

Product identifier	
Product Name	

HiFi prep kit 96

### Recommended use See product insert

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	Not a hazardous material
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 complies with the requirements of: JIS Z 7252:2019; JIS Z 7253:2019

> Revision date 08-Apr-2024 Revision Number 1

1. Identification		
Product Name	Popoir buffer 06	
Product Name	Repair buffer 96	
Registration Number(s)	No information available	
Details of the supplier of the safety	v data sheet	
Manufacturer PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA www.pacb.com Emergency telephone number	CHEMTREC 1-800-424-9300 (CCN#656805)	
E-mail address	techsupport@pacb.com	
Recommended use of the chemica	l and restrictions on use	
Recommended use	As part of kit.	
Restrictions on use For research u	ise only	
2. Hazard(s) identification		
GHS Classification Not a hazardous substance or mixtur	e according to the Globally Harmonized System (GHS	5)
Acute toxicity - Oral		Classification not possible
Acute toxicity - Dermal		Classification not possible
Acute toxicity - Inhalation (Gases)		Classification not applicable
Acute toxicity - Inhalation (Vapors)		Classification not possible
Acute toxicity - Inhalation (Dusts/Mist	s)	Classification not possible
Skin corrosion/irritation		Classification not possible
Serious eye damage/eye irritation		Classification not possible
Respiratory sensitization		Classification not possible
Skin sensitization		Classification not possible
Germ cell mutagenicity		Classification not possible
Carcinogenicity Classifica		Classification not possible
Reproductive toxicity		Classification not possible
Effects on or via lactation		Classification not possible
Specific target organ toxicity (single e	exposure)	Classification not possible
Specific target organ toxicity (repeate		Classification not possible
Aspiration hazard	/	Classification not possible
		Classification not possible
Chronic aquatic toxicity		Not classified
Hazardous to the ozone layer		Classification not possible

### **GHS label elements**

### Hazard statements

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

### Prevention

Not applicable

 Not applicable Storage • Not applicable Disposal Not applicable

### Other hazards

No information available.

### 3. Composition/information on ingredients

### Pure substance/mixture

Pure substance/mixture Mix	xture					
Chemical name	CAS No.	Weight-%	ENCS	ENCS Number	ISHL Inventory	ISHL No.
			Inventory			
Magnesium chloride	7786-30-3	0 - 10%	Existing	(1)-233	Existing	(1)-233,(1)-24 4

### Pollutant Release and Transfer Register (PRTR) Not applicable

Industrial Safety and Health Law ISHL Notifiable Substances

Not applicable

Harmful Substances Whose Names Are to be Indicated on the Label Not applicable

## **Poisonous and Deleterious Substances Control Law**

Not applicable

### 4. First-aid measures

In case of inhalation	Remove to fresh air.
In case of skin contact	Wash skin with soap and water.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
In case of ingestion	Rinse mouth.
Most important symptoms/effects, acute and delayed	No information available.
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.

Cool drums with water spray. **Special Extinguishing Media** 

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.	
Other information	CAUTION: Use of water spray when fighting fire may be inefficient.	
6. Accidental release measures		
Personal precautions, protective equipment and emergency procedures	Ensure adequate ventilation.	
For emergency responders	Use personal protection recommended in Section 8.	
Environmental precautions	See Section 12 for additional Ecological Information.	
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.	
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.	

7. Handling and storage	
Handling	
Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice.
Storage	
Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls/personal	protection
Exposure guidelines	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Biological monitoring indicator	This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies
Engineering controls	Showers Eyewash stations Ventilation systems.
Environmental exposure controls Personal protective equipment	No information available.
Respiratory protection	Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
Hand protection	Appropriate hand protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.
Eye/face protection	Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.
Skin and body protection	Appropriate skin and body protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local

jurisdiction.

### Information on basic physical and chemical properties

Appearance Physical state Color Odor Odor threshold	Liquid Liquid clear colorless Odorless No information available		
Property Melting point / freezing point Initial boiling point and boiling rang Upper/lower flammability or explosive limits Lower flammability or explosive limits		Remarks • Method No information available No information available No information available	
Flash point Evaporation rate Autoignition temperature Decomposition temperature pH Viscosity Water solubility Solubility(ies) Partition Coefficient (n-octanol/water) Vapor pressure Density and/or relative density Relative density	7 - 8.5	No information available No information available	
Other information Explosive properties Oxidizing properties	No information available No information 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	No information available.		
Incompatible materials	None known based on information supplied.		
Hazardous decomposition products None known based on information supplied.			
11. Toxicological information			
Acute toxicity			

The following values are calculated	based on o	hapter 3.1 of the GHS document
ATEmix (oral)	83,066.70	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/mist)	99,999.00	mg/l

### Numerical measures of toxicity - Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Magnesium chloride	= 2800 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Abbroviations and caronyma			

Abbreviations and acronyms Rat: Rat

### Symptoms

No information available.

Ingestion	Specific test data for the substance or mixture is not available.
Inhalation	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.

## 12. Ecological information

Ecotoxicity

Classification not possible. Based on available data, the classification criteria are not met.

Chemical name	Algae/aquatic plants	Fish	Crustacea	
Magnesium chloride	EC50: >82.7mg/L (72h,	LC50: 1970 - 3880mg/L (96h,	EC50: =140mg/L (48h, Daphnia	
	Pseudokirchneriella subcapitata)	Pimephales promelas)	magna)	
<b>Percentage for unknown hazards</b> 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.				
Persistence and degradability	No information available.	No information available.		
Bioaccumulation	There is no data for this pr	There is no data for this product.		
Mobility in soil	No information available.	No information available.		
Hazardous to the ozone layer	Classification not possible	Classification not possible. Based on available data, the classification criteria are not met.		

Other adverse effects	No information available.		
13. Disposal considerations			
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			
International Regulations	Not regulated		
Transport in bulk according to A No information available	Annex II of MARPOL 73/78 and the IBC Code		
ADR	Not regulated		
IATA	Not regulated		
Domestic regulations See section 15. If product is subject to the Fire Service Law, Poisonous and Deleterious Substance Control Law, High Pressure Gas Safety Law, Ship Safety Law, and/or the Civil Aeronautics Act, the requirements that are specific to each of the laws must be followed.			
<u>Japan</u>	Not regulated		
15. Regulatory information			
National regulations Industrial Safety and Health Law Not applicable ISHL Notifiable Substances Not applicable Harmful Substances Whose Names Are to be Indicated on the Label Not applicable			
Poisonous and Deleterious Substances Control Law Not applicable Fire Service Law: Not applicable Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (CSCL) Not applicable			
Act on Prevention of Marine Pollution and Maritime Disaster Not applicable			
International Regulations			
The Stockholm Convention on Persistent Organic Pollutants Not applicable			
The Rotterdam Convention Not applicable			
International Inventories TSCA DSL/NDSL EINECS/ELINCS ENCS IECSC KECI PICCS	Does not comply Does not comply		

AIIC	Does not comply
NZIOC	Does not comply
TCSI	TCSI

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

TCSI - Taiwan Chemical Substance Inventory

### 16. Other information

Prepared By	PacBio Environment, Health, and Safety 1305 O'Brien Drive Menlo Park, CA 94025	
Revision date Revision Note	USA safety@pacb.com 08-Apr-2024 ***Indicates updated data since last publication.	

