP
	NZIoC	:	On the inventory, o	or in compliance with the inventory
	ENCS	:	Not in compliance	with the inventory
	ISHL	:	Not in compliance	with the inventory
	KECI	:	Not in compliance	with the inventory
	PICCS	:	Not in compliance	with the inventory
	IECSC	:	Not in compliance	with the inventory
	TCSI	:	Not in compliance	with the inventory
	TSCA	:	Product contains s	substance(s) not listed on TSCA inventory.
	TECI	:	Not in compliance	with the inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

Klenow enzyme



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CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards	: No SARA Hazards
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SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489): >= 50 - < 70 %

1,2,3-Propanetriol 56-81-5

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

US State Regulations

Massachusetts Right To Know 1,2,3-Propanetriol 56-81-5 Pennsylvania Right To Know 1,2,3-Propanetriol 56-81-5 Water 7732-18-5

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

Product does not contain any listed chemicals

Washington Chemicals of High Concern

Product does not contain any listed chemicals

California Permissible Exposure Limits for Chemical Contaminants

1,2,3-Propanetriol

56-81-5

The ingredients of this product are reported in the following inventories:

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	AIIC	:	Not in compliance	e with the inventory
	DSL	:		tains the following components listed on the . All other components are on the Canadian
			DNA-dependent	DNA polymerase
	NZIoC	:	On the inventory	, or in compliance with the inventory
	ENCS	:	Not in compliance	e with the inventory
	ISHL	:	Not in compliance	e with the inventory
	KECI	:	Not in compliance	e with the inventory
	PICCS	:	Not in compliance	e with the inventory
	IECSC	:	Not in compliance	e with the inventory
	TCSI	:	On the inventory	, or in compliance with the inventory
	TSCA	:	All substances lis	sted as active on the TSCA inventory
	TECI	:	Not in compliance	e with the inventory

Roche

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

Unlabeled Control DNA 1

GHS label elements

Not a hazardous substance or mixture. **Unlabeled Control DNA 2**

GHS label elements

Not a hazardous substance or mixture. **DNA Dilution buffer**

GHS label elements Not a hazardous substance or mixture. Labeled Control DNA

GHS label elements

Not a hazardous substance or mixture. *Hexanucleotide Mix*

GHS label elements

Not a hazardous substance or mixture.



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dNTP labeling mixture

GHS label elements

Not a hazardous substance or mixture. *Klenow enzyme*

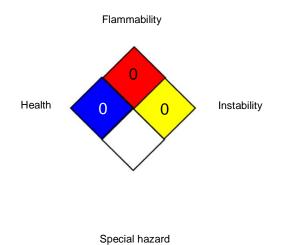
GHS label elements

Not a hazardous substance or mixture.

SECTION 16. OTHER INFORMATION

Further information

NFPA 704:

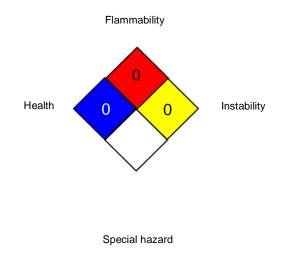


HMIS® IV:

HEALTH	1	0
FLAMMABILITY		0
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

NFPA 704:



HMIS® IV:

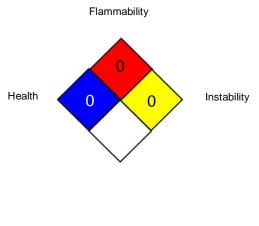


HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.



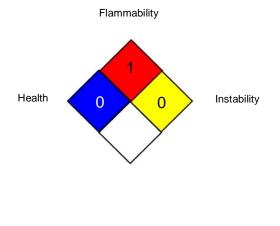
Version 1.10 Revision Date: 03-14-2022

NFPA 704:



Special hazard

NFPA 704:



Special hazard

Date of last issue: 10-08-2021 Date of first issue: 10-20-2015

HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

HMIS® IV:

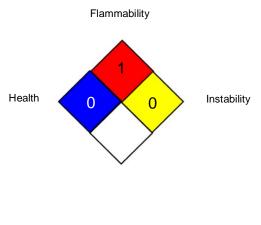


HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.



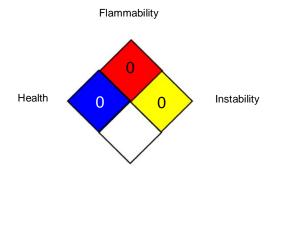
Version 1.10 Revision Date: 03-14-2022

NFPA 704:



Special hazard

NFPA 704:



Special hazard

Date of last issue: 10-08-2021 Date of first issue: 10-20-2015

HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

HMIS® IV:



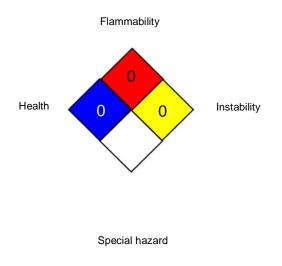
HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.



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NFPA 704:



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HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Distributor

MilliporeSigma 3050 Spruce Street SAINT LOUIS MO 63103 USA

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC -International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable



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Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 03-14-2022

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / Z8 / 2104