

Product identifier	
Product Name	HiFi prep kit 96
Recommended use	See product insert

ended use

Other means of identification

Product Code(s) 103-122-600

This product is a kit box containing 8 reagent tubes

Chemical name	Part number	Quantity	Cap color	Classification
Repair buffer 96	103-285-200	1	Purple	Skin irritant (category 3), Serious eye damage (category 1).
				(category r).
End repair mix 96	103-285-300	1	Blue	Not a hazardous material
DNA repair mix 96	103-285-400	1	Green	Not a hazardous material
Ligation mix 96	103-285-500	2	Yellow	Not a hazardous material
Ligation enhancer 96	103-285-600	1	Red	Not a hazardous material
Nuclease buffer 96	103-285-700	1	Light Purple	Not a hazardous material
Nuclease mix 96	103-285-800	1	Light green	Not a hazardous material

*Hazard classifications provided in the table are in accordance with UN Globally Harmonized System of Classification and Labelling of Chemicals. Country specific regulations may differ. Refer to the SDS for individual components for your country specific information.



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR)

Revision date 08-Apr-2024

Revision Number 1

1. Identification	
Product identifier	
Product Name	Repair buffer 96
Other means of identification	
Product Code(s)	103-285-200
Synonyms	None
Recommended use of the chemical	and restrictions on use
Recommended use	As part of kit
Restrictions on use	For research use only
Details of the supplier of the safety	data sheet
<u>Manufacturer Address</u> PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA www.pacb.com	
E-mail address	techsupport@pacb.com
Emergency telephone number	
Emergency Telephone	CHEMTREC 1-800-424-9300 (CCN#656805)

2. Hazard(s) identification

Classification

Serious eve damade/eve irritation	
e che de e y e damage/e y e initiation	Category

Label elements



Danger

Hazard statements

Causes serious eye damage

Precautionary Statements - Prevention

Wear eye and face protection

Precautionary Statements - Response

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or doctor

Other information

Causes mild skin irritation.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No.	Weight-%	Information Review	Date HMIRA filed and date exemption granted (if applicable)
Magnesium chloride	7786-30-3	0 - 10%	-	-
Dithiothreitol	3483-12-3	0 - 10%	-	-

4. First-aid measures

Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.	
Inhalation	Remove to fresh air. Get medical attention immediately if symptoms occur.	
Eye contact	Get immediate medical attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.	
Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.	
Ingestion	Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.	
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).	
Most important symptoms and effe	cts, both acute and delayed	
Symptoms	Burning sensation. Prolonged contact may cause redness and irritation.	
Effects of Exposure	No information available.	
Indication of any immediate medica	cal attention and special treatment needed	
Note to physicians	Treat symptomatically.	

5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the
	surrounding environment.

Specific hazards arising from the chemical	No information available.		
Explosion data Sensitivity to mechanical impac Sensitivity to static discharge	et None. None.		
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.		
6. Accidental release measures			
Personal precautions, protective en	quipment and emergency procedures		
Personal precautions Other information	Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Refer to protective measures listed in Sections 7 and 8.		
Methods and material for containm	ent and cleaning up		
Methods for containment	Prevent further leakage or spillage if safe to do so.		
Methods for cleaning up	Pick up and transfer to properly labeled containers.		
7. Handling and storage			
Precautions for safe handling			
Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.		
Conditions for safe storage, includ	ing any incompatibilities		
Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.		
8. Exposure controls/personal	protection		
Control parameters			
Exposure Limits	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies		
Appropriate engineering controls			
Engineering controls	Showers Eyewash stations Ventilation systems.		
Individual protection measures, such as personal protective equipment			
Eye/face protection	Tight sealing safety goggles.		
Hand protection	Wear suitable gloves.		
Skin and body protection	Wear suitable protective clothing.		
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.		

General hygiene considerations

Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

9. Physical and chemical properties

Information on basic physical and c		
Physical state	Liquid	
Appearance	Liquid	
Color	clear colorless	
Odor	Odorless	
Odor threshold	No information available	
Property_	Values	Remarks • Method
рН	7 - 8.5	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling rang	eNo data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive	No data available	
limits		
Lower flammability or explosive	No data available	
limits		
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
· ·		

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	Strong acids. Strong bases. Strong oxidizing agents.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye damage. May cause irreversible damage to eyes.
Skin contact	Specific test data for the substance or mixture is not available. Causes mild skin irritation.

Ingestion Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Redness. Burning. May cause blindness. Prolonged contact may cause redness and irritation.

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	14,141.40 mg/kg		
ATEmix (dermal)	59,333.30 mg/kg		
ATEmix (inhalation-gas)	99,999.00 ppm		
ATEmix (inhalation-vapor)	99,999.00 mg/l		
ATEmix (inhalation-dust/m	ist) 99,999.00 mg/l		
Component Information			
Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Magnesium chloride	= 2800 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
7786-30-3			

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

Skin corrosion/irritation	May cause skin irritation. Classification based on data available for ingredients. Causes mild skin irritation.
Serious eye damage/eye irritation	Classification based on data available for ingredients. Causes burns. Causes serious eye damage.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

12. Ecological information

Ecotoxicity	The environmental impact of this product has not been fully investigated.				
Chemical name	Algae/ac	luatic plants	Fish	Toxicity to	Crustacea
				microorganisms	
Magnesium chloride	EC50: >82	2.7mg/L (72h,	LC50: 1970 - 3880mg/L	-	EC50: =140mg/L (48h,
7786-30-3		kirchneriella	(96h, Pimephales		Daphnia magna)
		apitata)	promelas)		
Persistence and degradability No information available.					
Bioaccumulation		There is no d	lata for this product.		
Other adverse effects		No information	on available.		
13. Disposal consider	ations				

Disposal methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

14. Transport information

DOT	Not regulated
TDG	Not regulated
<u>MEX</u>	Not regulated
ICAO (air)	Not regulated
IATA	Not regulated
IMDG	Not regulated

15. Regulatory information International Inventories TSCA

Contact supplier for inventory compliance status.

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
Water	7732-18-5	Present	Active
Tris-HCI	1185-53-1	Present	Active
2' Deoxyadenosine 5'-triphosphatedisodium salt	1927-31-7	-	Unknown *
Dithiothreitol	3483-12-3	Present	Active
Magnesium chloride	7786-30-3	Present	Active
β-Nicotinamide adenine dinucleotide hydrate	53-84-9	Present	Active
ATP disodium salt trihydrate	51963-61-2	-	Unknown *
2'-Deoxythymidine-5'triphosphate	365-08-2	-	Unknown *
2'Deoxycytidine-5'triphosphate	2056-98-6	-	Unknown *
2'-Deoxyguanosine-5'triphosphate	2564-35-4	-	Unknown *

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL EINECS/ELINCS	Does not comply Does not comply
ENCS	Does not comply
IECSC	Does not comply
KECI	Does not comply
PICCS	Does not comply
AIIC	Does not comply
NZIOC	Does not comply

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIOC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water	-	-	Х
7732-18-5			