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

Legend	Section 8: Exposure controls/personal protection		
TŴA	TWA (time-weighted average)	Ceiling	Maximum limit value
Sk*	Skin designation	+	Sensitizers

### 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 Chemicals Agency** 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

### 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

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End of Safety Data Sheet



# SAFETY DATA SHEET

This safety data sheet complies with the requirements of: JIS Z 7252:2019; JIS Z 7253:2019

> Revision date 08-Apr-2024 Revision Number 1

1. Identification		
Product Name	End repair 96	
Registration Number(s)	No information available	
Details of the supplier of the safety	<u>data sheet</u>	
Manufacturer PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA www.pacb.com Emergency telephone number	CHEMTREC 1-800-424-9300 (CCN#656805)	
E-mail address	techsupport@pacb.com	
Recommended use of the chemica	l and restrictions on use	
Recommended use	As part of kit.	
Restrictions on use For research u	ise only	
2. Hazard(s) identification		
GHS Classification Not a hazardous substance or mixtur	e according to the Globally Harmonized System (GF	IS)
Acute toxicity - Oral		Classification not possible
Acute toxicity - Dermal		Classification not possible
Acute toxicity - Inhalation (Gases)		Classification not applicable
Acute toxicity - Inhalation (Vapors)		Classification not possible
Acute toxicity - Inhalation (Dusts/Mist	s)	Classification not possible
Skin corrosion/irritation		Classification not possible
Serious eye damage/eye irritation		Classification not possible
Respiratory sensitization		Classification not possible
Skin sensitization		Classification not possible
Germ cell mutagenicity		Classification not possible
Carcinogenicity		Classification not possible
Reproductive toxicity		Classification not possible
Effects on or via lactation		Classification not possible
Specific target organ toxicity (single e	exposure)	Classification not possible
Specific target organ toxicity (repeate		Classification not possible
Aspiration hazard		Classification not possible
Acute aquatic toxicity		Classification not possible
Chronic aquatic toxicity		Not classified
Hazardous to the ozone layer		Classification not possible

### **GHS label elements**

### Hazard statements

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

### Prevention

Not applicable

### Response

Not applicable
Storage
Not applicable
Disposal
Not applicable

### Other hazards

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

Mixture

### 3. Composition/information on ingredients

### Pure substance/mixture

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

### Pollutant Release and Transfer Register (PRTR) Not applicable

### Industrial Safety and Health Law

ISHL Notifiable Substances Not applicable

Harmful Substances Whose Names Are to be Indicated on the Label Not applicable

### Poisonous and Deleterious Substances Control Law Not applicable

4. First-aid measures	
In case of inhalation	Remove to fresh air.
In case of skin contact	Wash skin with soap and water.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
In case of ingestion	Rinse mouth.
Most important symptoms/effects, acute and delayed	No information available.
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.
Special Extinguishing Media	Cool drums with water spray.
Special protective equipment and	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

103-285-300 End repair 96	Revision date 08-Apr-2024
precautions for fire-fighters Other information	Use personal protection equipment. CAUTION: Use of water spray when fighting fire may be inefficient.
6. Accidental release measures	S
Personal precautions, protective equipment and emergency procedures	Ensure adequate ventilation.
For emergency responders	Use personal protection recommended in Section 8.
Environmental precautions	See Section 12 for additional Ecological Information.
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.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage	
Handling	
Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice.
<u>Storage</u>	
Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection			
Exposure guidelines	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.		
Biological monitoring indicator	This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies		
Engineering controls	Showers Eyewash stations Ventilation systems.		
Environmental exposure controls Personal protective equipment	No information available.		
Respiratory protection	Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.		
Hand protection	Appropriate hand protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.		
Eye/face protection	Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.		
Skin and body protection	Appropriate skin and body protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.		

## 9. Physical and chemical properties

Appearance Physical state Color Odor Odor threshold	Liquid Liquid clear colorless Odorless No information available	
<u>Property</u> Melting point / freezing point Initial boiling point and boiling rang Upper/lower flammability or explos Upper flammability or explosive limits		Remarks • Method No information available No information available No information available
Lower flammability or explosive limits Flash point Evaporation rate Autoignition temperature Decomposition temperature pH Viscosity Water solubility Solubility(ies) Partition Coefficient (n-octanol/water) Vapor pressure Density and/or relative density Relative density Other information	7 - 8.5	No information available No information available
Explosive properties Oxidizing properties	No information available No information 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	No information available.	
Incompatible materials	None known based on information supplied.	
Hazardous decomposition products None known based on information supplied.		
11. Toxicological information		

### Acute toxicity

Numerical measures of toxicity - Product Information

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

ATEmix (oral)	31,500.00 mg/kg
ATEmix (dermal)	25,000.00 mg/kg
ATEmix (inhalation-gas)	99,999.00 ppm
ATEmix (inhalation-vapor)	99,999.00 mg/l
ATEmix (inhalation-dust/mist)	6.88 mg/l

### Symptoms

Ingestion	Specific test data for the substance or mixture is not available.	
Inhalation	Specific test data for the substance or mixture is not available.	
Skin contact	Specific test data for the substance or mixture is not available.	
Eye contact	Specific test data for the substance or mixture is not available.	

12. Ecological information		
Ecotoxicity	Classification not possible. Based on available data, the classification criteria are not met.	
Percentage for unknown hazar	<b>ds</b> 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.	
Persistence and degradability	No information available.	
Bioaccumulation	There is no data for this product.	
Mobility in soil	No information available.	
Hazardous to the ozone layer	Classification not possible. Based on available data, the classification criteria are not met.	
Other adverse effects	No information available.	
13. Disposal considerations		
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

# International Regulations IMDG

Not regulated

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

ADR	Not regulated
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<u>IATA</u>	Not regulated
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### **Domestic regulations**

See section 15. If product is subject to the Fire Service Law, Poisonous and Deleterious Substance Control Law, High Pressure Gas Safety Law, Ship Safety Law, and/or the Civil Aeronautics Act, the requirements that are specific to each of the laws must be followed.

