

## Product identifier

**Product Name** Kinnex concatenation kit 2.0

## Other means of identification

**Product Code(s)** 103-836-400

| <i>Chemical name</i>           | <i>Part number</i> | <i>Quantity</i> | <i>Cap color</i> | <i>Classification</i>     |
|--------------------------------|--------------------|-----------------|------------------|---------------------------|
| Nuclease mix                   | 103-110-100        | 1               | Light green      | Not a hazardous material. |
| Nuclease buffer                | 103-110-200        | 1               | Light Purple     | Not a hazardous material. |
| Kinnex repair mix              | 103-837-500        | 1               | Green            | Not a hazardous material. |
| Kinnex ligase                  | 103-110-500        | 1               | Yellow           | Not a hazardous material. |
| Kinnex enzyme                  | 103-110-400        | 1               | Red              | Not a hazardous material. |
| Kinnex array and repair buffer | 103-110-300        | 1               | White            | Not a hazardous material. |
| Kinnex adapter bc04 mix        | 103-109-900        | 1               | Blue             | Not a hazardous material. |
| Kinnex adapter bc03 mix        | 103-109-800        | 1               | Blue             | Not a hazardous material. |
| Kinnex adapter bc02 mix        | 103-109-700        | 1               | Blue             | Not a hazardous material. |
| Kinnex adapter bc01 mix        | 103-109-600        | 1               | Blue             | 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  
which includes the amended Hazardous Products Act (HPA) and the Hazardous Products  
Regulation (HPR)

Revision date 03-Oct-2024

Revision Number 1

## 1. Identification

### Product identifier

**Product Name** Kinnex adapter bc01 mix

### Other means of identification

**Product Code(s)** 103-109-600

### Recommended use of the chemical and restrictions on use

**Recommended use** See product insert

**Restrictions on use** For research use only

### Details of the supplier of the safety data sheet

#### Manufacturer Address

PacBio  
1305 O'Brien Drive  
Menlo Park, CA 94025  
USA  
www.pacb.com

**E-mail address** techsupport@pacb.com

### Emergency telephone number

**Emergency Telephone** CHEMTREC 1-800-424-9300 (CCN#656805)

## 2. Hazard(s) identification

### Classification of the substance or mixture

This product is not considered hazardous by either the US OSHA Hazard Communication Standard 2024, or Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended.

### Label elements

#### **Hazard statements**

This product is not considered hazardous by either the US OSHA Hazard Communication Standard 2024, or Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended.

#### **Hazards classified under paragraph (d)(1)(ii) of 1910.1200**

No information available.

### Other information

No information available.

## 3. Composition/information on ingredients

**Substance**

Not applicable.

**Mixture**

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

**4. First-aid measures****Description of first aid measures**

|              |                                                                                                                         |
|--------------|-------------------------------------------------------------------------------------------------------------------------|
| Inhalation   | Remove to fresh air.                                                                                                    |
| Eye contact  | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.<br>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**

|                                                                              |                                                                                                                                       |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b><u>Suitable Extinguishing Media</u></b>                                   | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.                               |
| <b><u>Specific hazards arising from the chemical</u></b>                     | No information available.                                                                                                             |
| <b><u>Explosion data</u></b>                                                 |                                                                                                                                       |
| Sensitivity to mechanical impact                                             | None.                                                                                                                                 |
| Sensitivity to static discharge                                              | None.                                                                                                                                 |
| <b><u>Special protective equipment and precautions for fire-fighters</u></b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.<br>Use personal protective 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.                                 |
| Prevention of secondary hazards | Clean contaminated objects and areas thoroughly observing environmental regulations. |

## 7. Handling and storage

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. Exposure controls/personal protection

### Control Parameters

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

### Appropriate engineering controls

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

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

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

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

**Appearance** Liquid  
**Physical state** Liquid  
**Color** clear colorless  
**Odor** Odorless

| <u>Property</u>                                                  | <u>Values</u>     | <u>Remarks • Method</u> |
|------------------------------------------------------------------|-------------------|-------------------------|
| <b>Melting point / freezing point</b>                            | No data available | None known              |
| <b>Boiling point (or initial boiling point or boiling range)</b> | No data available | None known              |
| <b>Flammability</b>                                              | No data available | None known              |
| <b>Flammability Limit in Air</b>                                 |                   | None known              |
| <b>Upper flammability or explosive limits</b>                    | No data available |                         |
| <b>Lower flammability or explosive limits</b>                    | No data available |                         |

