

Product identifier	
Product Name	SMRTbell prep kit 3.0
Recommended use	See product insert
Other means of identification	
Product Code(s)	102-141-700

This product is a kit box containing 10 reagent tubes

Chemical name	Part number	Quantity	Cap color	Classification
SMRTbell adapter	102-167-800	1	Orange	Not a hazardous material.
Repair buffer	102-166-000	1	Purple	Skin irritant (category 3); Serious eye damage
				(category 1).***
Nuclease mix	102-166-200	1	Light green	Not a hazardous material.
Nuclease buffer	102-167-900	1	Light Purple	Not a hazardous material.
Ligation mix v2	102-167-200	1	Yellow	Not a hazardous material.
Ligation enhancer	102-179-100	1	Red	Not a hazardous material.
End repair mix	102-166-100	1	Blue	Not a hazardous material.
DNA repair mix	102-167-700	1	Green	Not a hazardous material.
1x elution buffer	100-159-800	2	White	Not a hazardous material.

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



SAFETY DATA SHEET

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

Revision date 12-Jul-2024

Revision Number 1

1. Identification	
Product identifier	
Product Name	1x elution buffer
Other means of identification	
Product Code(s)	100-159-800
Synonyms	None
Recommended use of the chemical	and restrictions on use
Recommended use	As part of kit
Restrictions on use	For research use only
Details of the supplier of the safety	data sheet
Manufacturer Address PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA www.pacb.com	
E-mail address	techsupport@pacb.com
Emergency telephone number	
Emergency Telephone	CHEMTREC 1-800-424-9300 (CCN#656805)

2. Hazard(s) identification

Classification

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

Label elements

Hazard statements

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

Other information

No information available.

3. Composition/information on ingredients

Substance

Not applicable.

<u>Mixture</u>

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

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

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

Methods and material for containment and cleaning up

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

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

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

9. Physical and chemical properties

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

Relative vapor density	No data available	None known	
Relative density	No data available	None known	
Water solubility	No data available	None known	
Solubility(ies)	No data available	None known	
Partition coefficient	No data available	None known	
Autoignition temperature	No data available	None known	
Decomposition temperature	No data available	None known	
10. Stability and reactivity			
10. Stability and reactivity Reactivity	No information available.		
	No information available. Stable under normal conditions.		

Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

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

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

12. Ecological information

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

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

14. Transport information

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

15. Regulatory information

International Inventories TSCA

Contact supplier for inventory compliance status.

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
Water	7732-18-5	Present	Active
Tris-HCI	1185-53-1	Present	Active

DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECI	Complies
PICCS	Complies
AIIC	Complies
NZIOC	Complies

Legend:

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

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

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

ENCS - Japan Existing and New Chemical Substances

- **IECSC** China Inventory of Existing Chemical Substances
- KECL Korean Existing and Evaluated Chemical Substances
- **PICCS** Philippines Inventory of Chemicals and Chemical Substances
- AIIC Australian Inventory of Industrial Chemicals

NZIOC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

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

SARA 311/312 Hazard Categories

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

CWA (Clean Water Act)

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

CERCLA

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

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

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

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information				
NFPA HMIS	Health hazards 0 Health hazards 0	Flammability 0 Flammability 0	Instability 0 Physical hazards 0	Special hazards - Personal protection X
Key or legend to abbreviations and acronyms used in the safety data sheet				
Legend Section 8 TWA Ceiling	Exposure controls/personal pr TWA (time-weighted average) Maximum limit value		STEL (Short Tern Skin designation	n Exposure Limit)
Key literature references and sources for data used to compile the SDS Agency for Toxic Substances and Disease Registry (ATSDR) U.S. Environmental Protection Agency ChemView Database European Food Safety Authority (EFSA) Environmental Protection Agency Acute Exposure Guideline Level(s) (AEGL(s)) U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act U.S. Environmental Protection Agency High Production Volume Chemicals Food Research Journal Hazardous Substance Database				

International Uniform Chemical Information Database (IUCLID)

National Institute of Technology and Evaluation (NITE) Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS) NIOSH (National Institute for Occupational Safety and Health) National Library of Medicine's ChemID Plus (NLM CIP) National Library of Medicine's PubMed database (NLM PUBMED) U.S. National Toxicology Program (NTP) New Zealand's Chemical Classification and Information Database (CCID) Organization for Economic Co-operation and Development Environment, Health, and Safety Publications Organization for Economic Co-operation and Development High Production Volume Chemicals Program Organization for Economic Co-operation and Development Screening Information Data Set World Health Organization