<u>Japan</u>

Not regulated

### 15. Regulatory information

 National regulations

 Industrial Safety and Health Law

 Not applicable

 ISHL Notifiable Substances

 Not applicable

 Harmful Substances Whose Names Are to be Indicated on the Label

 Not applicable

Poisonous and Deleterious Substances Control Law Not applicable Fire Service Law: Not applicable Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (CSCL) Not applicable

Act on Prevention of Marine Pollution and Maritime Disaster Not applicable Waterworks (Water Supply) Act Waterworks (Water Supply) Act - items that require further study Air Pollution Control Law Volatile organic compound per Air Pollution Control Law article 2, paragraph 4 Hazardous air pollutants (HAPs) per Air Pollution Control Law article 2, paragraph 1, item 3 and Enforcement Order article 1

### International Regulations

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories TSCA Does not comply DSL/NDSL Does not comply EINECS/ELINCS Does not comply **ENCS** Does not comply Does not comply **IECSC** Does not comply KECI PICCS Does not comply Does not comply AIIC NZIOC Does not comply TCSI TCSI

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

TCSI - Taiwan Chemical Substance Inventory

#### 16. Other information **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** \*\*\*Indicates updated data since last publication. 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) Ceiling Maximum limit value Sk\* Skin designation Sensitizers + 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 Chemicals Agency 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

### Disclaimer

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a quide. 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 complies with the requirements of: JIS Z 7252:2019; JIS Z 7253:2019

> Revision date 08-Apr-2024 **Revision Number** 1

1. Identification		
Product Name	DNA repair 96	
Registration Number(s)	No information available	
Details of the supplier of the safety	data sheet	
Manufacturer PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA www.pacb.com Emergency telephone number	CHEMTREC 1-800-424-9300 (CCN#656805)	
Emergency telephone number	CHEWITKEC 1-800-424-9300 (CCN#050805)	
E-mail address	techsupport@pacb.com	
Recommended use of the chemica	l and restrictions on use	
Recommended use	See product insert.	
Restrictions on use For research u	se only	
2. Hazard(s) identification		
GHS Classification		
	e according to the Globally Harmonized System (GHS	5)
Acute toxicity - Oral		Classification not possible
Acute toxicity - Dermal		Classification not possible
Acute toxicity - Inhalation (Gases)		Classification not applicable
Skin corrosion/irritation		Classification not possible
Serious eye damage/eye irritation		Classification not possible
Respiratory sensitization		Classification not possible
Skin sensitization		Classification not possible
Germ cell mutagenicity		Classification not possible
Carcinogenicity		Classification not possible
Reproductive toxicity		Classification not possible
Effects on or via lactation		Classification not possible
Specific target organ toxicity (single e		Classification not possible
Specific target organ toxicity (repeate		Classification not possible
Aspiration hazard		Classification not possible
Acute aquatic toxicity		Classification not possible
Chronic aquatic toxicity		Not classified
Hazardous to the ozone layer		Classification not possible

### GHS label elements

### Hazard statements

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

Prevention Not applicable

Response Not applicable Storage

Not applicable
Disposal
Not applicable

Other hazards

### No information available.

Biological Material

Product contains substance(s) derived from bacteria.

### 3. Composition/information on ingredients

 Pure substance/mixture
 Mixture

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

Pollutant Release and Transfer Register (PRTR) Not applicable

Industrial Safety and Health Law ISHL Notifiable Substances Not applicable

Harmful Substances Whose Names Are to be Indicated on the Label Not applicable

## Poisonous and Deleterious Substances Control Law

Not applicable

### 4. First-aid measures

In case of inhalation	Remove to fresh air.
In case of skin contact	Wash skin with soap and water.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
In case of ingestion	Rinse mouth.
Most important symptoms/effects, acute and delayed	No information available.

Treat symptomatically.

# 5. Fire-fighting measures

Note to physicians

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.
Special Extinguishing Media	Cool drums with water spray.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

### Other information

CAUTION: Use of water spray when fighting fire may be inefficient.

# 6. Accidental release measuresPersonal precautions, protective<br/>equipment and emergency<br/>proceduresEnsure adequate ventilation.For emergency respondersUse personal protection recommended in Section 8.Environmental precautionsSee Section 12 for additional Ecological Information.Methods for containmentPrevent further leakage or spillage if safe to do so.Methods for cleaning upPick up and transfer to properly labeled containers.Prevention of secondary hazardsClean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage	
Handling	
Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice.
<u>Storage</u>	
Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection		
Exposure guidelines	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.	
Biological monitoring indicator	This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies	
Engineering controls	Showers Eyewash stations Ventilation systems.	
Environmental exposure controls	No information available.	
Personal protective equipment		
Respiratory protection	Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.	
Hand protection	Appropriate hand protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.	
Eye/face protection	Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.	
Skin and body protection	Appropriate skin and body protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.	

### 9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Color Odor Odor threshold	No information available clear colorless Odorless No information available	
<u>Property</u> Melting point / freezing point Initial boiling point and boiling ran Upper/lower flammability or explosive limits Lower flammability or explosive	osive limits e	Remarks • Method No information available No information available No information available
limits Flash point Evaporation rate Autoignition temperature Decomposition temperature pH		No information available No information available No information available No information available No information available
Viscosity Water solubility Solubility(ies) Partition Coefficient (n-octanol/water)		No information available No information available No information available
Vapor pressure Density and/or relative density Relative density		No information available No information available
Other information Explosive properties Oxidizing properties	No information available No information available	
10. Stability and reactivity		
Reactivity	No information available	

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

Hazardous decomposition products None known based on information supplied.

### 11. Toxicological information

### Acute toxicity

Numerical measures of toxicity - Product Information

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

ATEmix (oral)	28,000.00 mg/kg
ATEmix (dermal)	22,222.20 mg/kg
ATEmix (inhalation-gas)	99,999.00 ppm
ATEmix (inhalation-vapor)	99,999.00 mg/l
ATEmix (inhalation-dust/mist)	6.11 mg/l

Symptoms

No information available.

Ingestion	Specific test data for the substance or mixture is not available.
Inhalation	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.