|                                                   |                   |            |
|---------------------------------------------------|-------------------|------------|
| Flash point                                       | No data available | None known |
| Autoignition temperature                          | No data available | None known |
| Decomposition temperature                         | No data available | None known |
| SADT (°C)                                         | No data available | None known |
| pH                                                | 7 - 8.5           | None known |
| pH (as aqueous solution)                          | No data available | None known |
| Kinematic viscosity                               | No data available | None known |
| Dynamic viscosity                                 | No data available | None known |
| Solubility                                        | No data available | None known |
| Water solubility                                  | No data available | None known |
| Partition coefficient n-octanol/water (log value) | No data available | None known |
| Vapor pressure (includes evaporation rate)        | No data available | None known |
| Evaporation rate                                  | No data available | None known |
| Density and/or relative density                   | No data available | None known |
| Bulk density                                      | No data available |            |
| Liquid Density                                    | No data available |            |
| Relative vapor density                            | No data available | None known |
| Particle characteristics                          |                   | None known |
| Particle Size                                     | No data available |            |
| Particle Size Distribution                        | No data available |            |

Other information**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 | No information available. |

Numerical measures of toxicity

The following ATE values have been calculated for the mixture

|                         |                 |
|-------------------------|-----------------|
| ATEmix (oral)           | 99,999.00 mg/kg |
| ATEmix (dermal)         | 99,999.00 mg/kg |
| ATEmix (inhalation-gas) | 99,999.00 ppm   |

|                               |                |
|-------------------------------|----------------|
| ATEmix (inhalation-vapor)     | 99,999.00 mg/L |
| ATEmix (inhalation-dust/mist) | 99,999.00 mg/L |

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

|                                          |                           |
|------------------------------------------|---------------------------|
| <b>Skin corrosion/irritation</b>         | No information available. |
| <b>Serious eye damage/eye irritation</b> | No information available. |
| <b>Respiratory or skin sensitization</b> | No information available. |
| <b>Germ cell mutagenicity</b>            | No information available. |
| <b>Carcinogenicity</b>                   | No information available. |
| <b>Reproductive toxicity</b>             | No information available. |
| <b>STOT - single exposure</b>            | No information available. |
| <b>STOT - repeated exposure</b>          | No information available. |
| <b>Aspiration hazard</b>                 | No information available. |

**12. Ecological information**

|                                      |                                                                           |
|--------------------------------------|---------------------------------------------------------------------------|
| <b>Ecotoxicity</b>                   | The environmental impact of this product has not been fully investigated. |
| <b>Persistence and degradability</b> | No information available.                                                 |
| <b>Bioaccumulative potential</b>     | There is no data for this product.                                        |
| <b>Other adverse effects</b>         | No information available.                                                 |

**13. Disposal considerations****Disposal methods**

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

**14. Transport information**

**DOT** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**15. Regulatory information****International Inventories**

**TSCA** Contact supplier for inventory compliance status.

\*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/NDL       | Contact supplier for inventory compliance status. |
| EINECS/ELINCS | Contact supplier for inventory compliance status. |
| ENCS          | Contact supplier for inventory compliance status. |
| IECSC         | Contact supplier for inventory compliance status. |
| KECL          | Contact supplier for inventory compliance status. |
| PICCS         | Contact supplier for inventory compliance status. |
| AIIC          | Contact supplier for inventory compliance status. |
| NZIoC         | Contact supplier for inventory compliance status. |

**Legend:**

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

**DSL/NDL** - 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 Chemicals Inventory

**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).

**CAA (Clean Air Act)**

This product does not contain any substances regulated as pollutants pursuant to Clean Air Act (CAA).

**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<br>7732-18-5                          | -          | -             | X            |
| Ethylenediamine tetraacetic acid<br>60-00-4 | X          | X             | X            |