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other informatio	n				
NFPA HMIS	Health hazards 3 Health hazards 3	Flammability Flammability		Instability 0 Physical hazards 0	Special hazards - Personal protection X
Key or legend to abbre	eviations and acronyms	used in the safet	y data she	eet	
TWATWACeilingMaxKey literature referenceAgency for Toxic SubstaU.S. Environmental ProtectioEuropean Food Safety AEnvironmental ProtectioAcute Exposure GuidelinU.S. Environmental ProteU.S. Environmental ProteU.S. Environmental ProteU.S. Environmental ProteFood Research JournalHazardous Substance DInternational Uniform ChNational Institute of TeclAustralia National IndustNIOSH (National InstitutNational Library of MediU.S. National ToxicologyNew Zealand's ChemicaOrganization for Economic	n Agency he Level(s) (AEGL(s)) ection Agency Federal In- ection Agency High Produ- tection Agency High Production e for Occupational Safety cine's ChemID Plus (NLM cine's PubMed database	secticide, Fungicic used to compile ry (ATSDR) Database secticide, Fungicic uction Volume Che base (IUCLID) NITE) n and Assessmen and Health) I CIP) (NLM PUBMED) nation Database ((elopment Environ)	the SDS de, and Ro emicals t Scheme (CCID) ment, Heal	Skin designation denticide Act (NICNAS) th, and Safety Publicatio	

Organization for Economic Co-operation and Development Screening Information Data Set World Health Organization

Prepared By	PacBio Environment, Health, and Safety 1305 O'Brien Drive Menlo Park, CA 94025 USA safety@pacb.com.
Revision date	08-Apr-2024
Revision Note	No information available

Disclaimer

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. It is not a warranty or quality specification. This information relates only to the specific material designated and may not be valid for use in combination with any other material or in any other process.Research use only. Not for use in diagnostic procedures. ©2024, Pacific Biosciences of California, Inc. ("PacBio"). All rights reserved. Information in this document is subject to change without notice. PacBio assumes no responsibility for any errors or omissions in this document. Certain notices, terms, conditions and/or use restrictions may pertain to your use of PacBio products and/or third-party products. Refer to the applicable PacBio terms and conditions of sale and to the applicable license terms at pacb.com/license. Pacific Biosciences, the PacBio logo, PacBio, Circulomics, Omniome, SMRT, SMRTbell, Iso-Seq, Sequel, Nanobind, SBB, Revio, Onso, Apton, Kinnex, and PureTarget, are trademarks of PacBio.

End of Safety Data Sheet



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR)

Revision date 08-Apr-2024

Revision Number 1

1. Identification	
Product identifier	
Product Name	End repair 96
Other means of identification	
Product Code(s)	103-285-300
Synonyms	None
Recommended use of the chemical	and restrictions on use
Recommended use	As part of kit
Restrictions on use	For research use only
Details of the supplier of the safety	data sheet
<u>Manufacturer Address</u> PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA www.pacb.com	
E-mail address	techsupport@pacb.com
Emergency telephone number	
Emergency Telephone	CHEMTREC 1-800-424-9300 (CCN#656805)

2. Hazard(s) identification

Classification

This product is not considered hazardous by either the US OSHA Hazard Communication Standard (29 CFR 1910.1200) or the Canadian Workplace Hazardous Material Information System (WHMIS).

Label elements

Hazard statements

This product is not considered hazardous by either the US OSHA Hazard Communication Standard (29 CFR 1910.1200) or the Canadian Workplace Hazardous Material Information System (WHMIS).

Other information No information available. Biological Material Product contains substance(s) derived from bacteria, and Bovine Serum Albumin (BSA).

3. Composition/information on ingredients

Substance

Not applicable.

Methods for cleaning up

<u>Mixture</u>

The product contains no substances which at their given concentration, are considered to be hazardous to health.

4. First-aid measures	
Description of first aid measures	
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water.
Ingestion	Rinse mouth.
Most important symptoms and effe	ects, both acute and delayed
Symptoms	No information available.
Effects of Exposure	No information available.
Indication of any immediate medica	al attention and special treatment needed
Note to physicians	Treat symptomatically.
5. Fire-fighting measures	
5. Fire-fighting measures Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Suitable Extinguishing Media Specific hazards arising from the	surrounding environment. No information available.
Suitable Extinguishing Media Specific hazards arising from the chemical Explosion data Sensitivity to mechanical impace	surrounding environment. No information available.
Suitable Extinguishing Media Specific hazards arising from the chemical Explosion data Sensitivity to mechanical impac Sensitivity to static discharge Special protective equipment and	surrounding environment. No information available. Et None. None. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
Suitable Extinguishing Media Specific hazards arising from the chemical Explosion data Sensitivity to mechanical impac Sensitivity to static discharge Special protective equipment and precautions for fire-fighters 6. Accidental release measures	surrounding environment. No information available. Et None. None. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
Suitable Extinguishing Media Specific hazards arising from the chemical Explosion data Sensitivity to mechanical impac Sensitivity to static discharge Special protective equipment and precautions for fire-fighters 6. Accidental release measures	surrounding environment. No information available. St None. None. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
Suitable Extinguishing Media Specific hazards arising from the chemical Explosion data Sensitivity to mechanical impace Sensitivity to static discharge Special protective equipment and precautions for fire-fighters 6. Accidental release measures Personal precautions, protective equipment	surrounding environment. No information available. Et None. None. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. Ensure adequate ventilation.

Pick up and transfer to properly labeled containers.

7. Handling and storage	
Precautions for safe handling	
Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice.
Conditions for safe storage, includi	ng any incompatibilities
Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.
8. Exposure controls/personal p	protection
<u>Control parameters</u> Exposure Limits	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies
Appropriate engineering controls	
Engineering controls	Showers Eyewash stations Ventilation systems.
Individual protection measures, suc	ch as personal protective equipment
Eye/face protection	No special protective equipment required.
Hand protection	No special protective equipment required.
Skin and body protection	No special protective equipment required.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical state	Liquid	
Appearance	Liquid	
Color	clear colorless	
Odor	Odorless	
Odor threshold	No information available	
Property	Values	Remarks • Method
pH	7 - 8.5	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling rang	eNo data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	

None known

None known None known

None known None known

None known

None known

None known

Vapor pressure	No data available
Relative vapor density	No data available
Relative density	No data available
Water solubility	No data available
Solubility(ies)	No data available
Partition coefficient	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Specific test data for the substance or mixture is not available.	
Eye contact	Specific test data for the substance or mixture is not available.	
Skin contact	Specific test data for the substance or mixture is not available.	
Ingestion	Specific test data for the substance or mixture is not available.	
Symptoms related to the physical, of	chemical and toxicological characteristics	
Symptoms	No information available.	
Acute toxicity		
Numerical measures of toxicity		
The following values are calculated ATEmix (oral) ATEmix (dermal) ATEmix (inhalation-gas) ATEmix (inhalation-vapor) ATEmix (inhalation-dust/mist)	based on chapter 3.1 of the GHS document 31,500.00 mg/kg 25,000.00 mg/kg 99,999.00 ppm 99,999.00 mg/l 6.88 mg/l	
Delayed and immediate effects as well as chronic effects from short and long-term exposure		
Skin corrosion/irritation	No information available.	
Serious eye damage/eye irritation	No information available.	
Respiratory or skin sensitization	No information available.	
Germ cell mutagenicity	No information available.	
Carcinogenicity	No information available.	
Reproductive toxicity	No information available.	