12. Ecological information		
Ecotoxicity	Classification not possible. Based on available data, the classification criteria are not met.	
<b>Percentage for unknown hazards</b> 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.		
Persistence and degradability	No information available.	
Bioaccumulation	There is no data for this product.	
Mobility in soil	No information available.	
Hazardous to the ozone layer	Classification not possible. Based on available data, the classification criteria are not met.	
Other adverse effects	No information available.	
13. Disposal considerations		
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		

International Regulations	Not regulated
Transport in bulk accor No information available	ding to Annex II of MARPOL 73/78 and the IBC Code
ADR	Not regulated
IATA	Not regulated
	subject to the Fire Service Law, Poisonous and Deleterious Substance Control Law, High Pressure Law, and/or the Civil Aeronautics Act, the requirements that are specific to each of the laws must be
<u>Japan</u>	Not regulated
15. Regulatory informati	on
National regulations Industrial Safety and Health Not applicable ISHL Notifiable Substan Not applicable Harmful Substances Wi Not applicable	
Poisonous and Deleterious Not applicable Fire Service Law: Not applicable Act on the Evaluation of Ch Not applicable	Substances Control Law nemical Substances and Regulation of Their Manufacture, etc. (CSCL)
Not applicable Air Pollution Control Law	e Pollution and Maritime Disaster er Air Pollution Control Law article 2, paragraph 4
International Regulations	
The Stockholm Convention	on Persistent Organic Pollutants Not applicable
The Rotterdam Convention	Not applicable
International Inventories TSCA DSL/NDSL EINECS/ELINCS ENCS IECSC KECI PICCS AIIC NZIoC TCSI	Does not comply Does not comply TCSI
DSL/NDSL - Canadian Domes	isting Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIOC - New Zealand Inventory of Chemicals

TCSI - Taiwan Chemical Substance Inventory

16. Other inform	nation				
Prepared By Revision date Revision Note		PacBio Environment, Health, an 1305 O'Brien Drive Menlo Park, CA 94025 USA safety@pacb.com 08-Apr-2024 ***Indicates updated dat	·	publication.	
Key or legend to	abbreviations and	acronyms used in the s	afety data sh	neet	
		s/personal protection	-		
TWA	TWA (time-weight	ed average)	Ceiling	Maximum limit value	
Sk*	Skin designation		+	Sensitizers	
Agency for Toxic S U.S. Environmenta European Chemic European Food Sa Environmental Pro Acute Exposure G U.S. Environmenta V.S. Environmenta Food Research Jo Hazardous Substa International Unifo National Institute of Australia National NIOSH (National I National Library of U.S. National Toxi New Zealand's Ch Organization for E	Substances and Dis al Protection Agency als Agency afety Authority (EFS tection Agency uideline Level(s) (A al Protection Agency urnal ince Database rm Chemical Inform of Technology and E Industrial Chemical nstitute for Occupat Medicine's ChemII Medicine's PubMe cology Program (N emical Classificatio conomic Co-operati conomic Co-operati	EGL(s)) y Federal Insecticide, Fung y High Production Volume hation Database (IUCLID) Evaluation (NITE) s Notification and Assessr ional Safety and Health) D Plus (NLM CIP) d database (NLM PUBME TP) n and Information Databas ion and Development Envi	gicide, and Ro Chemicals nent Scheme D) se (CCID) ronment, Hea Production \	odenticide Act e (NICNAS) alth, and Safety Publications Volume Chemicals Program	
	nation is believed t	to be correct but does no	ot purport to	be all inclusive and shall be used	l only as a guide.

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 complies with the requirements of: JIS Z 7252:2019; JIS Z 7253:2019

> Revision date 08-Apr-2024 Revision Number 1

1. Identification			
Product Name	Ligation mix 96		
Registration Number(s)	No information available		
Details of the supplier of the safety	data sheet		
Manufacturer PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA www.pacb.com Emergency telephone number	CHEMTREC 1-800-424-9300 (CCN#656805)		
E-mail address	techsupport@pacb.com		
L-mail audi 655	Consupport e paco.com		
Recommended use of the chemica	l and restrictions on use		
Recommended use	As part of kit.		
Restrictions on use For research u	se only		
2. Hazard(s) identification			
GHS Classification Not a hazardous substance or mixture	e according to the Globally Harmonized System (GI	-IS)	
Acute toxicity - Oral		Classification not possible	
Acute toxicity - Dermal		Classification not possible	
Acute toxicity - Inhalation (Gases)		Classification not applicable	
Acute toxicity - Inhalation (Vapors)		Classification not possible	
Acute toxicity - Inhalation (Dusts/Mist	s)	Classification not possible	
Skin corrosion/irritation		Classification not possible	
Serious eye damage/eye irritation		Classification not possible	
Respiratory sensitization		Classification not possible	
Skin sensitization		Classification not possible	
Germ cell mutagenicity		Classification not possible	
Carcinogenicity		Classification not possible	
Reproductive toxicity		Classification not possible	
Effects on or via lactation		Classification not possible	
Specific target organ toxicity (single e		Classification not possible	
Specific target organ toxicity (repeate	d exposure)	Classification not possible	
Aspiration hazard		Classification not possible	
Acute aquatic toxicity		Classification not possible	
Chronic aquatic toxicity		Not classified	
Hazardous to the ozone layer		Classification not possible	

### GHS label elements

### Hazard statements

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

### Prevention

Not applicable

Not applicable
Storage
Not applicable
Disposal
Not applicable

### Other hazards

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

### 3. Composition/information on ingredients

### Pure substance/mixture Mixture

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

### Pollutant Release and Transfer Register (PRTR) Not applicable

### Industrial Safety and Health Law

ISHL Notifiable Substances Not applicable

5. Fire-fighting measures

Harmful Substances Whose Names Are to be Indicated on the Label Not applicable

Poisonous and Deleterious Substances Control Law Not applicable

4. First-aid measures	
In case of inhalation	Remove to fresh air.
In case of skin contact	Wash skin with soap and water.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
In case of ingestion	Rinse mouth.
Most important symptoms/effects, acute and delayed	No information available.
Note to physicians	Treat symptomatically.

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.
Special Extinguishing Media	Cool drums with water spray.
Special protective equipment and	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

103-285-500 Ligation mix 96	Revision date 08-Apr-2024
precautions for fire-fighters	Use personal protection equipment.
Other information	CAUTION: Use of water spray when fighting fire may be inefficient.
6. Accidental release measures	
Personal precautions, protective equipment and emergency procedures	Ensure adequate ventilation.
For emergency responders	Use personal protection recommended in Section 8.
Environmental precautions	See Section 12 for additional Ecological Information.
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.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage	
<u>Handling</u>	
Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice.
<u>Storage</u>	
Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection		
Exposure guidelines	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.	
Biological monitoring indicator	This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies	
Engineering controls	Showers Eyewash stations Ventilation systems.	
Environmental exposure controls Personal protective equipment	No information available.	
Respiratory protection	Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.	
Hand protection	Appropriate hand protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.	
Eye/face protection	Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.	
Skin and body protection	Appropriate skin and body protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.	