Prepared By	PacBio Environment, Health, and Safety 1305 O'Brien Drive Menlo Park, CA 94025 USA safety@pacb.com.
Revision date	12-Jul-2024
Revision Note	No information available

Disclaimer

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

End of Safety Data Sheet



SAFETY DATA SHEET

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

Revision date 12-Jul-2024

Revision Number 1

1. Identification	
Product identifier	
Product Name	Repair buffer
Other means of identification	
Product Code(s)	102-166-000
Synonyms	None
Recommended use of the chemical	and restrictions on use
Recommended use	As part of kit
Restrictions on use	For research use only
Details of the supplier of the safety	data sheet
Manufacturer Address PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA www.pacb.com	
E-mail address	techsupport@pacb.com
Emergency telephone number	
Emergency Telephone	CHEMTREC 1-800-424-9300 (CCN#656805)

2. Hazard(s) identification

Classification

Sorious ava damaga/ava irritation	Cotomer 1
Serious eve damage/eve irritation	ICatedory 1
	e allegely i

Label elements



Danger

Hazard statements

Causes serious eye damage

Precautionary Statements - Prevention

Wear eye and face protection

Precautionary Statements - Response

Eyes

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

Other information

Causes mild skin irritation.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

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

4. First-aid measures

Description of first aid measures

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

5. Fire-fighting measures

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

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

General hygiene considerations

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

9. Physical and chemical properties

Information on basis physical and a	hemical properties	
Information on basic physical and on Physical state	Liquid	
Appearance	Liquid	
Color	clear colorless	
Odor	Odorless	
Odor threshold	No information available	
Property	Values	Remarks • Method
pH	7 - 8.5	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling rang	eNo data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive	No data available	
limits		
Lower flammability or explosive	No data available	
limits		N1 1
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known

10. Stability and reactivity

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

11. Toxicological information

Information on likely routes of exposure

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

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

Symptoms related to the physical, chemical and toxicological characteristics

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

Acute toxicity

Numerical measures of toxicity

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

ATEmix (oral)	14,141.40 mg/kg				
ATEmix (dermal)	59,333.30 mg/kg				
ATEmix (inhalation-gas)	99,999.00 ppm				
ATEmix (inhalation-vapor)	99,999.00 mg/l				
ATEmix (inhalation-dust/m	on-dust/mist) 99.999.00 mg/l				
Component Information					
Chemical name	Oral LD50	Dermal LD50	Inhalation LC50		
Magnesium chloride	= 2800 mg/kg (Rat)	> 2000 mg/kg (Rat)	-		
7786-30-3					

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

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

12. Ecological information

Ecotoxicity	The environmental impact of this product has not been fully investigated.				
Chemical name	Algae/aquatic plants		Fish	Toxicity to	Crustacea
				microorganisms	
Magnesium chloride			LC50: 1970 - 3880mg/L	-	EC50: =140mg/L (48h,
7786-30-3	Pseudokirchneriella		(96h, Pimephales		Daphnia magna)
	subcapitata)		promelas)		1 3 /
Persistence and degradability No information available.					
Bioaccumulation There is no data for this product.					
Other adverse effects No information available.					
13. Disposal considerations					

Disposal methods

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

14. Transport information

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

15. Regulatory information International Inventories TSCA

Contact supplier for inventory compliance status.

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

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

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

Legend:

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

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

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

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIOC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

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

SARA 311/312 Hazard Categories

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

CWA (Clean Water Act)

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

CERCLA

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

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

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

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information	1				
NFPA HMIS	Health hazards3Health hazards3	Flammability Flammability		Instability 0 Physical hazards 0	Special hazards - Personal protection X
Key or legend to abbrev	viations and acronyms	used in the safe	ty data sh	eet	
Ceiling Maxim Key literature reference Agency for Toxic Substar U.S. Environmental Protection Acute Exposure Guideling U.S. Environmental Protection Acute Exposure Guideling U.S. Environmental Protection Acute Exposure Guideling U.S. Environmental Protection Acute Substance Da International Uniform Cher National Institute of Techn Australia National Industr NIOSH (National Institute National Library of Medici U.S. National Toxicology New Zealand's Chemical	(time-weighted average) num limit value s and sources for data nees and Disease Regist ection Agency ChemView uthority (EFSA) Agency e Level(s) (AEGL(s)) ection Agency Federal In ection Agency High Prod atabase emical Information Datab nology and Evaluation (N rial Chemicals Notificatio for Occupational Safety ine's ChemID Plus (NLN ine's PubMed database Program (NTP) Classification and Inform ic Co-operation and Dev	used to compile ry (ATSDR) / Database secticide, Fungici uction Volume Ch ase (IUCLID) NITE) n and Assessmer and Health) (CIP) (NLM PUBMED) nation Database (elopment Environ	de, and Ro emicals nt Scheme (CCID) iment, Hea	(NICNAS) Ith, and Safety Publication	nS