12. Ecological information

STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

Ecotoxicity The environmental impact of this product has not been fully investigated. Persistence and degradability No information available. **Bioaccumulation** There is no data for this product. Other adverse effects No information available. 13. Disposal considerations **Disposal methods** Dispose of in accordance with local regulations. Dispose of waste in accordance with Waste from residues/unused products environmental legislation. **Contaminated packaging** Do not reuse empty containers.

14. Transport information

DOT	Not regulated
TDG	Not regulated
MEX	Not regulated
ICAO (air)	Not regulated
	Not regulated
IMDG_	Not regulated

15. Regulatory information

International Inventories TSCA

Contact supplier for inventory compliance status.

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
Water	7732-18-5	Present	Active
Glycerol	56-81-5	Present	Active
Tris-HCI	1185-53-1	Present	Active
Potassium chloride	7747-40-7	-	Unknown *
Igepal CA-630	9002-93-1	Present	Active
Tween 20	9005-64-5	Present	Active
Dithiothreitol	3483-12-3	Present	Active
Ethylenediamine tetraacetic acid	60-00-4	Present	Active
e.coli derived enzyme	-	-	Unknown *
E.coli Protein (SSB)	-	-	Unknown *
Exonuclease I	9037-46-1	-	Unknown *

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL	Does not comply
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Does not comply
KECI	Does not comply
PICCS	Does not comply
AIIC	Does not comply
NZIoC	Does not comply

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances **ENCS** - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIOC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water	-	-	Х
7732-18-5			
Glycerol	Х	Х	Х
56-81-5			
Ethylenediamine tetraacetic acid	X	X	X
60-00-4			

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

<u>NFPA</u>	Health hazards 2	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 0	Flammability 0	Physical hazards 0	Personal protection X

Key or legend to abbreviations and acronyms used in the safety data sheet

LegendSection 8: Exposure contTWATWA (time-weiCeilingMaximum limit	ghted average)	STEL Sk*	STEL (Short Term Exposure Limit) Skin designation
Key literature references and so Agency for Toxic Substances and U.S. Environmental Protection Age European Food Safety Authority (E Environmental Protection Agency Acute Exposure Guideline Level(s) U.S. Environmental Protection Age U.S. Environmental Protection Age Food Research Journal Hazardous Substance Database International Uniform Chemical Infi National Institute of Technology ar Australia National Industrial Chemi NIOSH (National Institute for Occu National Library of Medicine's Che National Library of Medicine's Pub U.S. National Toxicology Program New Zealand's Chemical Classifica Organization for Economic Co-ope Organization for Economic Co-ope World Health Organization	Disease Registry (ATSDR) ncy ChemView Database FSA) (AEGL(s)) ncy Federal Insecticide, Fun ncy High Production Volume ormation Database (IUCLID) d Evaluation (NITE) cals Notification and Assessi pational Safety and Health) mID Plus (NLM CIP) Med database (NLM PUBME (NTP) tition and Information Databa ration and Development Env ration and Development Higl	gicide, and Rod Chemicals ment Scheme (N D) se (CCID) ironment, Health Production Vol	NICNAS) h, and Safety Publications lume Chemicals Program
Prepared By	PacBio Environment, Health, ar 1305 O'Brien Drive Menlo Park, CA 94025 USA safety@pacb.com.	nd Safety	
Revision date	08-Apr-2024		

Revision Note

No information available

Disclaimer

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. It is not a warranty or quality specification. This information relates only to the specific material designated and may not be valid for use in combination with any other material or in any other process.Research use only. Not for use in diagnostic procedures. ©2024. Pacific Biosciences of California. Inc. ("PacBio"). All rights reserved. Information in this document is subject to change without notice. PacBio assumes no responsibility for any errors or omissions in this document. Certain notices, terms, conditions and/or use restrictions may pertain to your use of PacBio products and/or third-party products. Refer to the applicable PacBio terms and conditions of sale and to the applicable license terms at pacb.com/license. Pacific Biosciences, the PacBio logo, PacBio, Circulomics, Omniome, SMRT, SMRTbell, Iso-Seq, Sequel, Nanobind, SBB, Revio, Onso, Apton, Kinnex, and PureTarget, are trademarks of PacBio.

End of Safety Data Sheet



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR)

Revision date 08-Apr-2024

Revision Number 1

1. Identification		
Product identifier		
Product Name	DNA repair 96	
Other means of identification		
Product Code(s)	103-285-400	
Synonyms	None	
Recommended use of the chemical	and restrictions on use	
Recommended use	See product insert	
Restrictions on use	For research use only	
Details of the supplier of the safety	data sheet	
Manufacturer Address PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA www.pacb.com		
E-mail address	techsupport@pacb.com	
Emergency telephone number		
Emergency Telephone	CHEMTREC 1-800-424-9300 (CCN#656805)	

2. Hazard(s) identification

Classification

This product is not considered hazardous by either the US OSHA Hazard Communication Standard (29 CFR 1910.1200) or the Canadian Workplace Hazardous Material Information System (WHMIS).

Label elements

Hazard statements

This product is not considered hazardous by either the US OSHA Hazard Communication Standard (29 CFR 1910.1200) or the Canadian Workplace Hazardous Material Information System (WHMIS).

Other information No information available. Biological Material Product contains substance(s) derived from bacteria.

3. Composition/information on ingredients

Substance

Not applicable.

Methods for containment

Methods for cleaning up

<u>Mixture</u>

The product contains no substances which at their given concentration, are considered to be hazardous to health.

4. First-aid measures		
Description of first aid measures		
Inhalation	Remove to fresh air.	
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.	
Skin contact	Wash skin with soap and water.	
Ingestion	Rinse mouth.	
Most important symptoms and effect	cts, both acute and delayed	
Symptoms	No information available.	
Effects of Exposure	No information available.	
Indication of any immediate medica	I attention and special treatment needed	
Note to physicians	Treat symptomatically.	
5. Fire-fighting measures		
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.	
Specific hazards arising from the chemical	No information available.	
Explosion data Sensitivity to mechanical impac Sensitivity to static discharge	t None. None.	
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.	
6. Accidental release measures		
Personal precautions, protective equipment and emergency procedures		
Personal precautions	Ensure adequate ventilation.	
Methods and material for containme	ent and cleaning up	

Prevent further leakage or spillage if safe to do so.

Pick up and transfer to properly labeled containers.

7. Handling and storage		
Precautions for safe handling		
Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice.	
Conditions for safe storage, including any incompatibilities		
Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.	
8. Exposure controls/personal (protection	
Control parameters Exposure Limits	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies	
Appropriate engineering controls		
Engineering controls	Showers Eyewash stations Ventilation systems.	
Individual protection measures, such as personal protective equipment		
Eye/face protection	No special protective equipment required.	
Hand protection	No special protective equipment required.	
Skin and body protection	No special protective equipment required.	
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.	
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.	