## 9. Physical and chemical properties

Appearance	Liquid	
Physical state	Liquid	
Color	clear colorless	
Odor	Odorless	
Odor threshold	No information available	
Property	Values	Remarks • Method
Melting point / freezing point		No information available
Initial boiling point and boiling rang	e	No information available
Upper/lower flammability or explos		No information available
Upper flammability or explosive		
limits		
Lower flammability or explosive		
limits		
Flash point		No information available
Evaporation rate		No information available
Autoignition temperature		No information available
Decomposition temperature	7 0 5	No information available
pH Viscosity	7 - 8.5	No information available
Water solubility		No information available
Solubility(ies)		No information available
Partition Coefficient		No information available
(n-octanol/water)		
Vapor pressure		No information available
Density and/or relative density		
Relative density		No information available
Other information		
Explosive properties	No information available	
Oxidizing properties	No information 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	No information available.	
Incompatible materials	None known based on information s	upplied.
Hazardous decomposition products	s None known based on information s	upplied.
11. Toxicological information		
in toxicological information		

### Acute toxicity

Numerical measures of toxicity - Product Information

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

ATEmix (oral)	30,455.90 mg/kg
ATEmix (dermal)	24,444.40 mg/kg
ATEmix (inhalation-gas)	99,999.00 ppm
ATEmix (inhalation-vapor)	99,999.00 mg/l
ATEmix (inhalation-dust/mist)	7.79 mg/l

### Symptoms

Ingestion	Specific test data for the substance or mixture is not available.
Inhalation	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.

12. Ecological information		
Ecotoxicity	Classification not possible. Based on available data, the classification criteria are not met.	
Percentage for unknown hazard	<b>ds</b> 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.	
Persistence and degradability	No information available.	
Bioaccumulation	There is no data for this product.	
Mobility in soil	No information available.	
Hazardous to the ozone layer	Classification not possible. Based on available data, the classification criteria are not met.	
Other adverse effects	No information available.	
13. Disposal considerations		
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

# International Regulations IMDG

Not regulated

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

ADR_	Not regulated
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IATA Not regulated

### **Domestic regulations**

See section 15. If product is subject to the Fire Service Law, Poisonous and Deleterious Substance Control Law, High Pressure Gas Safety Law, Ship Safety Law, and/or the Civil Aeronautics Act, the requirements that are specific to each of the laws must be followed.

<u>Japan</u>

Not regulated

### 15. Regulatory information

 National regulations

 Industrial Safety and Health Law

 Not applicable

 ISHL Notifiable Substances

 Not applicable

 Harmful Substances Whose Names Are to be Indicated on the Label

 Not applicable

Poisonous and Deleterious Substances Control Law Not applicable Fire Service Law: Not applicable Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (CSCL) Not applicable

Act on Prevention of Marine Pollution and Maritime Disaster Not applicable Air Pollution Control Law Air pollutants with regulated emissions standards, Air Pollution Control Act article 3 Volatile organic compound per Air Pollution Control Law article 2, paragraph 4

### International Regulations

### The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories	
TSCA	Does not comply
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
TCSI	TCSI

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

TCSI - Taiwan Chemical Substance Inventory

### 16. Other information PacBio **Prepared By** Environment, Health, and Safety 1305 O'Brien Drive Menlo Park, CA 94025 USA safety@pacb.com 08-Apr-2024 **Revision date** \*\*\*Indicates updated data since last publication. **Revision Note** 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) Ceiling Maximum limit value Sk\* Skin designation Sensitizers 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 Chemicals Agency** 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 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 complies with the requirements of: JIS Z 7252:2019; JIS Z 7253:2019

> Revision date 08-Apr-2024 Revision Number 1

1. Identification		
Product Name	Ligation enhancer 96	
Registration Number(s)	No information available	
Details of the supplier of the safety	data sheet	
Manufacturer PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA www.pacb.com Emergency telephone number	CHEMTREC 1-800-424-9300 (CCN#656805)	
E-mail address	techsupport@pacb.com	
Recommended use of the chemical and restrictions on use		
Recommended use	As part of kit.	
Restrictions on use For research u	se only	
2. Hazard(s) identification		
GHS Classification	e according to the Globally Harmonized System (GH	9)
Acute toxicity - Oral	e according to the Globally Harmonized System (GH	Not classified
Acute toxicity - Dermal		Not classified
Acute toxicity - Inhalation (Gases)		Classification not applicable
Acute toxicity - Inhalation (Vapors)		Classification not possible
Acute toxicity - Inhalation (Dusts/Mist	s)	Not classified
Skin corrosion/irritation	5,	Classification not possible
Serious eye damage/eye irritation		Classification not possible
Respiratory sensitization		Classification not possible
Skin sensitization		Classification not possible
Germ cell mutagenicity		Classification not possible
Carcinogenicity		Classification not possible
Reproductive toxicity		Classification not possible
Effects on or via lactation		Classification not possible
Specific target organ toxicity (single e		Classification not possible
Specific target organ toxicity (single e		Classification not possible
Aspiration hazard		Classification not possible
Acute aquatic toxicity		Not classified
Chronic aquatic toxicity		Not classified
Hazardous to the ozone layer		Classification not possible
i lazardous to the ozone layer		

### **GHS label elements**

### Hazard statements

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

### Prevention

Not applicable

Not applicable
Storage
Not applicable
Disposal
Not applicable

### Other hazards

No information available.

### 3. Composition/information on ingredients

# Pure substance/mixture Mixture The product contains no substances which at their given concentration, are considered to be hazardous to health.

### Pollutant Release and Transfer Register (PRTR) Not applicable

Industrial Safety and Health Law ISHL Notifiable Substances Not applicable

Harmful Substances Whose Names Are to be Indicated on the Label Not applicable

## Poisonous and Deleterious Substances Control Law

Not applicable

### 4. First-aid measures

In case of inhalation	Remove to fresh air.
In case of skin contact	Wash skin with soap and water.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
In case of ingestion	Rinse mouth.
Most important symptoms/effects, acute and delayed	No information available.
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.
Special Extinguishing Media	Cool drums with water spray.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

### Other information

CAUTION: Use of water spray when fighting fire may be inefficient.

### 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Ensure adequate ventilation.
For emergency responders	Use personal protection recommended in Section 8.
Environmental precautions	See Section 12 for additional Ecological Information.
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.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage	
Handling	
Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice.
Storage	
Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection		
Exposure guidelines	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.	
Biological monitoring indicator	This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies	
Engineering controls	Showers Eyewash stations Ventilation systems.	
Environmental exposure controls	No information available.	
Personal protective equipment		
Respiratory protection	Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.	
Hand protection	Appropriate hand protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.	
Eye/face protection	Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.	
Skin and body protection	Appropriate skin and body protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.	