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

Prepared By	PacBio Environment, Health, and Safety 1305 O'Brien Drive Menlo Park, CA 94025 USA safety@pacb.com.	
Revision date	12-Jul-2024	
Revision Note	No information available	

Disclaimer

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

End of Safety Data Sheet



SAFETY DATA SHEET

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

Revision date 12-Jul-2024

Revision Number 1

1. Identification	
Product identifier	
Product Name	End repair mix
Other means of identification	
Product Code(s)	102-166-100
Synonyms	None
Recommended use of the chemical	and restrictions on use
Recommended use	As part of kit
Restrictions on use	For research use only
Details of the supplier of the safety	data sheet
<u>Manufacturer Address</u> PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA www.pacb.com	
E-mail address	techsupport@pacb.com
Emergency telephone number	
Emergency Telephone	CHEMTREC 1-800-424-9300 (CCN#656805)

2. Hazard(s) identification

Classification

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

Label elements

Hazard statements

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

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

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

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

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

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

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

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

9. Physical and chemical properties

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

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

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

10. Stability and reactivity

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

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

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

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

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

Contaminated packaging Do not reuse empty containers.

14. Transport information

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

15. Regulatory information

International Inventories TSCA

Contact supplier for inventory compliance status.

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

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

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

Legend:

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

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

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

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIOC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

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

SARA 311/312 Hazard Categories

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

CWA (Clean Water Act)

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

CERCLA

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

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

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

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

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

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

LegendSection 8: Exposure controlsTWATWA (time-weightCeilingMaximum limit val	ed average)	STEL Sk*	STEL (Short Term Exposure Limit) Skin designation
Key literature references and source Agency for Toxic Substances and Dis U.S. Environmental Protection Agency European Food Safety Authority (EFS Environmental Protection Agency Acute Exposure Guideline Level(s) (A U.S. Environmental Protection Agency U.S. Environmental Protection Agency 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 ChemID National Library of Medicine's PubMe U.S. National Toxicology Program (NT New Zealand's Chemical Classificatio Organization for Economic Co-operati Organization for Economic Co-operati World Health Organization	ease Registry (ATSDR) y ChemView Database (A) EGL(s)) y Federal Insecticide, Fung y High Production Volume nation Database (IUCLID) Evaluation (NITE) s Notification and Assessm ional Safety and Health) D Plus (NLM CIP) d database (NLM PUBMEI (TP) n and Information Databas ion and Development Envir	gicide, and Rodentic Chemicals nent Scheme (NICN D) se (CCID) ronment, Health, an Production Volume	IAS) Id Safety Publications Chemicals Program
Prepared By	PacBio Environment, Health, and 1305 O'Brien Drive Menlo Park, CA 94025 USA safety@pacb.com.	d Safety	
Revision date	12-Jul-2024		

Revision Note

No information available

Disclaimer

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

End of Safety Data Sheet



SAFETY DATA SHEET

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

Revision date 12-Jul-2024

Revision Number 1

1. Identification	
Product identifier	
Product Name	Nuclease mix
Other means of identification	
Product Code(s)	102-166-200
Synonyms	None
Recommended use of the chemical	and restrictions on use
Recommended use	As part of kit
Restrictions on use	For research use only
Details of the supplier of the safety	data sheet
Manufacturer Address PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA www.pacb.com	
E-mail address	techsupport@pacb.com
Emergency telephone number	
Emergency Telephone	CHEMTREC 1-800-424-9300 (CCN#656805)

2. Hazard(s) identification

Classification

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

Label elements

Hazard statements

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

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

3. Composition/information on ingredients

Substance

Not applicable.