9. Physical and chemical properties

Physical state	Liquid	
Appearance	Liquid	
Color	clear colorless	
Odor	Odorless	
Odor threshold	No information available	
Property	Values	Remarks • Method
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling rang	eNo data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	

Vapor pressure	No data available
Relative vapor density	No data available
Relative density	No data available
Water solubility	No data available
Solubility(ies)	No data available
Partition coefficient	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available

None known None known None known None known None known None known None known

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

· · · · ·			
Inhalation	Specific test data for the substance or mixture is not available.		
Eye contact	Specific test data for the substance or mixture is not available.		
Skin contact	Specific test data for the substance or mixture is not available.		
Ingestion	Specific test data for the substance or mixture is not available.		
Symptoms related to the physical, chemical and toxicological characteristics			
Symptoms	No information available.		
Acute toxicity			
Numerical measures of toxicity			
The following values are calculated ATEmix (oral) ATEmix (dermal) ATEmix (inhalation-gas) ATEmix (inhalation-vapor) ATEmix (inhalation-dust/mist)	l based on chapter 3.1 of the GHS document 28,000.00 mg/kg 22,222.20 mg/kg 99,999.00 ppm 99,999.00 mg/l 6.11 mg/l		
Delayed and immediate effects as well as chronic effects from short and long-term exposure			
Skin corrosion/irritation	No information available.		
Serious eye damage/eye irritation	No information available.		
Respiratory or skin sensitization	No information available.		
Germ cell mutagenicity	No information available.		
Carcinogenicity	No information available.		
Reproductive toxicity	No information available.		

STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

12. Ecological information	
Ecotoxicity	The environmental impact of this product has not been fully investigated.
Persistence and degradability	No information available.
Bioaccumulation	There is no data for this product.
Other adverse effects	No information available.
13. Disposal considerations	
Disposal methods	
Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

14. Transport information

DOT	Not regulated
TDG	Not regulated
MEX	Not regulated
ICAO (air)	Not regulated
ΙΑΤΑ	Not regulated
IMDG	Not regulated

15. Regulatory information International Inventories

TSCA

Contact supplier for inventory compliance status.

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
Water	7732-18-5	Present	Active
Glycerol	56-81-5	Present	Active
Tris-HCI	1185-53-1	Present	Active
Sodium chloride	7647-14-5	Present	Active
e.coli derived enzyme	-	-	Unknown *

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL	Does not comply
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Does not comply
KECI	Does not comply

PICCS	Does not comply
AIIC	Does not comply
NZIoC	Does not comply

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIOC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	Х
Glycerol 56-81-5	Х	Х	Х

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other in	nformation					
NFPA HMIS	Health hazards Health hazards		ammability ammability		Instability 0 Physical hazards 0	Special hazards - Personal protection X
Key or legen	d to abbreviations and acror	nyms used	in the safe	ty data sh	eet	
<u>Legend Sec</u> TWA Ceiling	tion 8: Exposure controls/perso TWA (time-weighted ave Maximum limit value		S	STEL Sk*	STEL (Short Term Skin designation	n Exposure Limit)

Key literature references and sources for data used to compile the SDS Agency for Toxic Substances and Disease Registry (ATSDR) U.S. Environmental Protection Agency ChemView Database European Food Safety Authority (EFSA) Environmental Protection Agency Acute Exposure Guideline Level(s) (AEGL(s)) U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act U.S. Environmental Protection Agency High Production Volume Chemicals Food Research Journal Hazardous Substance Database International Uniform Chemical Information Database (IUCLID) National Institute of Technology and Evaluation (NITE) Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS) NIOSH (National Institute for Occupational Safety and Health) National Library of Medicine's ChemID Plus (NLM CIP) National Library of Medicine's PubMed database (NLM PUBMED) U.S. National Toxicology Program (NTP) New Zealand's Chemical Classification and Information Database (CCID) Organization for Economic Co-operation and Development Environment, Health, and Safety Publications Organization for Economic Co-operation and Development High Production Volume Chemicals Program Organization for Economic Co-operation and Development Screening Information Data Set World Health Organization

Prenared By

Prepared By	PacBio Environment, Health, and Safety 1305 O'Brien Drive Menlo Park, CA 94025 USA safety@pacb.com.
Revision date	08-Apr-2024

Revision Note

No information available

Disclaimer

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. It is not a warranty or quality specification. This information relates only to the specific material designated and may not be valid for use in combination with any other material or in any other process. Research use only. Not for use in diagnostic procedures. ©2024, Pacific Biosciences of California, Inc. ("PacBio"). All rights reserved. Information in this document is subject to change without notice. PacBio assumes no responsibility for any errors or omissions in this document. Certain notices, terms, conditions and/or use restrictions may pertain to your use of PacBio products and/or third-party products. Refer to the applicable PacBio terms and conditions of sale and to the applicable license terms at pacb.com/license. Pacific Biosciences, the PacBio logo, PacBio, Circulomics, Omniome, SMRT, SMRTbell, Iso-Seq, Sequel, Nanobind, SBB, Revio, Onso, Apton, Kinnex, and PureTarget, are trademarks of PacBio.

End of Safety Data Sheet



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR)

Revision date 08-Apr-2024

Revision Number 1

1. Identification	
Product identifier	
Product Name	Ligation mix 96
Other means of identification	
Product Code(s)	103-285-500
Synonyms	None
Recommended use of the chemical	and restrictions on use
Recommended use	As part of kit
Restrictions on use	For research use only
Details of the supplier of the safety	data sheet
<u>Manufacturer Address</u> PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA www.pacb.com	
E-mail address	techsupport@pacb.com
Emergency telephone number	
Emergency Telephone	CHEMTREC 1-800-424-9300 (CCN#656805)

2. Hazard(s) identification

Classification

This product is not considered hazardous by either the US OSHA Hazard Communication Standard (29 CFR 1910.1200) or the Canadian Workplace Hazardous Material Information System (WHMIS).

Label elements

Hazard statements

This product is not considered hazardous by either the US OSHA Hazard Communication Standard (29 CFR 1910.1200) or the Canadian Workplace Hazardous Material Information System (WHMIS).

Other information No information available. Biological Material Product contains substance(s) derived from bacteria.

3. Composition/information on ingredients

Substance

Not applicable.

Methods for cleaning up

<u>Mixture</u>

The product contains no substances which at their given concentration, are considered to be hazardous to health.

4. First-aid measures	
Description of first aid measures	
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water.
Ingestion	Rinse mouth.
Most important symptoms and effe	ects, both acute and delayed
Symptoms	No information available.
Effects of Exposure	No information available.
Indication of any immediate medica	al attention and special treatment needed
Note to physicians	Treat symptomatically.
5. Fire-fighting measures	
5. Fire-fighting measures Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Suitable Extinguishing Media Specific hazards arising from the	surrounding environment. No information available.
Suitable Extinguishing Media Specific hazards arising from the chemical Explosion data Sensitivity to mechanical impace	surrounding environment. No information available.
Suitable Extinguishing Media Specific hazards arising from the chemical Explosion data Sensitivity to mechanical impac Sensitivity to static discharge Special protective equipment and	surrounding environment. No information available. Et None. None. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
Suitable Extinguishing Media Specific hazards arising from the chemical Explosion data Sensitivity to mechanical impac Sensitivity to static discharge Special protective equipment and precautions for fire-fighters 6. Accidental release measures	surrounding environment. No information available. Et None. None. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
Suitable Extinguishing Media Specific hazards arising from the chemical Explosion data Sensitivity to mechanical impac Sensitivity to static discharge Special protective equipment and precautions for fire-fighters 6. Accidental release measures	surrounding environment. No information available. St None. None. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
Suitable Extinguishing Media Specific hazards arising from the chemical Explosion data Sensitivity to mechanical impace Sensitivity to static discharge Special protective equipment and precautions for fire-fighters 6. Accidental release measures Personal precautions, protective equipment	surrounding environment. No information available. Et None. None. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. Ensure adequate ventilation.