**16. Other information**

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

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

List may include phrases which are not applicable to this product

**Legend**

|         |                                                                                                 |
|---------|-------------------------------------------------------------------------------------------------|
| ACGIH   | American Conference of Governmental Industrial Hygienists                                       |
| ADN     | Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe) |
| ADR     | Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)             |
| ATE     | Acute Toxicity Estimate                                                                         |
| ASTM    | American Society for the Testing of Materials                                                   |
| bar     | Biological Reference Values for Chemical Compounds in the Work Area                             |
| BAT     | Biological tolerance values for occupational exposure                                           |
| BEL     | Biological exposure limits                                                                      |
| bw      | Body weight                                                                                     |
| Ceiling | Maximum limit value                                                                             |
| CMR     | Carcinogen, Mutagen or Reproductive Toxicant                                                    |
| DOT     | Department of Transportation (United States)                                                    |
| EPA     | U.S. Environmental Protection Agency                                                            |
| GHS     | Globally Harmonized System                                                                      |
| HMIS    | Hazardous Materials Identification System                                                       |
| IARC    | International Agency for Research on Cancer                                                     |
| IATA    | International Air Transport Association                                                         |
| ICAO    | International Civil Aviation Organization                                                       |
| IMDG    | International Maritime Dangerous Goods                                                          |
| IMO     | International Maritime Organization                                                             |
| ISO     | International Organization for Standardization                                                  |
| LC50    | Lethal Concentration to 50% of a test population                                                |
| LD50    | Lethal Dose to 50% of a test population (Median Lethal Dose)                                    |
| NFPA    | National Fire Protection Association                                                            |
| NIOSH   | National Institute for Occupational Safety and Health                                           |
| n.o.s.  | Not Otherwise Specified                                                                         |
| NOAEC   | No Observed Adverse Effect Concentration                                                        |
| NOAEL   | No Observed Adverse Effect Level                                                                |
| NOELR   | No Observable Effect Loading Rate                                                               |
| NTP     | National Toxicology Program (United States)                                                     |
| OECD    | Organization for Economic Cooperation and Development                                           |
| OEL     | Occupational exposure limits                                                                    |
| OSHA    | Occupational Safety and Health Administration of the US Department of Labor                     |
| PBT     | Persistent, Bioaccumulative and Toxic substance                                                 |
| PMT     | Persistent, Mobile and Toxic                                                                    |
| PPE     | Personal protective equipment                                                                   |
| SADT    | Self-Accelerating Decomposition Temperature                                                     |
| SARA    | Superfund Amendments and Reauthorization Act                                                    |
| SDS     | Safety Data Sheet                                                                               |
| SL      | Surface Limit                                                                                   |
| STEL    | Short Term Exposure Limit                                                                       |
| STOT RE | Specific target organ toxicity - Repeated exposure                                              |
| STOT SE | Specific target organ toxicity - Single exposure                                                |
| TDG     | Transport of Dangerous Goods (Canada)                                                           |
| TWA     | Time-Weighted Average                                                                           |
| UN      | United Nations                                                                                  |
| VOC     | Volatile organic compounds                                                                      |
| vPvB    | Very Persistent and Very Bioaccumulative                                                        |
| vPvM    | Very Persistent and Very Mobile                                                                 |
| As      | Allergenic substance                                                                            |
| DS      | Dermal Sensitizer                                                                               |
| Ot      | Ototoxicant                                                                                     |
| pOt     | Ototoxicant - potential to cause hearing disorders                                              |
| PS      | Photosensitizer                                                                                 |
| RS      | Respiratory Sensitizer                                                                          |
| S       | Sensitizer                                                                                      |
| poS     | Sensitizer - capable of causing occupational asthma                                             |
| Sa      | Simple asphyxiant                                                                               |
| Sd      | Skin designation                                                                                |

|     |                                                       |
|-----|-------------------------------------------------------|
| pSd | Skin designation - potential for cutaneous absorption |
| Sdv | Skin designation - vacated                            |
| Sk  | Skin notation                                         |
| dSk | Skin notation - danger of cutaneous absorption        |
| pSk | Skin notation - potential for cutaneous absorption    |

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

U.S. Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
U.S. Environmental Protection Agency  
U.S. EPA 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  
U.S. Hazardous Substance Data Bank (HSDB)  
International Uniform Chemical Information Database (IUCLID)  
Japan National Institute of Technology and Evaluation (NITE)  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
U.S. National Institute for Occupational Safety and Health (NIOSH)  
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)  
International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications  
International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program  
International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set  
United Nations World Health Organization (WHO)

**Prepared By** PacBio  
Environment, Health, and Safety  
1305 O'Brien Drive  
Menlo Park, CA 94025  
USA  
safety@pacb.com.