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

Physical state Color Odor Odor threshold	Liquid clear colorless Odorless No information available	
Property Melting point / freezing point Initial boiling point and boiling rang Upper/lower flammability or explos Upper flammability or explosive limits Lower flammability or explosive		Remarks • Method No information available No information available No information available
limits Flash point Evaporation rate Autoignition temperature Decomposition temperature pH Viscosity Water solubility Solubility(ies) Partition Coefficient (n-octanol/water) Vapor pressure Density and/or relative density Relative density	7 - 8.5	No information available No information available
Other information Explosive properties Oxidizing properties	No information available No information 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** No information available.

Incompatible materials None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

### 11. Toxicological information

### Acute toxicity

Numerical measures of toxicity - Product Information

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

ATEmix (oral)	25,200.00 mg/kg	
ATEmix (dermal)	20,000.00 mg/kg	
ATEmix (inhalation-gas)	99,999.00 ppm	
ATEmix (inhalation-vapor)	99,999.00 mg/l	
ATEmix (inhalation-dust/mist)	5.50 mg/l	

Symptoms

No information available.

Ingestion	Specific test data for the substance or mixture is not available.
Inhalation	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.

12. Ecological information		
Ecotoxicity	Classification not possible. Based on available data, the classification criteria are not met.	
Percentage for unknown hazards0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.		
Persistence and degradability	No information available.	
Bioaccumulation	There is no data for this product.	
Mobility in soil	No information available.	
Hazardous to the ozone layer	Classification not possible. Based on available data, the classification criteria are not met.	
Other adverse effects	No information available.	
13. Disposal considerations		
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		

International Regulations IMDG	Not regulated	
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available		
ADR	Not regulated	
IATA	Not regulated	
Domestic regulations         See section 15. If product is subject to the Fire Service Law, Poisonous and Deleterious Substance Control Law, High Pressure         Gas Safety Law, Ship Safety Law, and/or the Civil Aeronautics Act, the requirements that are specific to each of the laws must be         followed.         Japan       Not regulated		
15. Regulatory information		
15. Regulatory mormation		
National regulations Industrial Safety and Health Law Not applicable ISHL Notifiable Substances Not applicable Harmful Substances Whose Nam Not applicable	nes Are to be Indicated on the Label	
Poisonous and Deleterious Substances Control Law Not applicable Fire Service Law: Not applicable Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (CSCL) Not applicable		
Act on Prevention of Marine Pollution and Maritime Disaster Not applicable Waterworks (Water Supply) Act Waterworks (Water Supply) Act - items that require further study Air Pollution Control Law Volatile organic compound per Air Pollution Control Law article 2, paragraph 4 Hazardous air pollutants (HAPs) per Air Pollution Control Law article 2, paragraph 1, item 3 and Enforcement Order article 1		
International Regulations		
The Stockholm Convention on Pers	istent Organic Pollutants Not applicable	
The Rotterdam Convention Not app	licable	
International Inventories TSCA DSL/NDSL EINECS/ELINCS ENCS IECSC KECI	Complies Complies Does not comply Complies Does not comply	
PICCS	Complies	

AllC Complies NZIOC Complies TCSI TCSI

 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

TCSI - Taiwan Chemical Substance Inventory

16. Other information PacBio **Prepared By** Environment, Health, and Safety 1305 O'Brien Drive Menlo Park, CA 94025 USA safety@pacb.com 08-Apr-2024 **Revision date** \*\*\*Indicates updated data since last publication. **Revision Note** 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) Ceiling Maximum limit value Sk\* Skin designation Sensitizers 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 Chemicals Agency** 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 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-Seg, Seguel, Nanobind, SBB, Revio, Onso, Apton, Kinnex and PureTarget are trademarks of PacBio.

**End of Safety Data Sheet** 



# SAFETY DATA SHEET

This safety data sheet complies with the requirements of: JIS Z 7252:2019; JIS Z 7253:2019

> Revision date 08-Apr-2024 Revision Number 1

1. Identification		
	Nuclease buffer 96	
Product Name	Nuclease buller 96	
Registration Number(s)	No information available	
Details of the supplier of the safe	ty data sheet	
Manufacturer PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA		
www.pacb.com Emergency telephone number	CHEMTREC 1-800-424-9300 (CCN#6568	305)
E-mail address	techsupport@pacb.com	
Recommended use of the chemic	al and restrictions on use	
Recommended use	As part of kit.	
Restrictions on use For research	use only	
2. Hazard(s) identification		
GHS Classification Not a hazardous substance or mixtu	re according to the Globally Harmonized Sys	tem (GHS)
Acute toxicity - Oral		Not classified
Acute toxicity - Dermal		Not classified
Acute toxicity - Inhalation (Gases)		Classification not applicable
Acute toxicity - Inhalation (Vapors)		Not classified
Acute toxicity - Inhalation (Dusts/Mis	sts)	Not classified
Skin corrosion/irritation	<i>i</i>	Not classified
Serious eye damage/eye irritation		Not classified
Respiratory sensitization		Classification not possible
Skin sensitization		Classification not possible
Germ cell mutagenicity		Classification not possible
Carcinogenicity		Classification not possible
Reproductive toxicity		Classification not possible
Effects on or via lactation		Classification not possible
Specific target organ toxicity (single	exposure)	Not classified
Specific target organ toxicity (english		Not classified
Aspiration hazard		Not classified
Acute aquatic toxicity		Not classified
Chronic aquatic toxicity		Not classified
Hazardous to the ozone layer		Classification not possible

# **GHS label elements**

# Hazard statements

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

#### Prevention

Not applicable

Not applicable
Storage
Not applicable
Disposal
Not applicable

#### Other hazards

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

# 3. Composition/information on ingredients

#### Pure substance/mixture Mixture

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

# Pollutant Release and Transfer Register (PRTR) Not applicable

# Industrial Safety and Health Law

ISHL Notifiable Substances Not applicable

Harmful Substances Whose Names Are to be Indicated on the Label Not applicable

#### Poisonous and Deleterious Substances Control Law Not applicable

4. First-aid measures	
In case of inhalation	Remove to fresh air.
In case of skin contact	Wash skin with soap and water.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
In case of ingestion	Rinse mouth.
Most important symptoms/effects, acute and delayed	No information available.
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.
Special Extinguishing Media	Cool drums with water spray.
Special protective equipment and	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

|--|--|

precautions for fire-fighters	Use personal protection equipment.
Other information	CAUTION: Use of water spray when fighting fire may be inefficient.
6. Accidental release measures	
Personal precautions, protective equipment and emergency procedures	Ensure adequate ventilation.
For emergency responders	Use personal protection recommended in Section 8.
Environmental precautions	See Section 12 for additional Ecological Information.
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.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.
7. Handling and storage	

Handling	
Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice.
Storage_	
Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection		
Exposure guidelines	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.	
Biological monitoring indicator	This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies	
Engineering controls	Showers Eyewash stations Ventilation systems.	
Environmental exposure controls Personal protective equipment	No information available.	
Respiratory protection	Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.	
Hand protection	Appropriate hand protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.	
Eye/face protection	Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.	
Skin and body protection	Appropriate skin and body protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.	