Pick up and transfer to properly labeled containers.

7. Handling and storage		
Precautions for safe handling		
Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice.	
Conditions for safe storage, including any incompatibilities		
Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.	
8. Exposure controls/personal p	rotection	
<u>Control parameters</u> Exposure Limits	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies	
Appropriate engineering controls		
Engineering controls	Showers Eyewash stations Ventilation systems.	
Individual protection measures, suc	h as personal protective equipment	
Eye/face protection	No special protective equipment required.	
Hand protection	No special protective equipment required.	
Skin and body protection	No special protective equipment required.	
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.	
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.	

9. Physical and chemical properties

Physical state	Liquid	
Appearance	Liquid	
Color	clear colorless	
Odor	Odorless	
Odor threshold	No information available	
Property_	Values_	Remarks • Method
pH	7 - 8.5	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling rang	eNo data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	

Vapor pressure	No data available
Relative vapor density	No data available
Relative density	No data available
Water solubility	No data available
Solubility(ies)	No data available
Partition coefficient	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available

None known None known None known None known None known None known None known

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Specific test data for the substance or mixture is not available.	
Eye contact	Specific test data for the substance or mixture is not available.	
Skin contact	Specific test data for the substance or mixture is not available.	
Ingestion	Specific test data for the substance or mixture is not available.	
Symptoms related to the physical, chemical and toxicological characteristics		
Symptoms	No information available.	
Acute toxicity		
Numerical measures of toxicity		
The following values are calculated ATEmix (oral) ATEmix (dermal) ATEmix (inhalation-gas) ATEmix (inhalation-vapor) ATEmix (inhalation-dust/mist)	l based on chapter 3.1 of the GHS document 30,455.90 mg/kg 24,444.40 mg/kg 99,999.00 ppm 99,999.00 mg/l 7.79 mg/l	
Delayed and immediate effects as v	vell as chronic effects from short and long-term exposure	
Skin corrosion/irritation	No information available.	
Serious eye damage/eye irritation	No information available.	
Respiratory or skin sensitization	No information available.	
Germ cell mutagenicity	No information available.	
Carcinogenicity	No information available.	
Reproductive toxicity	No information available.	

STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

12. Ecological information

Ecotoxicity	
Persistence and degradability	No information available.
Bioaccumulation	There is no data for this product.
Other adverse effects	No information available.
13. Disposal considerations	
Disposal methods	
Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

14. Transport information

DOT	Not regulated
TDG	Not regulated
MEX	Not regulated
ICAO (air)	Not regulated
	Not regulated
IMDG	Not regulated

15. Regulatory information

International Inventories TSCA

Contact supplier for inventory compliance status.

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
Water	7732-18-5	Present	Active
Glycerol	56-81-5	Present	Active
Trade secret	-	-	Unknown *
Tris base	77-86-1	Present	Active
Polyethylene glycol	25322-68-3	Present	Active
Magnesium chloride	7786-30-3	Present	Active
ATP	56-65-5	Present	Active
Dithiothreitol	3483-12-3	Present	Active

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL EINECS/ELINCS Does not comply Does not comply

ENCS	Does not comply
IECSC	Does not comply
KECI	Does not comply
PICCS	Does not comply
AIIC	Does not comply
NZIoC	Does not comply

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIOC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

<u>CERCLA</u>

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	Х
Glycerol 56-81-5	Х	Х	Х

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other inform	mation				
NFPA HMIS	Health hazards Health hazards		Flammability 0 Flammability 0	Instability 0 Physical hazards 0	Special hazards - Personal protection X
Key or legend to	abbreviations and acro	nvme	used in the safety data	shaat	

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend	Section 8: Exposure controls/personal protection		
TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	Sk*	Skin designation

Key literature references and sources for data used to compile the SDS Agency for Toxic Substances and Disease Registry (ATSDR) U.S. Environmental Protection Agency ChemView Database European Food Safety Authority (EFSA) **Environmental Protection Agency** Acute Exposure Guideline Level(s) (AEGL(s)) U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act U.S. Environmental Protection Agency High Production Volume Chemicals Food Research Journal Hazardous Substance Database International Uniform Chemical Information Database (IUCLID) National Institute of Technology and Evaluation (NITE) Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS) NIOSH (National Institute for Occupational Safety and Health) National Library of Medicine's ChemID Plus (NLM CIP) National Library of Medicine's PubMed database (NLM PUBMED) U.S. National Toxicology Program (NTP) New Zealand's Chemical Classification and Information Database (CCID) Organization for Economic Co-operation and Development Environment, Health, and Safety Publications Organization for Economic Co-operation and Development High Production Volume Chemicals Program Organization for Economic Co-operation and Development Screening Information Data Set World Health Organization PacBio **Prepared By** Environment, Health, and Safety 1305 O'Brien Drive Menlo Park, CA 94025 USA

safety@pacb.com.

Revision date

Revision Note

08-Apr-2024

No information available

Disclaimer

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. It is not a warranty or quality specification. This information relates only to the specific material designated and may not be valid for use in combination with any other material or in any other process.Research use only. Not for use in diagnostic procedures. ©2024, Pacific Biosciences of California, Inc. ("PacBio"). All rights reserved. Information in this document is subject to change without notice. PacBio assumes no responsibility for any errors or omissions in this document. Certain notices, terms, conditions and/or use restrictions may pertain to your use of PacBio products and/or third-party products. Refer to the applicable PacBio terms and conditions of sale and to the applicable license terms at pacb.com/license. Pacific Biosciences, the PacBio logo, PacBio, Circulomics, Omniome, SMRT, SMRTbell, Iso-Seq, Sequel, Nanobind, SBB, Revio, Onso, Apton, Kinnex, and PureTarget, are trademarks of PacBio.

End of Safety Data Sheet



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR)

Revision date 08-Apr-2024

Revision Number 1

1. Identification	
Product identifier	
Product Name	Ligation enhancer 96
Other means of identification	
Product Code(s)	103-285-600
Synonyms	None
Recommended use of the chemical	and restrictions on use
Recommended use	As part of kit
Restrictions on use	For research use only
Details of the supplier of the safety	data sheet
<u>Manufacturer Address</u> PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA www.pacb.com	
E-mail address	techsupport@pacb.com
Emergency telephone number	
Emergency Telephone	CHEMTREC 1-800-424-9300 (CCN#656805)

2. Hazard(s) identification

Classification

This product is not considered hazardous by either the US OSHA Hazard Communication Standard (29 CFR 1910.1200) or the Canadian Workplace Hazardous Material Information System (WHMIS).

Label elements

Hazard statements

This product is not considered hazardous by either the US OSHA Hazard Communication Standard (29 CFR 1910.1200) or the Canadian Workplace Hazardous Material Information System (WHMIS).

Other information

No information available.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

The product contains no substances which at their given concentration, are considered to be hazardous to health.