**Revision date** 03-Oct-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. 2026 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](https://pacb.com/license). Pacific Biosciences, the PacBio logo, PacBio, Circulomics, Omniome, SMRT, SMRTbell, Iso-Seq, Sequel, Nanobind, Revio, Revio SPRQ, Kinnex, PureTarget, SPRQ, Vega and Vega SPRQ 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  
which includes the amended Hazardous Products Act (HPA) and the Hazardous Products  
Regulation (HPR)

Revision date 03-Oct-2024

Revision Number 1

## 1. Identification

### Product identifier

**Product Name** Kinnex adapter bc02 mix

### Other means of identification

**Product Code(s)** 103-109-700

### Recommended use of the chemical and restrictions on use

**Recommended use** See product insert

**Restrictions on use** For research use only

### Details of the supplier of the safety data sheet

#### Manufacturer Address

PacBio  
1305 O'Brien Drive  
Menlo Park, CA 94025  
USA  
www.pacb.com

**E-mail address** techsupport@pacb.com

### Emergency telephone number

**Emergency Telephone** CHEMTREC 1-800-424-9300 (CCN#656805)

## 2. Hazard(s) identification

### Classification of the substance or mixture

This product is not considered hazardous by either the US OSHA Hazard Communication Standard 2024, or Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended.

### Label elements

#### **Hazard statements**

This product is not considered hazardous by either the US OSHA Hazard Communication Standard 2024, or Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended.

#### **Hazards classified under paragraph (d)(1)(ii) of 1910.1200**

No information available.

### Other information

No information available.

## 3. Composition/information on ingredients

**Substance**

Not applicable.

**Mixture**

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

**4. First-aid measures****Description of first aid measures**

|              |                                                                                                                         |
|--------------|-------------------------------------------------------------------------------------------------------------------------|
| Inhalation   | Remove to fresh air.                                                                                                    |
| Eye contact  | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.<br>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**

|                                            |                                                                                                         |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b><u>Suitable Extinguishing Media</u></b> | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------|

|                                                          |                           |
|----------------------------------------------------------|---------------------------|
| <b><u>Specific hazards arising from the chemical</u></b> | No information available. |
|----------------------------------------------------------|---------------------------|

**Explosion data**

|                                  |       |
|----------------------------------|-------|
| Sensitivity to mechanical impact | None. |
| Sensitivity to static discharge  | None. |

|                                                                              |                                                                                                                                       |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b><u>Special protective equipment and precautions for fire-fighters</u></b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.<br>Use personal protective 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.                                 |
| Prevention of secondary hazards | Clean contaminated objects and areas thoroughly observing environmental regulations. |

**7. Handling and storage****Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

**8. Exposure controls/personal protection****Control Parameters**

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

**Appropriate engineering controls**

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

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

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

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties****Information on basic physical and chemical properties**

**Appearance** Liquid  
**Physical state** Liquid  
**Color** clear colorless  
**Odor** Odorless

| <b><u>Property</u></b>                                           | <b><u>Values</u></b> | <b><u>Remarks • Method</u></b> |
|------------------------------------------------------------------|----------------------|--------------------------------|
| <b>Melting point / freezing point</b>                            | No data available    | None known                     |
| <b>Boiling point (or initial boiling point or boiling range)</b> | No data available    | None known                     |
| <b>Flammability</b>                                              | No data available    | None known                     |
| <b>Flammability Limit in Air</b>                                 |                      | None known                     |
| <b>Upper flammability or explosive limits</b>                    | No data available    |                                |
| <b>Lower flammability or explosive limits</b>                    | No data available    |                                |

|                                                   |                   |            |
|---------------------------------------------------|-------------------|------------|
| Flash point                                       | No data available | None known |
| Autoignition temperature                          | No data available | None known |
| Decomposition temperature                         | No data available | None known |
| SADT (°C)                                         | No data available | None known |
| pH                                                | 7 - 8.5           | None known |
| pH (as aqueous solution)                          | No data available | None known |
| Kinematic viscosity                               | No data available | None known |
| Dynamic viscosity                                 | No data available | None known |
| Solubility                                        | No data available | None known |
| Water solubility                                  | No data available | None known |
| Partition coefficient n-octanol/water (log value) | No data available | None known |
| Vapor pressure (includes evaporation rate)        | No data available | None known |
| Evaporation rate                                  | No data available | None known |
| Density and/or relative density                   | No data available | None known |
| Bulk density                                      | No data available |            |
| Liquid Density                                    | No data available |            |
| Relative vapor density                            | No data available | None known |
| Particle characteristics                          |                   | None known |
| Particle Size                                     | No data available |            |
| Particle Size Distribution                        | No data available |            |