<u>Mixture</u>

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

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

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

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

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

9. Physical and chemical properties

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

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

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

10. Stability and reactivity

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

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.
Symptoms related to the physical, of	chemical and toxicological characteristics
Symptoms	No information available.
Acute toxicity	
Numerical measures of toxicity	
The following values are calculated ATEmix (oral) ATEmix (dermal) ATEmix (inhalation-gas) ATEmix (inhalation-vapor) ATEmix (inhalation-dust/mist)	l based on chapter 3.1 of the GHS document 24,223.20 mg/kg 19,224.80 mg/kg 99,999.00 ppm 99,999.00 mg/l 5.29 mg/l
Delayed and immediate effects as v	vell as chronic effects from short and long-term exposure
Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.

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

12. Ecological information

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

14. Transport information

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

15. Regulatory information International Inventories TSCA

Contact supplier for inventory compliance status.

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
Water	7732-18-5	Present	Active
Glycerol	56-81-5	Present	Active
RecJf	-	-	Unknown *
Glycerol	56-81-5	Present	Active
Sodium chloride	7647-14-5	Present	Active
Tris-HCI	1185-53-1	Present	Active
Dithiothreitol	3483-12-3	Present	Active
Tris-HCI	1185-53-1	Present	Active
2-mercaptoethanol	60-24-2	Present	Active
Ethylenediamine tetraacetic acid	60-00-4	Present	Active
Ethylenediamine tetraacetic acid	60-00-4	Present	Active
Exonuclease I	9037-46-1	-	Unknown *
Bovine Serum Albumin	9048-46-8	Present	Active
T7 Exonuclease	9012-90-2	Present	Active

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

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

Legend:

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

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

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

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIOC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

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

SARA 311/312 Hazard Categories

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

CWA (Clean Water Act)

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

CERCLA

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

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Glycerol 56-81-5	Х	Х	Х
Glycerol 56-81-5	Х	X	Х
2-mercaptoethanol 60-24-2	Х	X	Х
Ethylenediamine tetraacetic acid 60-00-4	Х	X	Х
Ethylenediamine tetraacetic acid 60-00-4	Х	X	Х

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information					
	ealth hazards 2 ealth hazards 0	Flammability Flammability		Instability 0 Physical hazards 0	Special hazards - Personal protection X
Key or legend to abbreviat	tions and acronyms	used in the safe	ty data	sheet	
	ne-weighted average)	S		STEL (Short Ter Skin designation	n Exposure Limit)
Prepared By	1305 O'Br	k, CA 94025	afety		
Revision date	12-Jul-202	4			

Revision Note

No information available

Disclaimer

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

End of Safety Data Sheet



SAFETY DATA SHEET

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

Revision date 12-Jul-2024

Revision Number 1

1. Identification	
Product identifier	
Product Name	Ligation mix v2
Other means of identification	
Product Code(s)	102-167-200
Synonyms	None
Recommended use of the chemical	and restrictions on use
Recommended use	As part of kit
Restrictions on use	For research use only
Details of the supplier of the safety	data sheet
<u>Manufacturer Address</u> PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA www.pacb.com	
E-mail address	techsupport@pacb.com
Emergency telephone number	
Emergency Telephone	CHEMTREC 1-800-424-9300 (CCN#656805)

2. Hazard(s) identification

Classification

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

Label elements

Hazard statements

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

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

3. Composition/information on ingredients

Substance

Not applicable.

Methods for cleaning up

<u>Mixture</u>

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

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

Pick up and transfer to properly labeled containers.

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

9. Physical and chemical properties

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

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

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

10. Stability and reactivity

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

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

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

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

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

14. Transport information

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

15. Regulatory information

International Inventories TSCA

Contact supplier for inventory compliance status.

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

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

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

Legend:

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

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

- EINECS/ELINCS European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- **ENCS** Japan Existing and New Chemical Substances
- **IECSC** China Inventory of Existing Chemical Substances
- KECL Korean Existing and Evaluated Chemical Substances
- PICCS Philippines Inventory of Chemicals and Chemical Substances
- AIIC Australian Inventory of Industrial Chemicals
- NZIOC New Zealand Inventory of Chemicals

US Federal Regulations

<u>SARA 313</u>

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

SARA 311/312 Hazard Categories

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

CWA (Clean Water Act)

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

CERCLA

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

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

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

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information				
	Health hazards 2 Health hazards 0	Flammability 0 Flammability 0	Instability 0 Physical hazards 0	Special hazards $\ -$ Personal protection $\ X$