4. First-aid measures	
Description of first aid measures	
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water.
Ingestion	Rinse mouth.
Most important symptoms and offer	ate both coute and delayed
Most important symptoms and effe	cts, both acute and delayed
Symptoms	No information available.
Effects of Exposure	No information available.
Indication of any immediate medica	I attention and special treatment needed
Note to physicians	Treat symptomatically.
5. Fire-fighting measures	
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific hazards arising from the chemical	No information available.
Explosion data Sensitivity to mechanical impac Sensitivity to static discharge	t None. None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
6. Accidental release measures	

b. Accidental release measures

Personal precautions, protective equipment and emergency procedures		
Personal precautions Ensure adequate ventilation.		
Methods and material for containment and cleaning up		
Methods for containment	Prevent further leakage or spillage if safe to do so.	
Methods for cleaning up	Pick up and transfer to properly labeled containers.	

7. Handling and storage	
r nanding and storage	
Precautions for safe handling	
Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice.
Conditions for safe storage, includ	ing any incompatibilities
Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.
9. Evenouro controlo/noroonal -	
8. Exposure controls/personal	protection
<u>Control parameters</u> Exposure Limits	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies
Appropriate engineering controls	
Engineering controls	Showers Eyewash stations Ventilation systems.
Individual protection measures, su	ch as personal protective equipment
Eye/face protection	No special protective equipment required.
Hand protection	No special protective equipment required.
Skin and body protection	No special protective equipment required.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Information on basic physical and o Physical state Appearance Color	Liquid Liquid clear colorless	
Odor Odor threshold	Odorless No information available	
Odor threshold	NO INFORMATION AVAILABLE	
Property	Values	Remarks • Method
рН	7 - 8.5	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling rang	eNo data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known

Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known

10. Stability and reactivity

Reactivity	No information available.		
Chemical stability	Stable under normal conditions.		
Possibility of hazardous reactions	None under normal processing.		
Conditions to avoid	None known based on information supplied.		
Incompatible materials	None known based on information supplied.		
Hazardous decomposition products None known based on information supplied.			

11. Toxicological information

Information on likely routes of exposure

Inhalation	Specific test data for the substance or mixture is not available.	
Eye contact	Specific test data for the substance or mixture is not available.	
Skin contact	Specific test data for the substance or mixture is not available.	
Ingestion	Specific test data for the substance or mixture is not available.	
Symptoms related to the physical, or	chemical and toxicological characteristics	
Symptoms	No information available.	
Acute toxicity		
Numerical measures of toxicity		
The following values are calculated ATEmix (oral) ATEmix (dermal) ATEmix (inhalation-gas) ATEmix (inhalation-vapor) ATEmix (inhalation-dust/mist)	based on chapter 3.1 of the GHS document 25,200.00 mg/kg 20,000.00 mg/kg 99,999.00 ppm 99,999.00 mg/l 5.50 mg/l	
Delayed and immediate effects as v	vell as chronic effects from short and long-term exposure	
Skin corrosion/irritation	No information available.	
Serious eye damage/eye irritation	No information available.	
Respiratory or skin sensitization	No information available.	
Germ cell mutagenicity	No information available.	
Carcinogenicity	No information available.	
Reproductive toxicity	No information available.	

STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

12. Ecological information

Ecotoxicity	The environmental impact of this product has not been fully investigated.
Persistence and degradability	No information available.
Bioaccumulation	There is no data for this product.
Other adverse effects	No information available.
13. Disposal considerations	
Disposal methods	

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

14. Transport information

DOT	Not regulated
TDG	Not regulated
MEX	Not regulated
ICAO (air)	Not regulated
IATA	Not regulated
IMDG	Not regulated

15. Regulatory information

International Inventories TSCA

Contact supplier for inventory compliance status.

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
Glycerol	56-81-5	Present	Active
Water	7732-18-5	Present	Active
Sodium chloride	7647-14-5	Present	Active
Tris-HCI	1185-53-1	Present	Active
Dithiothreitol	3483-12-3	Present	Active
Ethylenediamine tetraacetic acid	60-00-4	Present	Active

DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Does not comply
IECSC	Complies
KECI	Does not comply
PICCS	Complies
AIIC	Complies

NZIoC

Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIOC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Glycerol	Х	Х	Х
56-81-5			
Water	-	-	Х
7732-18-5			
Ethylenediamine tetraacetic acid	X	Х	Х
60-00-4			

U.S. EPA Label Information

Ceiling

EPA Pesticide Registration Number Not applicable

Maximum limit value

16. Other information					
NFPA HMIS	Health hazards 2 Health hazards 0	Flammability Flammability		Instability 0 Physical hazards 0	Special hazards - Personal protection X
Key or legend to abbreviations and acronyms used in the safety data sheet					
Legend Section 8: Exposure controls/personal protection TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)					

Sk*

Skin designation

Key literature references and sources for data used to compile the SDS Agency for Toxic Substances and Disease Registry (ATSDR) U.S. Environmental Protection Agency ChemView Database European Food Safety Authority (EFSA) Environmental Protection Agency Acute Exposure Guideline Level(s) (AEGL(s)) U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act U.S. Environmental Protection Agency High Production Volume Chemicals Food Research Journal Hazardous Substance Database International Uniform Chemical Information Database (IUCLID) National Institute of Technology and Evaluation (NITE) Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS) NIOSH (National Institute for Occupational Safety and Health) National Library of Medicine's ChemID Plus (NLM CIP) National Library of Medicine's PubMed database (NLM PUBMED) U.S. National Toxicology Program (NTP) New Zealand's Chemical Classification and Information Database (CCID) Organization for Economic Co-operation and Development Environment, Health, and Safety Publications Organization for Economic Co-operation and Development High Production Volume Chemicals Program Organization for Economic Co-operation and Development Screening Information Data Set World Health Organization

Prepared By	PacBio Environment, Health, and 1305 O'Brien Drive Menlo Park, CA 94025 USA safety@pacb.com.
Revision date	08-Apr-2024

Revision Note

No information available

Disclaimer

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. It is not a warranty or quality specification. This information relates only to the specific material designated and may not be valid for use in combination with any other material or in any other process.Research use only. Not for use in diagnostic procedures. ©2024, Pacific Biosciences of California, Inc. ("PacBio"). All rights reserved. Information in this document is subject to change without notice. PacBio assumes no responsibility for any errors or omissions in this document. Certain notices, terms, conditions and/or use restrictions may pertain to your use of PacBio products and/or third-party products. Refer to the applicable PacBio terms and conditions of sale and to the applicable license terms at pacb.com/license. Pacific Biosciences, the PacBio logo, PacBio, Circulomics, Omniome, SMRT, SMRTbell, Iso-Seq, Sequel, Nanobind, SBB, Revio, Onso, Apton, Kinnex, and PureTarget, are trademarks of PacBio.

Safety

End of Safety Data Sheet



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR)

Revision date 08-Apr-2024

Revision Number 1

1. Identification		
Product identifier		
Product Name	Nuclease buffer 96	
Other means of identification		
Product Code(s)	103-285-700	
Synonyms	None	
Recommended use of the chemical and restrictions on use		
Recommended use	As part of kit	
Restrictions on use	For research use only	
Details of the supplier of the safety	data sheet	
<u>Manufacturer Address</u> PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA www.pacb.com		
E-mail address	techsupport@pacb.com	
Emergency telephone number		
Emergency Telephone	CHEMTREC 1-800-424-9300 (CCN#656805)	

2. Hazard(s) identification

Classification

This product is not considered hazardous by either the US OSHA Hazard Communication Standard (29 CFR 1910.1200) or the Canadian Workplace Hazardous Material Information System (WHMIS).