Other information**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 | No information available. |

Numerical measures of toxicity

|                                                               |           |       |
|---------------------------------------------------------------|-----------|-------|
| The following ATE values have been calculated for the mixture |           |       |
| ATEmix (oral)                                                 | 99,999.00 | mg/kg |
| ATEmix (dermal)                                               | 99,999.00 | mg/kg |
| ATEmix (inhalation-gas)                                       | 99,999.00 | ppm   |

|                               |                |
|-------------------------------|----------------|
| ATEmix (inhalation-vapor)     | 99,999.00 mg/L |
| ATEmix (inhalation-dust/mist) | 99,999.00 mg/L |

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

|                                          |                           |
|------------------------------------------|---------------------------|
| <b>Skin corrosion/irritation</b>         | No information available. |
| <b>Serious eye damage/eye irritation</b> | No information available. |
| <b>Respiratory or skin sensitization</b> | No information available. |
| <b>Germ cell mutagenicity</b>            | No information available. |
| <b>Carcinogenicity</b>                   | No information available. |
| <b>Reproductive toxicity</b>             | No information available. |
| <b>STOT - single exposure</b>            | No information available. |
| <b>STOT - repeated exposure</b>          | No information available. |
| <b>Aspiration hazard</b>                 | No information available. |

**12. Ecological information**

|                                      |                                                                           |
|--------------------------------------|---------------------------------------------------------------------------|
| <b>Ecotoxicity</b>                   | The environmental impact of this product has not been fully investigated. |
| <b>Persistence and degradability</b> | No information available.                                                 |
| <b>Bioaccumulative potential</b>     | There is no data for this product.                                        |
| <b>Other adverse effects</b>         | No information available.                                                 |

**13. Disposal considerations****Disposal methods**

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

**14. Transport information**

**DOT** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**15. Regulatory information****International Inventories**

**TSCA** Contact supplier for inventory compliance status.

\*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/NDL       | Contact supplier for inventory compliance status. |
| EINECS/ELINCS | Contact supplier for inventory compliance status. |
| ENCS          | Contact supplier for inventory compliance status. |
| IECSC         | Contact supplier for inventory compliance status. |
| KECL          | Contact supplier for inventory compliance status. |
| PICCS         | Contact supplier for inventory compliance status. |
| AIIC          | Contact supplier for inventory compliance status. |
| NZIoC         | Contact supplier for inventory compliance status. |

**Legend:**

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

**DSL/NDL** - 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 Chemicals Inventory

**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).

**CAA (Clean Air Act)**

This product does not contain any substances regulated as pollutants pursuant to Clean Air Act (CAA).

**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<br>7732-18-5                          | -          | -             | X            |
| Ethylenediamine tetraacetic acid<br>60-00-4 | X          | X             | X            |

