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Rev. 01

SDS PN: 101-849-900

1. PRODUCT AND COMPANY IDENTIFICATION				
1.1 Product Identifier				
Product Name	Sequel® II Binding Kit 2.1			
Product Number(s)	101-820-500			
Other means of identification	This product is a kit box containing 15 reagent tubes.			
	Subcomponent Name	Part #	#	Cap Color
	Sequel® II DNA Polymerase 2.1	101-820-600	1	Purple
	Sequel® Binding Buffer	101-623-400	2	Yellow
	Sequel® dNTP	101-623-700	1	Green
	DTT	001-388-706	3	Red
	Sequel® Additive	101-623-500	1	White
	Sequel® Complex Dilution Buffer	101-623-600	7	Blue
1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against				
Identified Use	For use with the Sequel® II Sequencing Kit 2.0 on the PacBio® Sequel® II System with a Sequel® II SMRT® Cell 8M.			
Restrictions on Use	FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES.			
1.3 Details of the Supplier of the Substance or Mixture				
Supplier Name and Address	Pacific Biosciences of California, Inc. 1305 O'Brien Drive Menlo Park, CA 94025 U.S.A www.pacificbiosciences.com			
Supplier phone	+1 650-521-8000			
1.4 Emergency Telephone Number				
Within USA & Canada	Call CHEMTREC 1-800-424-9300 (reference CCN# 656805)			
Outside USA and Canada	techsupport@pacb.com			
2. HAZARD(S) IDENTIFICATION				
2.1 Classification of the substance or mixture				
The kit as a whole is not a hazardous substance or mixture. ¹ Subcomponents are classified as follows.				
Subcomponent Name	Part #	Classification		
Sequel® II DNA Polymerase 2.1	101-820-600	Not a hazardous substance or mixture		
Sequel® Binding Buffer	101-623-400	Not a hazardous substance or mixture		
Sequel® dNTP	100-623-700	Not a hazardous substance or mixture		
DTT	001-388-706	Skin Irritation (Category 3)		
Sequel® Additive	101-623-500	Not a hazardous substance or mixture		
Sequel® Complex Dilution Buffer	101-623-600	Not a hazardous substance or mixture		

¹ Classification in accordance with 29CFR1910 (OSHA HCS) and UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

2.2 GHS Label Elements and precautionary statements				
Information is provided for the hazardous components listed in section 2.1				
Product	Pictogram	Signal Word	Hazard statement(s)	Precautionary statement(s)
DTT Tube	None	Warning	H316: Causes mild skin irritation	P332+P313: If skin irritation occurs: Get medical advice/attention
2.3 Hazards not otherwise classified (HNOC) or not covered by GHS				
None				
3. COMPOSITION / INFORMATION ON INGREDIENTS				
3.1 Substances				
Common Name and Synonyms			Sequel® II Binding Kit	
CAS Number			None	
Other unique identifiers			None	
3.2 Hazardous components				
The DTT Tube contains the following hazardous ingredients. None of the other reagent tubes contain any hazardous ingredients.				
Subcomponent	Hazardous Ingredient(s)	CAS	GHS Classification	Concentration (wt%)
DTT Tube	DL-Dithiothreitol	3483-12-3	Acute Toxicity, Oral (Category 4); Skin Irritation (Category 2); Eye Irritation (Category 2A); Specific Target Organ Toxicity – single exposure (Category 3), Respiratory system; Chronic Aquatic Toxicity (Category 3)	6.17%
4. FIRST AID MEASURES				
4.1 Description of First Aid Measures				
General advice	Consult a physician. Show this safety data sheet to the physician.			
If inhaled	If breathed in, move person into fresh air. If not breathing, give artificial respiration.			
In case of skin contact	Wash off with plenty of water. If skin irritation occurs: Get medical advice/attention.			
In case of eye contact	Flush eyes with water.			
If swallowed	Never give anything by mouth to an unconscious person. Rinse mouth with water.			
4.2 Most important symptoms/effects, both acute and delayed				
No data available. Refer to section 2.2 and section 11 for additional information.				
4.2 Indication of any immediate medical attention and special treatment needed				
No data available				
5. FIRE-FIGHTING MEASURES				
5.1 Suitable Extinguishing Media				
Dry chemical, carbon dioxide, foam or water.				
5.2 Special hazards arising from the substance or mixture				
Combustion will produce oxides of carbon, nitrogen and sulfur.				
5.3 Advice for firefighters (special protective equipment or precautions)				
Wear self-contained breathing apparatus for fire-fighting as necessary.				
6. ACCIDENTAL RELEASE MEASURES				
6.1 Personal precautions, protective equipment and emergency procedures				
Avoid breathing vapors, mists or gas. For personal protection see section 8.0.				
6.2 Environmental precautions				
Avoid release to the environment. Report spills and releases as required to appropriate authorities.				
6.3 Methods and materials for cleanup				
Wear personal protective equipment, wipe up with paper towel (or similar), and contain in closed containers.				