Label elements

Hazard statements

This product is not considered hazardous by either the US OSHA Hazard Communication Standard (29 CFR 1910.1200) or the Canadian Workplace Hazardous Material Information System (WHMIS).

Other information No information available. Biological Material Product contains Bovine Serum Albumin (BSA).

3. Composition/information on ingredients

Substance

Not applicable.

<u>Mixture</u>

The product contains no substances which at their given concentration, are considered to be hazardous to health.

4. First-aid measures	
Description of first aid measures	
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water.
Ingestion	Rinse mouth.
Most important symptoms and effe	cts, both acute and delayed
Symptoms	No information available.
Effects of Exposure	No information available.
Indication of any immediate medica	I attention and special treatment needed
Note to physicians	Treat symptomatically.
5. Fire-fighting measures	
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific hazards arising from the chemical	No information available.
Explosion data Sensitivity to mechanical impac Sensitivity to static discharge	t None. None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
6. Accidental release measures	
Personal precautions, protective eq	uipment and emergency procedures
Personal precautions	Ensure adequate ventilation.
Methods and material for containme	

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage			
Precautions for safe handling			
Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice.		
Conditions for safe storage, includ	ing any incompatibilities		
Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.		
8. Exposure controls/personal protection			
6. Exposure controls/personal			
Control parameters Exposure Limits	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies		
Appropriate engineering controls			
Engineering controls	Showers Eyewash stations Ventilation systems.		
Individual protection measures, su	ch as personal protective equipment		
Eye/face protection	No special protective equipment required.		
Hand protection	No special protective equipment required.		
Skin and body protection	No special protective equipment required.		
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.		
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.		

9. Physical and chemical properties

Information on basic physical and	chemical properties_	
Physical state	Liquid	
Appearance	Liquid	
Color	clear colorless	
Odor	Odorless	
Odor threshold	No information available	
Property_	Values_	Remarks • Method
pH	7 - 8.5	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling rang	je No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	

Vapor pressure	No data available
Relative vapor density	No data available
Relative density	No data available
Water solubility	No data available
Solubility(ies)	No data available
Partition coefficient	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available

None known None known None known None known None known None known None known

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Specific test data for the substance or mixture is not available.		
Specific test data for the substance or mixture is not available.		
Specific test data for the substance or mixture is not available.		
Specific test data for the substance or mixture is not available.		
chemical and toxicological characteristics		
No information available.		
ed based on chapter 3.1 of the GHS document 99,999.00 mg/kg 99,999.00 mg/kg 99,999.00 ppm 99,999.00 mg/l 99,999.00 mg/l		
ed and immediate effects as well as chronic effects from short and long-term exposure		
No information available.		

STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

12. Ecological information

Ecotoxicity	
Persistence and degradability	No information available.
Bioaccumulation	There is no data for this product.
Other adverse effects	No information available.
13. Disposal considerations	
Disposal methods	
Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

14. Transport information

DOT	Not regulated
TDG	Not regulated
MEX	Not regulated
ICAO (air)	Not regulated
	Not regulated
IMDG	Not regulated

15. Regulatory information International Inventories TSCA

Contact supplier for inventory compliance status.

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
Water	7732-18-5	Present	Active
Potassium acetate	127-08-2	Present	Active
Tris acetate	6850-28-8	Present	Active
Magnesium acetate	142-72-3	Present	Active
Bovine Serum Albumin	9048-46-8	Present	Active
Dithiothreitol	3483-12-3	Present	Active

DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Does not comply
IECSC	Does not comply
KECI	Does not comply
PICCS	Complies

AIIC	Does not comply
NZIoC	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIOC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

HMIS

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water	-	-	Х
7732-18-5			

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information	n			
NFPA	Health hazards 0	Flammability 0	Instability	0 Special hazards -

Physical hazards 0

opoolal hasala	
Personal protection	Х

Key or legend to abbreviations and acronyms used in the safety data sheet

Health hazards 0

Legend	Section 8: Exposure controls/personal protection		
TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceilina	Maximum limit value	Sk*	Skin designation

Flammability 0

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR) U.S. Environmental Protection Agency ChemView Database European Food Safety Authority (EFSA) Environmental Protection Agency Acute Exposure Guideline Level(s) (AEGL(s)) U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

National Institute of Technology and Evaluation (NITE)

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

U.S. National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

Organization for Economic Co-operation and Development High Production Volume Chemicals Program

Organization for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Prepared By	PacBio Environment, Health, and Safety 1305 O'Brien Drive Menlo Park, CA 94025 USA safety@pacb.com.
Revision date	08-Apr-2024
Revision Note	No information available

Disclaimer

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. It is not a warranty or quality specification. This information relates only to the specific material designated and may not be valid for use in combination with any other material or in any other process.Research use only. Not for use in diagnostic procedures. ©2024, Pacific Biosciences of California, Inc. ("PacBio"). All rights reserved. Information in this document is subject to change without notice. PacBio assumes no responsibility for any errors or omissions in this document. Certain notices, terms, conditions and/or use restrictions may pertain to your use of PacBio products and/or third-party products. Refer to the applicable PacBio terms and conditions of sale and to the applicable license terms at pacb.com/license. Pacific Biosciences, the PacBio logo, PacBio, Circulomics, Omniome, SMRT, SMRTbell, Iso-Seq, Sequel, Nanobind, SBB, Revio, Onso, Apton, Kinnex, and PureTarget, are trademarks of PacBio.

End of Safety Data Sheet



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR)

Revision date 08-Apr-2024

Revision Number 1

1. Identification	
Product identifier	
Product Name	Nuclease mix 96
Other means of identification	
Product Code(s)	103-285-800
Synonyms	None
Recommended use of the chemical	and restrictions on use
Recommended use	See product insert
Restrictions on use	For research use only
Details of the supplier of the safety	data sheet
Manufacturer Address PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA www.pacb.com	
E-mail address	techsupport@pacb.com
Emergency telephone number	
Emergency Telephone	CHEMTREC 1-800-424-9300 (CCN#656805)

2. Hazard(s) identification

Classification

This product is not considered hazardous by either the US OSHA Hazard Communication Standard (29 CFR 1910.1200) or the Canadian Workplace Hazardous Material Information System (WHMIS).

Label elements

Hazard statements

This product is not considered hazardous by either the US OSHA Hazard Communication Standard (29 CFR 1910.1200) or the Canadian Workplace Hazardous Material Information System (WHMIS).

<u>Other information</u> No information available. **Biological Material** Product contains substance(s) derived from bacteria, and Bovine Serum Albumin (BSA).

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

The product contains no substances which at their given concentration, are considered to be hazardous to health.

4. First-aid measures

Description of first aid measures

Remove to fresh air.	
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.	
Wash skin with soap and water.	
Rinse mouth.	
cts, both acute and delayed	
No information available.	
No information available.	
l attention and special treatment needed	
Treat symptomatically.	
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.	
No information available.	
t None. None.	