# 9. Physical and chemical properties

Appearance Physical state Color Odor Odor threshold	Liquid Liquid clear colorless Odorless No information available	
<u>Property</u> Melting point / freezing point Initial boiling point and boiling range Upper/lower flammability or explosive Upper flammability or explosive limits	<u>Values</u> e ve limits	Remarks • Method No information available No information available No information available
Lower flammability or explosive limits Flash point Evaporation rate Autoignition temperature Decomposition temperature pH Viscosity Water solubility Solubility(ies) Partition Coefficient (n-octanol/water) Vapor pressure Density and/or relative density Relative density Other information Explosive properties Oxidizing properties	7 - 8.5 No information available No information available	No information available No information 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	No information available.	
Incompatible materials	None known based on information sup	oplied.
Hazardous decomposition products	None known based on information sup	oplied.
11. Toxicological information		

# Acute toxicity

Numerical measures of toxicity - Product Information

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

ATEmix (oral)	99,999.00	
ATEmix (dermal)	99,999.00	mg/kg
ATEmix (inhalation-gas)	99,999.00	ppm
ATEmix (inhalation-vapor)	99,999.00	mg/l
ATEmix (inhalation-dust/mist)	99,999.00	mg/l

# Symptoms

No information	available.
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Ingestion	Specific test data for the substance or mixture is not available.
Inhalation	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.

12. Ecological information		
Ecotoxicity	Classification not possible. Based on available data, the classification criteria are not met.	
Percentage for unknown hazard	<b>ds</b> 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.	
Persistence and degradability	No information available.	
Bioaccumulation	There is no data for this product.	
Mobility in soil	No information available.	
Hazardous to the ozone layer	Classification not possible. Based on available data, the classification criteria are not met.	
Other adverse effects	No information available.	
13. Disposal considerations		
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

# International Regulations

Not regulated

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

ADR_	Not regulated
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<u>IATA</u>	Not regulated
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#### **Domestic regulations**

See section 15. If product is subject to the Fire Service Law, Poisonous and Deleterious Substance Control Law, High Pressure Gas Safety Law, Ship Safety Law, and/or the Civil Aeronautics Act, the requirements that are specific to each of the laws must be followed.

<u>Japan</u>

Not regulated

## 15. Regulatory information

 National regulations

 Industrial Safety and Health Law

 Not applicable

 ISHL Notifiable Substances

 Not applicable

 Harmful Substances Whose Names Are to be Indicated on the Label

 Not applicable

Poisonous and Deleterious Substances Control Law Not applicable Fire Service Law: Not applicable Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (CSCL) Not applicable

Act on Prevention of Marine Pollution and Maritime Disaster Not applicable

# International Regulations

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories **TSCA** Complies Complies DSL/NDSL Complies **EINECS/ELINCS** Does not comply ENCS **IECSC** Does not comply KECI Does not comply PICCS Complies AIIC Does not comply NZIOC Complies TCSI TCSI

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

TCSI - Taiwan Chemical Substance Inventory

16. Other information				
Prepared By Revision date Revision Note	PacBio Environment, Health, and 1305 O'Brien Drive Menlo Park, CA 94025 USA safety@pacb.com 08-Apr-2024 ***Indicates updated data		iblication.	
Key or legend to abbreviations and Legend Section 8: Exposure controls		afety data she	eet	
TWA TWA (time-weight Sk* Skin designation		Ceiling +	Maximum limit value Sensitizers	
Key literature references and source Agency for Toxic Substances and Dis U.S. Environmental Protection Agence European Chemicals Agency European Food Safety Authority (EFS Environmental Protection Agency Acute Exposure Guideline Level(s) (A U.S. Environmental Protection Agence U.S. Environmental Protection Agence Food Research Journal Hazardous Substance Database International Uniform Chemical Inform National Institute of Technology and E Australia National Industrial Chemical NIOSH (National Institute for Occupat National Library of Medicine's Chemil National Library of Medicine's PubMe U.S. National Toxicology Program (N' New Zealand's Chemical Classificatio Organization for Economic Co-operat Organization for Economic Co-operat World Health Organization	ease Registry (ATSDR) y ChemView Database SA) EGL(s)) y Federal Insecticide, Fung y High Production Volume hation Database (IUCLID) Evaluation (NITE) Is Notification and Assess tional Safety and Health) D Plus (NLM CIP) d database (NLM PUBMEI TP) on and Information Databas ion and Development Envir ion and Development High	gicide, and Roo Chemicals nent Scheme ( D) se (CCID) ronment, Healt Production Vo	(NICNAS) th, and Safety Publications olume Chemicals Program	

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 complies with the requirements of: JIS Z 7252:2019; JIS Z 7253:2019

> Revision date 08-Apr-2024 Revision Number 1

1. Identification		
Product Name	Nuclease mix 96	
Registration Number(s)	No information available	
Details of the supplier of the safe	y data sheet	
Manufacturer PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA www.pacb.com Emergency telephone number	CHEMTREC 1-800-424-9300 (CCN#6568)	05)
E-mail address	techsupport@pacb.com	
	techsupport@pacb.com	
Recommended use of the chemic	al and restrictions on use	
Recommended use	See product insert.	
Restrictions on use For research	use only	
2. Hazard(s) identification		
GHS Classification_ Not a hazardous substance or mixtu	re according to the Globally Harmonized Syst	em (GHS)
Acute toxicity - Oral		Not classified
Acute toxicity - Dermal Not classified		Not classified
Acute toxicity - Inhalation (Gases)		Classification not applicable
Acute toxicity - Inhalation (Vapors)		Classification not possible
Acute toxicity - Inhalation (Dusts/Mis	sts)	Not classified
Skin corrosion/irritation		Classification not possible
Serious eye damage/eye irritation		Classification not possible
Respiratory sensitization		Classification not possible
Skin sensitization		Classification not possible
Germ cell mutagenicity		Classification not possible
Carcinogenicity		
Reproductive toxicity		
Effects on or via lactation		Classification not possible
Specific target organ toxicity (single	exposure)	Classification not possible
Specific target organ toxicity (repeat	ed exposure)	Classification not possible
Aspiration hazard	·	Classification not possible
Acute aquatic toxicity		Not classified
Chronic aquatic toxicity		Not classified
Hazardous to the ozone layer	lazardous to the ozone layer Classification not possible	

# GHS label elements

# Hazard statements

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

# Prevention

Not applicable

Response • Not applicable Storage • Not applicable Disposal • Not applicable

# Other hazards

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

# 3. Composition/information on ingredients

#### Pure substance/mixture Mixture

Chemical name	CAS No.	Weight-%	ENCS	ENCS Number	ISHL Inventory	ISHL No.
			Inventory			
2-mercaptoethanol	60-24-2	0 - 10%	Existing	(2)-458	Existing	(2)-458