6.4	Reference to other sections	
		For disposal see section 13.
7.	HANDLING AND STORAGE	
7.1	Precautions for safe handling	
		Utilize standard good lab practices. Use in a well-ventilated area and wear standard PPE.
7.2	Conditions for safe storage, including any incompatibilities	
		Keep containers tightly closed at the recommended storage temperature.
8.	EXPOSURE CONTROLS / PERSONAL PROTECTION	
8.1	Control Parameters	
		Contains no substances with occupational exposure limit values.
8.2	Exposure Controls	
	Appropriate engineering controls:	General industrial hygiene practice. No special ventilation required for normal use.
	Personal Protective Equipment (PPE):	
	Eye/Face Protection	Safety glasses
	Skin and Body Protection	Latex or nitrile gloves; lab coat /apron
	Respiratory Protection	None required
9.	PHYSICAL AND CHEMICAL PROPERTIES	
9.1	Information on basic physical and chemical properties	
	Appearance	Each reagent tube contains clear colorless liquid.
	Odor	The DTT tube has a slight sulfur smell. Other tubes have mild or no odor.
	Odor Threshold	No data available
	pH	7.0-8.5
	Melting point/freezing point	No data available
	Initial boiling point and boiling range	No data available
	Flash point	No data available
	Evaporation rate	No data available
	Flammability (solid, gas)	No data available
	Upper/lower flammability or explosive limit	No data available
	Vapor pressure	No data available
	Relative density	No data available
	Solubility(ies)	No data available
	Partition coefficient: n-octanol/water	No data available
	Auto-ignition temperature	No data available
	Decomposition temperature	No data available
	Viscosity	No data available
10.	STABILITY AND REACTIVITY	
	Reactivity	This product is not reactive under normal conditions of storage and use.
	Chemical Stability	Stable under recommended storage conditions.
	Possibility of Hazardous Reactions	No data available
	Conditions to Avoid	No data available
	Incompatible Materials	Avoid contact with strong acids, bases and oxidizers.
	Hazardous Decomposition Products	No data available. In the event of fire see section 5.
11.	TOXICOLOGICAL INFORMATION	
11.1	Information on likely routes of exposure	
		The most likely route of exposure is via skin or eye contact. Exposure via inhalation or ingestion is less likely.

11.2 Symptoms related to the physical, chemical and toxicological characteristics	
No data available	
11.3 Delayed and immediate effects and also chronic effects from short and long-term exposure	
Eyes	No data available
Skin	No data available
Inhalation	No data available
Ingestion	No data available
Chronic Effects	No data available
Aggravated Medical Conditions	No data available
Interactions with other Chemicals	No data available
11.4 Numerical measures of toxicity	
Acute toxicity	No data available
Skin corrosion/irritation	No data available
Serious eye damage/irritation	No data available
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	No data available
Reproductive toxicity	No data available
Specific target organ toxicity	No data available
11.5 Carcinogenicity	
No ingredients in this product are listed as carcinogens by ACGIH, IARC, NTP or OSHA.	
12. ECOLOGICAL INFORMATION	
Ecotoxicity	No data available
Persistence and Degradability	No data available
Bioaccumulative Potential	No data available
Mobility in soil	No data available
Results of PBT and vPvB Assessment	None Required
Other adverse effects	No data available
13. DISPOSAL CONSIDERATIONS	
Dispose all waste in accordance with local, regional and national regulations.	
Product	See above
Contaminated Packaging	See above
US EPA Waste Number	No EPA ID number. Not regulated as a US federal hazardous waste. Not regulated under Title 22 as a California hazardous waste.
14. TRANSPORT INFORMATION	
Transportation of this product is not regulated under ICAO, IMDG or US DOT.	
15. REGULATORY INFORMATION	
15.1 USA Federal Regulations	
SARA 302	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302
SARA 313	This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313
SARA 311/312	No SARA hazards
TSCA	Research use only
15.2 USA State Regulations	
CA Prop 65	This kit does not contain any chemicals known to the State of California to cause cancer or adverse reproductive health effects

16. OTHER INFORMATION	
Prepared By	Pacific Biosciences of California, Inc. Environment, Health and Safety 1305 O'Brien Drive Menlo Park, CA 94025 U.S.A. safety@pacb.com
Further Information	<p>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.</p> <p>For Research Use Only. Not for use in diagnostic procedures. © Copyright 2019, Pacific Biosciences of California, Inc. All right reserved. Information in this document is subject to change without notice. Pacific Biosciences 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 Pacific Biosciences products and/or third-party products. Please refer to the applicable Pacific Bioscience Terms and Conditions of Sale and to the applicable license terms at http://www.pacb.com/legal-and-trademarks/product-license-and-use-restrictions/.</p> <p>Pacific Biosciences, the Pacific Biosciences logo, PacBio, SMRT, SMRTbell, Iso-Seq, and Sequel are trademarks of Pacific Biosciences. BluePippin and SageELF are trademarks of Sage Science. NGS-go and NGSengine are trademarks of GenDx. FEMTO Pulse and Fragment Analyzer are trademarks of Agilent Technologies. All other trademarks are the sole property of their respective owners.</p>