**16. Other information**

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

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

List may include phrases which are not applicable to this product

**Legend**

|         |                                                                                                 |
|---------|-------------------------------------------------------------------------------------------------|
| ACGIH   | American Conference of Governmental Industrial Hygienists                                       |
| ADN     | Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe) |
| ADR     | Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)             |
| ATE     | Acute Toxicity Estimate                                                                         |
| ASTM    | American Society for the Testing of Materials                                                   |
| bar     | Biological Reference Values for Chemical Compounds in the Work Area                             |
| BAT     | Biological tolerance values for occupational exposure                                           |
| BEL     | Biological exposure limits                                                                      |
| bw      | Body weight                                                                                     |
| Ceiling | Maximum limit value                                                                             |
| CMR     | Carcinogen, Mutagen or Reproductive Toxicant                                                    |
| DOT     | Department of Transportation (United States)                                                    |
| EPA     | U.S. Environmental Protection Agency                                                            |
| GHS     | Globally Harmonized System                                                                      |
| HMIS    | Hazardous Materials Identification System                                                       |
| IARC    | International Agency for Research on Cancer                                                     |
| IATA    | International Air Transport Association                                                         |
| ICAO    | International Civil Aviation Organization                                                       |
| IMDG    | International Maritime Dangerous Goods                                                          |
| IMO     | International Maritime Organization                                                             |
| ISO     | International Organization for Standardization                                                  |
| LC50    | Lethal Concentration to 50% of a test population                                                |
| LD50    | Lethal Dose to 50% of a test population (Median Lethal Dose)                                    |
| NFPA    | National Fire Protection Association                                                            |
| NIOSH   | National Institute for Occupational Safety and Health                                           |
| n.o.s.  | Not Otherwise Specified                                                                         |
| NOAEC   | No Observed Adverse Effect Concentration                                                        |
| NOAEL   | No Observed Adverse Effect Level                                                                |
| NOELR   | No Observable Effect Loading Rate                                                               |
| NTP     | National Toxicology Program (United States)                                                     |
| OECD    | Organization for Economic Cooperation and Development                                           |
| OEL     | Occupational exposure limits                                                                    |
| OSHA    | Occupational Safety and Health Administration of the US Department of Labor                     |
| PBT     | Persistent, Bioaccumulative and Toxic substance                                                 |
| PMT     | Persistent, Mobile and Toxic                                                                    |
| PPE     | Personal protective equipment                                                                   |
| SADT    | Self-Accelerating Decomposition Temperature                                                     |
| SARA    | Superfund Amendments and Reauthorization Act                                                    |
| SDS     | Safety Data Sheet                                                                               |
| SL      | Surface Limit                                                                                   |
| STEL    | Short Term Exposure Limit                                                                       |
| STOT RE | Specific target organ toxicity - Repeated exposure                                              |
| STOT SE | Specific target organ toxicity - Single exposure                                                |
| TDG     | Transport of Dangerous Goods (Canada)                                                           |
| TWA     | Time-Weighted Average                                                                           |
| UN      | United Nations                                                                                  |
| VOC     | Volatile organic compounds                                                                      |
| vPvB    | Very Persistent and Very Bioaccumulative                                                        |
| vPvM    | Very Persistent and Very Mobile                                                                 |
| As      | Allergenic substance                                                                            |
| DS      | Dermal Sensitizer                                                                               |
| Ot      | Ototoxicant                                                                                     |
| pOt     | Ototoxicant - potential to cause hearing disorders                                              |
| PS      | Photosensitizer                                                                                 |
| RS      | Respiratory Sensitizer                                                                          |
| S       | Sensitizer                                                                                      |
| poS     | Sensitizer - capable of causing occupational asthma                                             |
| Sa      | Simple asphyxiant                                                                               |
| Sd      | Skin designation                                                                                |

|     |                                                       |
|-----|-------------------------------------------------------|
| pSd | Skin designation - potential for cutaneous absorption |
| Sdv | Skin designation - vacated                            |
| Sk  | Skin notation                                         |
| dSk | Skin notation - danger of cutaneous absorption        |
| pSk | Skin notation - potential for cutaneous absorption    |

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

U.S. Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
U.S. Environmental Protection Agency  
U.S. EPA 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  
U.S. Hazardous Substance Data Bank (HSDB)  
International Uniform Chemical Information Database (IUCLID)  
Japan National Institute of Technology and Evaluation (NITE)  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
U.S. National Institute for Occupational Safety and Health (NIOSH)  
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)  
International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications  
International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program  
International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set  
United Nations World Health Organization (WHO)

**Prepared By** PacBio  
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USA  
safety@pacb.com.

**Revision date** 03-Oct-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. 2026 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](https://pacb.com/license). Pacific Biosciences, the PacBio logo, PacBio, Circulomics, Omniome, SMRT, SMRTbell, Iso-Seq, Sequel, Nanobind, Revio, Revio SPRQ, Kinnex, PureTarget, SPRQ, Vega and Vega SPRQ 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  
which includes the amended Hazardous Products Act (HPA) and the Hazardous Products  
Regulation (HPR)

Revision date 03-Oct-2024

Revision Number 1

## 1. Identification

### Product identifier

**Product Name** Kinnex adapter bc03 mix

### Other means of identification

**Product Code(s)** 103-109-800

### Recommended use of the chemical and restrictions on use

**Recommended use** See product insert

**Restrictions on use** For research use only

### Details of the supplier of the safety data sheet

#### Manufacturer Address

PacBio  
1305 O'Brien Drive  
Menlo Park, CA 94025  
USA  
www.pacb.com

**E-mail address** techsupport@pacb.com

### Emergency telephone number

**Emergency Telephone** CHEMTREC 1-800-424-9300 (CCN#656805)

## 2. Hazard(s) identification

### Classification of the substance or mixture

This product is not considered hazardous by either the US OSHA Hazard Communication Standard 2024, or Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended.