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

Legend Section 8: Exposure controls/personal protection

TWA Ceiling	TWA (time-weighted average) Maximum limit value	STEL Sk*	STEL (Short Term Exposure Limit) Skin designation
Agency for Toxic U.S. Environment European Food S Environmental Pri Acute Exposure C U.S. Environment U.S. Environment Food Research Ju Hazardous Subst International Unife National Institute Australia National NIOSH (National National Library o U.S. National Tox New Zealand's C Organization for E	Suideline Level(s) (AEGL(s)) tal Protection Agency Federal Insecticide, Fun- tal Protection Agency High Production Volume ournal ance Database form Chemical Information Database (IUCLID) of Technology and Evaluation (NITE) I Industrial Chemicals Notification and Assessin Institute for Occupational Safety and Health) of Medicine's ChemID Plus (NLM CIP) of Medicine's PubMed database (NLM PUBME ticology Program (NTP) hemical Classification and Information Database Economic Co-operation and Development Env Economic Co-operation and Development High Economic Co-operation and Development Scree	gicide, and Rodentid Chemicals ment Scheme (NICN D) se (CCID) ironment, Health, ar Production Volume	IAS) nd Safety Publications e Chemicals Program
Propared By	DocRio		

Prepared By	PacBio Environment, Health, and Safety 1305 O'Brien Drive Menlo Park, CA 94025 USA safety@pacb.com.
Revision date	12-Jul-2024
Revision Note	No information available

Disclaimer

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

End of Safety Data Sheet



SAFETY DATA SHEET

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

Revision date 12-Jul-2024

Revision Number 1

1. Identification		
Product identifier		
Product Name	DNA repair mix	
Other means of identification		
Product Code(s)	102-167-700	
Synonyms	None	
Recommended use of the chemical and restrictions on use		
Recommended use	As part of kit	
Restrictions on use	For research use only	
Details of the supplier of the safety	data sheet	
Manufacturer Address PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA www.pacb.com		
E-mail address	techsupport@pacb.com	
Emergency telephone number		
Emergency Telephone	CHEMTREC 1-800-424-9300 (CCN#656805)	

2. Hazard(s) identification

Classification

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

Label elements

Hazard statements

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

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

3. Composition/information on ingredients

Substance

Not applicable.

Methods for cleaning up

<u>Mixture</u>

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

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

Pick up and transfer to properly labeled containers.

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

9. Physical and chemical properties

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

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

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

10. Stability and reactivity

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

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

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

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

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

14. Transport information

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

15. Regulatory information International Inventories

TSCA

Contact supplier for inventory compliance status.

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

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

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

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

Legend:

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

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

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

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIOC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

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

SARA 311/312 Hazard Categories

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

CWA (Clean Water Act)

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

CERCLA

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

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

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

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information					
NFPA HMIS	Health hazards 2 Health hazards 0			Instability 0 Physical hazards 0	Special hazards - Personal protection X
Key or legend to abbreviations and acronyms used in the safety data sheet					
LegendSection 8: Exposure controls/personal protectionTWATWA (time-weighted average)STELSTEL (Short Term Exposure Limit)CeilingMaximum limit valueSk*Skin designation					

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

Prepared By	PacBio Environment, Health, and Safety 1305 O'Brien Drive Menlo Park, CA 94025 USA safety@pacb.com.
Revision date	12-Jul-2024

Revision Note

No information available

Disclaimer

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

End of Safety Data Sheet



SAFETY DATA SHEET

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

Revision date 12-Jul-2024

Revision Number 1

1. Identification	
Product identifier	
Product Name	SMRTbell adapter
Other means of identification	
Product Code(s)	102-167-800
Synonyms	None
Recommended use of the chemica	and restrictions on use
Recommended use	As part of kit
Restrictions on use	For research use only
Details of the supplier of the safety	data sheet
Manufacturer Address PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA www.pacb.com	
E-mail address	techsupport@pacb.com
Emergency telephone number	
Emergency Telephone	CHEMTREC 1-800-424-9300 (CCN#656805)
2. Hazard(s) identification	
<u>Classification</u>	
Label elements	
Hazard statements	

Other information

No information available.