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and storage				
Precautions for safe handling				
Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice.			
Conditions for safe storage, includ	ing any incompatibilities			
Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.			
8. Exposure controls/personal p	protection			
<u>Control parameters</u> Exposure Limits	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies			
Appropriate engineering controls				
Engineering controls	Showers Eyewash stations Ventilation systems.			
Individual protection measures, su	ch as personal protective equipment			
Eye/face protection	No special protective equipment required.			
Hand protection	No special protective equipment required.			
Skin and body protection	No special protective equipment required.			
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.			
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.			

Remarks • Method

None known None known None known None known None known

9. Physical and chemical properties

Information on basic physical and chemical properties			
Physical state	Liquid		
Appearance	Liquid		
Color	clear colorless		
Odor	Odorless		
Odor threshold	No information available		
Property_	Values		
pH	7 - 8.5		
Melting point / freezing point	No data available		
Initial boiling point and boiling range	e No data available		
Flash point	No data available		
Evaporation rate	No data available		
Flammability Limit in Air			
Upper flammability or explosive	No data available		

limits		
Lower flammability or explosiv	 No data available 	
limits		
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.
Symptoms related to the physical,	chemical and toxicological characteristics
Symptoms	No information available.
Acute toxicity	
Numerical measures of toxicity	
The following values are calculated ATEmix (oral) ATEmix (dermal) ATEmix (inhalation-gas) ATEmix (inhalation-vapor) ATEmix (inhalation-dust/mist)	l based on chapter 3.1 of the GHS document 25,200.00 mg/kg 20,000.00 mg/kg 99,999.00 ppm 99,999.00 mg/l 5.50 mg/l
Delayed and immediate effects as v	vell as chronic effects from short and long-term exposure
Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.

Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

12. Ecological information		
Ecotoxicity	The environmental impact of this product has not been fully investigated.	
Persistence and degradability	No information available.	
Bioaccumulation	There is no data for this product.	
Other adverse effects	No information available.	
13. Disposal considerations		
13. Disposal considerations Disposal methods		
· · ·	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.	
Disposal methods Waste from residues/unused	i v i	

14. Transport information

DOT	Not regulated
TDG	Not regulated
MEX	Not regulated
ICAO (air)	Not regulated
IATA	Not regulated
IMDG_	Not regulated

15. Regulatory information International Inventories

Interi	au	a	
TSC/	۱.		

Contact supplier for inventory compliance status.

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
Glycerol	56-81-5	Present	Active
Water	7732-18-5	Present	Active
Water	7732-18-5	Present	Active
Glycerol	56-81-5	Present	Active
Glycerol	56-81-5	Present	Active
Water	7732-18-5	Present	Active
RecJf	-	-	Unknown *
Sodium chloride	7647-14-5	Present	Active
Sodium chloride	7647-14-5	Present	Active
Tris-HCI	1185-53-1	Present	Active
Tris-HCI	1185-53-1	Present	Active

103-285-800 Nuclease mix 96

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
Tris-HCI	1185-53-1	Present	Active
Dithiothreitol	3483-12-3	Present	Active
Bovine Serum Albumin	9048-46-8	Present	Active
2-mercaptoethanol	60-24-2	Present	Active
Dithiothreitol	3483-12-3	Present	Active
Ethylenediamine tetraacetic acid	60-00-4	Present	Active
Ethylenediamine tetraacetic acid	60-00-4	Present	Active
Bovine Serum Albumin	9048-46-8	Present	Active
Exonuclease I	9037-46-1	-	Unknown *
Ethylenediamine tetraacetic acid	60-00-4	Present	Active
T7 Exonuclease	9012-90-2	Present	Active

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL	Does not comply
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Does not comply
KECI	Does not comply
PICCS	Does not comply
AIIC	Does not comply
NZIoC	Does not comply

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIOC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

					1
Glycerol	X			Х	X
56-81-5					
Water	-			-	X
7732-18-5					
Water	-			-	X
7732-18-5					
Glycerol	Х			Х	Х
56-81-5					
Glycerol	Х			Х	Х
56-81-5					
Water	-			-	Х
7732-18-5					~
	x			Х	X
2-mercaptoethanol	^			^	^
60-24-2				N/	N N
Ethylenediamine tetraacetie	c acid X			Х	X
60-00-4					
Ethylenediamine tetraacetie	c acid X			Х	X
60-00-4					
Ethylenediamine tetraacetie	c acid X			Х	X
60-00-4					
	lealth hazards 2 lealth hazards 0	Flammabili Flammabili		Instability 0 Physical hazards	Special hazards - 0 Personal protection X
Key or legend to abbrevia			-	-	
Legend Section 8: Exposu	ire controls/personal pr	otection		/	
	me-weighted average)		STEL		t Term Exposure Limit)
Ceiling Maximu	ım limit value		Sk*	Skin designa	ation
Key literature references					
Agency for Toxic Substanc U.S. Environmental Protect European Food Safety Autl Environmental Protection A Acute Exposure Guideline U.S. Environmental Protect U.S. Environmental Protect Food Research Journal Hazardous Substance Data International Uniform Chem National Institute of Technol	es and Disease Registi tion Agency ChemView hority (EFSA) gency Level(s) (AEGL(s)) tion Agency Federal Ins tion Agency High Produ abase	ry (ATSDR) Database secticide, Fung action Volume ase (IUCLID)	jicide, and Ro	odenticide Act	
NIOSH (National Institute for National Library of Medicine	I Chemicals Notification or Occupational Safety e's ChemID Plus (NLM	n and Assessm and Health) CIP)		(NICNAS)	
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NIOSH (National Institute for National Library of Medicine National Library of Medicine U.S. National Toxicology P New Zealand's Chemical C	I Chemicals Notification or Occupational Safety e's ChemID Plus (NLM e's PubMed database (rogram (NTP) lassification and Inform	n and Assessm and Health) CIP) NLM PUBMEI nation Databas	D) se (CCID)		
NIOSH (National Institute for National Library of Medicine National Library of Medicine	I Chemicals Notification or Occupational Safety e's ChemID Plus (NLM e's PubMed database (rogram (NTP) lassification and Inform Co-operation and Deve	n and Assessm and Health) CIP) NLM PUBMEI nation Databas elopment Envir	D) se (CCID) ronment, Hea	lth, and Safety Publi	

Organization for Economic Co-operation and Development Screening Information Data Set

World Health Organization

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No information available

Revision date 08-Apr-2024

Revision Note

Disclaimer

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. It is not a warranty or quality specification. This information relates only to the specific material designated and may not be valid for use in combination with any other material or in any other process.Research use only. Not for use in diagnostic procedures. ©2024, Pacific Biosciences of California, Inc. ("PacBio"). All rights reserved. Information in this document is subject to change without notice. PacBio assumes no responsibility for any errors or omissions in this document. Certain notices, terms, conditions and/or use restrictions may pertain to your use of PacBio products and/or third-party products. Refer to the applicable PacBio terms and conditions of sale and to the applicable license terms at pacb.com/license. Pacific Biosciences, the PacBio logo, PacBio, Circulomics, Omniome, SMRT, SMRTbell, Iso-Seq, Sequel, Nanobind, SBB, Revio, Onso, Apton, Kinnex, and PureTarget, are trademarks of PacBio.

End of Safety Data Sheet