### Label elements

#### **Hazard statements**

This product is not considered hazardous by either the US OSHA Hazard Communication Standard 2024, or Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended.

#### **Hazards classified under paragraph (d)(1)(ii) of 1910.1200**

No information available.

### Other information

No information available.

## 3. Composition/information on ingredients

**Substance**

Not applicable.

**Mixture**

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

**4. First-aid measures****Description of first aid measures**

|              |                                                                                                                         |
|--------------|-------------------------------------------------------------------------------------------------------------------------|
| Inhalation   | Remove to fresh air.                                                                                                    |
| Eye contact  | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.<br>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**

|                                            |                                                                                                         |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b><u>Suitable Extinguishing Media</u></b> | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------|

|                                                          |                           |
|----------------------------------------------------------|---------------------------|
| <b><u>Specific hazards arising from the chemical</u></b> | No information available. |
|----------------------------------------------------------|---------------------------|

**Explosion data**

|                                  |       |
|----------------------------------|-------|
| Sensitivity to mechanical impact | None. |
| Sensitivity to static discharge  | None. |

|                                                                              |                                                                                                                                       |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b><u>Special protective equipment and precautions for fire-fighters</u></b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.<br>Use personal protective 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.                                 |
| Prevention of secondary hazards | Clean contaminated objects and areas thoroughly observing environmental regulations. |

## 7. Handling and storage

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. Exposure controls/personal protection

### Control Parameters

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

### Appropriate engineering controls

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

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

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

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

**Appearance** Liquid  
**Physical state** Liquid  
**Color** clear colorless  
**Odor** Odorless

| <u>Property</u>                                                  | <u>Values</u>     | <u>Remarks • Method</u> |
|------------------------------------------------------------------|-------------------|-------------------------|
| <b>Melting point / freezing point</b>                            | No data available | None known              |
| <b>Boiling point (or initial boiling point or boiling range)</b> | No data available | None known              |
| <b>Flammability</b>                                              | No data available | None known              |
| <b>Flammability Limit in Air</b>                                 |                   | None known              |
| <b>Upper flammability or explosive limits</b>                    | No data available |                         |
| <b>Lower flammability or explosive limits</b>                    | No data available |                         |

|                                                   |                   |            |
|---------------------------------------------------|-------------------|------------|
| Flash point                                       | No data available | None known |
| Autoignition temperature                          | No data available | None known |
| Decomposition temperature                         | No data available | None known |
| SADT (°C)                                         | No data available | None known |
| pH                                                | 7 - 8.5           | None known |
| pH (as aqueous solution)                          | No data available | None known |
| Kinematic viscosity                               | No data available | None known |
| Dynamic viscosity                                 | No data available | None known |
| Solubility                                        | No data available | None known |
| Water solubility                                  | No data available | None known |
| Partition coefficient n-octanol/water (log value) | No data available | None known |
| Vapor pressure (includes evaporation rate)        | No data available | None known |
| Evaporation rate                                  | No data available | None known |
| Density and/or relative density                   | No data available | None known |
| Bulk density                                      | No data available |            |
| Liquid Density                                    | No data available |            |
| Relative vapor density                            | No data available | None known |
| Particle characteristics                          |                   | None known |
| Particle Size                                     | No data available |            |
| Particle Size Distribution                        | No data available |            |

Other information**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 | No information available. |

Numerical measures of toxicity

The following ATE values have been calculated for the mixture

|                         |                 |
|-------------------------|-----------------|
| ATEmix (oral)           | 99,999.00 mg/kg |
| ATEmix (dermal)         | 99,999.00 mg/kg |
| ATEmix (inhalation-gas) | 99,999.00 ppm   |

|                               |                |
|-------------------------------|----------------|
| ATEmix (inhalation-vapor)     | 99,999.00 mg/L |
| ATEmix (inhalation-dust/mist) | 99,999.00 mg/L |

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

|                                          |                           |
|------------------------------------------|---------------------------|
| <b>Skin corrosion/irritation</b>         | No information available. |
| <b>Serious eye damage/eye irritation</b> | No information available. |
| <b>Respiratory or skin sensitization</b> | No information available. |
| <b>Germ cell mutagenicity</b>            | No information available. |
| <b>Carcinogenicity</b>                   | No information available. |
| <b>Reproductive toxicity</b>             | No information available. |
| <b>STOT - single exposure</b>            | No information available. |
| <b>STOT - repeated exposure</b>          | No information available. |
| <b>Aspiration hazard</b>                 | No information available. |