3. Composition/information on ingredients

Substance

Chemical name	CAS No.	Weight-%	Hazardous Material	Date HMIRA filed and
			Information Review	date exemption

			Act registry number (HMIRA registry #)	granted (if applicable)
Water	7732-18-5	90 - 100%	-	-
Sodium chloride	7647-14-5	0 - 10%	-	-
Tris-HCI	1185-53-1	0 - 10%	-	-
AT hairpin lyoph	-	0 - 10%	-	-

4. First-aid measures

Description of first aid measures

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

6. Accidental release measures

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

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

9. Physical and chemical properties

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

None known

None known

None known

None known None known

None known

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

10. Stability and reactivity

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

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Specific test data for the substance or mixture is not available.	
Eye contact	Specific test data for the substance or mixture is not available.	
Skin contact	Specific test data for the substance or mixture is not available.	
Ingestion	Specific test data for the substance or mixture is not available.	
Symptoms related to the physical, chemical and toxicological characteristics		

ailable.

Acute toxicity

Numerical measures of toxicity

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg (Rat)	-	-
Sodium chloride 7647-14-5	= 3550 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	> 42 mg/L (Rat)1 h

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

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.

STOT - repeated exposure

No information available.

Aspiration hazard No information available.

12. Ecological information

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical name	Algae/aquatic plants	Fish	Toxicity to	Crustacea
			microorganisms	
Sodium chloride 7647-14-5	-	LC50: 5560 - 6080mg/L (96h, Lepomis macrochirus) LC50: =12946mg/L (96h, Lepomis macrochirus) LC50: 6020 - 7070mg/L (96h, Pimephales promelas) LC50: =7050mg/L (96h, Pimephales promelas) LC50: 6420 - 6700mg/L (96h, Pimephales promelas) LC50: 4747 - 7824mg/L (96h, Oncorhynchus	-	EC50: =1000mg/L (48h, Daphnia magna) EC50: 340.7 - 469.2mg/L (48h, Daphnia magna)
		mykiss)		

Persistence and degradability

No information available.

Bioaccumulation

There is no data for this product.

Chemical name		Partition coefficient
Tris-H(-3.6
1185-5	3-1	
Other adverse effects	No information available.	
13. Disposal considerations		
Disposal methods		
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 contai	ners.
14. Transport information		

DOT	Not regulated
TDG	Not regulated
MEX	Not regulated
ICAO (air)	Not regulated
IATA_	Not regulated
IMDG	Not regulated
15. Regulatory information	

Contact supplier for inventory compliance status.

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

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

Legend:

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

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

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

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIOC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

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

SARA 311/312 Hazard Categories

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

CWA (Clean Water Act)

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

CERCLA

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

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations

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

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information	ion
-----------------------	-----

<u>NFPA</u> Health ha <u>HMIS</u> Health ha			stability 0 nysical hazards 0	Special hazards - Personal protection X
Key or legend to abbreviations an	d acronyms used in the	e safety data sheet		
LegendSection 8: Exposure controTWATWA (time-weighCeilingMaximum limit vaKey literature references and sourAgency for Toxic Substances and DiU.S. Environmental Protection AgenEuropean Food Safety Authority (EFEnvironmental Protection AgencyAcute Exposure Guideline Level(s) (U.S. Environmental Protection AgencyAcute Exposure Guideline Level(s) (U.S. Environmental Protection AgencyAcute Exposure Guideline Level(s) (U.S. Environmental Protection AgencyFood Research JournalHazardous Substance DatabaseInternational Uniform Chemical InforNational Institute of Technology andAustralia National Industrial ChemicaNIOSH (National Institute for OccupaNational Library of Medicine's ChemNational Library of Medicine's PubMU.S. National Toxicology Program (NNew Zealand's Chemical ClassificatiOrganization for Economic Co-operaOrganization for Economic Co-operaOrga	nted average) alue rces for data used to co isease Registry (ATSDR) cy ChemView Database SA) AEGL(s)) cy Federal Insecticide, F cy High Production Volur mation Database (IUCLII Evaluation (NITE) als Notification and Asses ational Safety and Health ID Plus (NLM CIP) ed database (NLM PUBN NTP) ion and Information Datal ation and Development E ation and Development H) ungicide, and Roden ne Chemicals D) ssment Scheme (NIC) MED) base (CCID) nvironment, Health, a igh Production Volun	Skin designation ticide Act CNAS) and Safety Publicatio ne Chemicals Progra	ons
World Health Organization Prepared By	PacBio Environment, Health, 1305 O'Brien Drive Menlo Park, CA 9402			

Revision date	12-Jul-2024

Revision Note No information available

USA

safety@pacb.com.