#### Pollutant Release and Transfer Register (PRTR) Not applicable

## Industrial Safety and Health Law

ISHL Notifiable Substances Not applicable

Harmful Substances Whose Names Are to be Indicated on the Label Not applicable

# Poisonous and Deleterious Substances Control Law

Deleterious

Chemical name	CAS No.	Category	Content rate %
2-mercaptoethanol	60-24-2	Deleterious substances (law art.2,	0.0055900000
		attached table 2, designating	
		order art.2)	

# 4. First-aid measures

In case of inhalation	Remove to fresh air.
In case of skin contact	Wash skin with soap and water.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
In case of ingestion	Rinse mouth.
Most important symptoms/effects, acute and delayed	No information available.
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.
Special Extinguishing Media	Cool drums with water spray.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
Other information	CAUTION: Use of water spray when fighting fire may be inefficient.
6. Accidental release measures	
Personal precautions, protective equipment and emergency	Ensure adequate ventilation.
procedures	
	Use personal protection recommended in Section 8.
procedures	Use personal protection recommended in Section 8. See Section 12 for additional Ecological Information.
procedures For emergency responders	
procedures For emergency responders Environmental precautions	See Section 12 for additional Ecological Information.

7. Handling and storage	
Handling_	
Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice.
Storage	
Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls/personal	protection
Exposure guidelines	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Biological monitoring indicator	This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies
Engineering controls	Showers Eyewash stations Ventilation systems.
Environmental exposure controls Personal protective equipment	No information available.
Respiratory protection	Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
Hand protection	Appropriate hand protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.
Eye/face protection	Appropriate eye/face protection should be selected and used according to the chemical

Skin and body protection

nature, hazards and use of this product and safety requirements of the local jurisdiction. Appropriate skin and body protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

# 9. Physical and chemical properties

#### Information on basic physical and chemical properties

Appearance Physical state Color Odor Odor threshold	No information available Liquid clear colorless Odorless No information available	
Property Melting point / freezing point Initial boiling point and boiling rang Upper/lower flammability or explosive limits Lower flammability or explosive limits		Remarks • Method No information available No information available No information available
Flash point Evaporation rate Autoignition temperature Decomposition temperature		No information available No information available No information available No information available
pH Viscosity Water solubility	7 - 8.5	No information available
Solubility(ies) Partition Coefficient (n-octanol/water)		No information available No information available
Vapor pressure Density and/or relative density Relative density		No information available No information available
Other information		
Explosive properties Oxidizing properties	No information available No information available	

# 10. Stability and reactivity

No information available.		
Stable under normal conditions.		
None under normal processing.		
No information available.		
None known based on information supplied.		
Hazardous decomposition products None known based on information supplied.		

# 11. Toxicological information

#### Acute toxicity

Numerical measures of toxicity - Product Information

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

ATEmix (oral)	25,200.00	ma/ka
ATEINIX (Oral)		
ATEmix (dermal)	20,000.00	mg/kg
ATEmix (inhalation-gas)	99,999.00	ppm
ATEmix (inhalation-vapor)	99,999.00	mg/l
ATEmix (inhalation-dust/mist)	5.50 mg/l	

Chemical name	emical name Oral LD50 Dermal LD50		Inhalation LC50
2-mercaptoethanol	= 244 mg/kg (Rat)	112 - 224 mg/kg (Rabbit)	-

# Symptoms

No information available.

Ingestion	Specific test data for the substance or mixture is not available.
Inhalation	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.

# 12. Ecological information

#### Ecotoxicity

Classification not possible. Based on available data, the classification criteria are not met.

Chemical name	Algae/aquatic plants	Fish	Crustacea
2-mercaptoethanol	EC50: =12mg/L (72h,	-	EC50: =1.52mg/L (48h, Daphnia
	Desmodesmus subspicatus)		magna)

Percentage for unknown hazards0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Persistence and degradability No information available.

#### **Bioaccumulation**

There is no data for this product.

Ohemissler	200	Doutition poolfisiont	
Chemical name 2-mercaptoethanol		Partition coefficient -0.056	
60-24-2	2		
Mobility in soil	No information available.		
Hazardous to the ozone layer	Classification not possible	e. Based on available data, the classification criteria are not met.	
Other adverse effects	No information available.		
13. Disposal considerations			
Waste from residues/unused products	Dispose of in accordance environmental legislation.	with local regulations. Dispose of waste in accordance with	
Contaminated packaging	Do not reuse empty conta	iners.	
14. Transport information			
International Regulations	Not regulated		
Transport in bulk according to No information available	Annex II of MARPOL 73/78	3 and the IBC Code	
ADR	Not regulated		
IATA	Not regulated		
Domestic regulations         See section 15. If product is subject to the Fire Service Law, Poisonous and Deleterious Substance Control Law, High Pressure         Gas Safety Law, Ship Safety Law, and/or the Civil Aeronautics Act, the requirements that are specific to each of the laws must be followed.         Japan       Not regulated			
15. Regulatory information			
National regulations         Industrial Safety and Health Law         Not applicable         ISHL Notifiable Substances         Not applicable         Harmful Substances Whose Names Are to be Indicated on the Label         Not applicable         Poisonous and Deleterious Substances Control Law			
Fire Service Law: Not applicable		Control Law table 2 and Cabinet Order article 2	
Act on Prevention of Marine Pollution and Maritime Disaster Not applicable Waterworks (Water Supply) Act Waterworks (Water Supply) Act - items that require further study Air Pollution Control Law Specified substances subject to measures in event of an accident per Air Pollution Control Law article 17, paragraph 1 and Enforcement Order article 10 Volatile organic compound per Air Pollution Control Law article 2, paragraph 4 Hazardous air pollutants (HAPs) per Air Pollution Control Law article 2, paragraph 1, item 3 and Enforcement Order article 1			

# International Regulations

#### The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories	
TSCA	Does not comply
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
TCSI	TCSI

# 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

TCSI - Taiwan Chemical Substance Inventory

# 16. Other information

Prepared By Revision date Revision Note		PacBio Environment, Health 1305 O'Brien Drive Menlo Park, CA 940 USA safety@pacb.com 08-Apr-2024 ***Indicates updated	25	plication.
		acronyms used in t	he safety data shee	ət
TWA	TWA (time-weighte		Ceiling	Maximum limit value
Sk*	Skin designation	0 /	+	Sensitizers
Sk*       Skin designation       +       Sensitizers         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 Chemicals Agency         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 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 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

#### Disclaimer

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End of Safety Data Sheet