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, PureTarget, SPRQ, and Vega are trademarks of PacBio.

End of Safety Data Sheet



SAFETY DATA SHEET

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

Revision date 12-Jul-2024

Revision Number 1

1. Identification				
Product identifier				
Product Name	Nuclease buffer			
Other means of identification				
Product Code(s)	102-167-900			
Synonyms	None			
Recommended use of the chemical	and restrictions on use			
Recommended use	As part of kit			
Restrictions on use For research use only				
Details of the supplier of the safety	data sheet			
Manufacturer Address PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA www.pacb.com				
E-mail address	techsupport@pacb.com			
Emergency telephone number				
Emergency Telephone	CHEMTREC 1-800-424-9300 (CCN#656805)			

2. Hazard(s) identification

Classification

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

Label elements

Hazard statements

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

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

3. Composition/information on ingredients

Substance

Not applicable.

<u>Mixture</u>

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

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

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

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

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

9. Physical and chemical properties

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

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

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

10. Stability and reactivity

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

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

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

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

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

Contaminated packaging Do not reuse empty containers.

14. Transport information

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

15. Regulatory information International Inventories

TSCA

Contact supplier for inventory compliance status.

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

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

AIIC	Does not comply
NZIoC	Complies

Legend:

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

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

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

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIOC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

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

SARA 311/312 Hazard Categories

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

CWA (Clean Water Act)

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

CERCLA

HMIS

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

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

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

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

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

Physical hazards 0

Personal protection X

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

Health hazards 0

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

Flammability 0

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

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

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

National Institute of Technology and Evaluation (NITE)

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

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

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

U.S. National Toxicology Program (NTP)

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

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

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

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

World Health Organization

Prepared By	PacBio Environment, Health, and Safety 1305 O'Brien Drive Menlo Park, CA 94025 USA safety@pacb.com.
Revision date	12-Jul-2024
Revision Note	No information available

Disclaimer

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

End of Safety Data Sheet



SAFETY DATA SHEET

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

Revision date 12-Jul-2024

Revision Number 1

1. Identification	
Product identifier	
Product Name	Ligation enhancer
Other means of identification	
Product Code(s)	102-179-100
Synonyms	None
Recommended use of the chemical	and restrictions on use
Recommended use	As part of kit
Restrictions on use	For research use only
Details of the supplier of the safety	data sheet
Manufacturer Address PacBio 1305 O'Brien Drive Menlo Park, CA 94025 USA www.pacb.com	
E-mail address	techsupport@pacb.com
Emergency telephone number	
Emergency Telephone	CHEMTREC 1-800-424-9300 (CCN#656805)

2. Hazard(s) identification

Classification

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

Label elements

Hazard statements

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

Other information No information available.

3. Composition/information on ingredients

Substance

Not applicable.

<u>Mixture</u>

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

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

6. Accidental release measures

precautions for fire-fighters

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

Use personal protection equipment.

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

Remarks • Method

None known None known None known None known None known

9. Physical and chemical properties

Physical state Liquid	
Appearance Liquid	
Color clear colorless	
Odor Odorless	
Odor threshold No information available	
Property Values	
рН 7 - 8.5	
Melting point / freezing point No data available	
Initial boiling point and boiling rangeNo data available	
Flash point No data available	
Evaporation rate No data available	
Flammability Limit in Air	
Upper flammability or explosive No data available	
limits	
Lower flammability or explosive No data available	

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

10. Stability and reactivity

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

11. Toxicological information

Information on likely routes of exposure

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

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

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

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

14. Transport information

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

15. Regulatory information

International Inventories TSCA

Contact supplier for inventory compliance status.

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

DSL/NDSL	
EINECS/ELINCS	
ENCS	
IECSC	
KECI	

Complies Complies Does not comply Complies Does not comply

PICCS	Complies
AIIC	Complies
NZIoC	Complies

Legend:

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

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

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

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIOC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

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

SARA 311/312 Hazard Categories

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

CWA (Clean Water Act)

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

CERCLA

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

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

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

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information							
NFPA HMIS	Health hazards Health hazards		Flammability 0 Flammability 0	Instability 0 Physical hazards 0	Special hazards - Personal protection X		
Key or legend to abbreviations and acronyms used in the safety data sheet							

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

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

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

1305 O'Brien Drive Menlo Park, CA 94025 USA safety@pacb.com.
12-Jul-2024
No information available

Disclaimer

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

End of Safety Data Sheet