**12. Ecological information**

|                                      |                                                                           |
|--------------------------------------|---------------------------------------------------------------------------|
| <b>Ecotoxicity</b>                   | The environmental impact of this product has not been fully investigated. |
| <b>Persistence and degradability</b> | No information available.                                                 |
| <b>Bioaccumulative potential</b>     | There is no data for this product.                                        |
| <b>Other adverse effects</b>         | No information available.                                                 |

**13. Disposal considerations****Disposal methods**

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

**14. Transport information**

**DOT** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**15. Regulatory information****International Inventories**

**TSCA** Contact supplier for inventory compliance status.

\*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

|               |                                                   |
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| AIIC          | Contact supplier for inventory compliance status. |
| NZIoC         | Contact supplier for inventory compliance status. |

**Legend:**

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

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

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

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**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing Chemicals Inventory

**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).

**CAA (Clean Air Act)**

This product does not contain any substances regulated as pollutants pursuant to Clean Air Act (CAA).

**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<br>7732-18-5                          | -          | -             | X            |
| Ethylenediamine tetraacetic acid<br>60-00-4 | X          | X             | X            |

**16. Other information**

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

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

List may include phrases which are not applicable to this product

**Legend**

|         |                                                                                                 |
|---------|-------------------------------------------------------------------------------------------------|
| ACGIH   | American Conference of Governmental Industrial Hygienists                                       |
| ADN     | Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe) |
| ADR     | Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)             |
| ATE     | Acute Toxicity Estimate                                                                         |
| ASTM    | American Society for the Testing of Materials                                                   |
| bar     | Biological Reference Values for Chemical Compounds in the Work Area                             |
| BAT     | Biological tolerance values for occupational exposure                                           |
| BEL     | Biological exposure limits                                                                      |
| bw      | Body weight                                                                                     |
| Ceiling | Maximum limit value                                                                             |
| CMR     | Carcinogen, Mutagen or Reproductive Toxicant                                                    |
| DOT     | Department of Transportation (United States)                                                    |
| EPA     | U.S. Environmental Protection Agency                                                            |
| GHS     | Globally Harmonized System                                                                      |
| HMIS    | Hazardous Materials Identification System                                                       |
| IARC    | International Agency for Research on Cancer                                                     |
| IATA    | International Air Transport Association                                                         |
| ICAO    | International Civil Aviation Organization                                                       |
| IMDG    | International Maritime Dangerous Goods                                                          |
| IMO     | International Maritime Organization                                                             |
| ISO     | International Organization for Standardization                                                  |
| LC50    | Lethal Concentration to 50% of a test population                                                |
| LD50    | Lethal Dose to 50% of a test population (Median Lethal Dose)                                    |
| NFPA    | National Fire Protection Association                                                            |
| NIOSH   | National Institute for Occupational Safety and Health                                           |
| n.o.s.  | Not Otherwise Specified                                                                         |
| NOAEC   | No Observed Adverse Effect Concentration                                                        |
| NOAEL   | No Observed Adverse Effect Level                                                                |
| NOELR   | No Observable Effect Loading Rate                                                               |
| NTP     | National Toxicology Program (United States)                                                     |
| OECD    | Organization for Economic Cooperation and Development                                           |
| OEL     | Occupational exposure limits                                                                    |
| OSHA    | Occupational Safety and Health Administration of the US Department of Labor                     |
| PBT     | Persistent, Bioaccumulative and Toxic substance                                                 |
| PMT     | Persistent, Mobile and Toxic                                                                    |
| PPE     | Personal protective equipment                                                                   |
| SADT    | Self-Accelerating Decomposition Temperature                                                     |
| SARA    | Superfund Amendments and Reauthorization Act                                                    |
| SDS     | Safety Data Sheet                                                                               |
| SL      | Surface Limit                                                                                   |
| STEL    | Short Term Exposure Limit                                                                       |
| STOT RE | Specific target organ toxicity - Repeated exposure                                              |
| STOT SE | Specific target organ toxicity - Single exposure                                                |
| TDG     | Transport of Dangerous Goods (Canada)                                                           |
| TWA     | Time-Weighted Average                                                                           |
| UN      | United Nations                                                                                  |
| VOC     | Volatile organic compounds                                                                      |
| vPvB    | Very Persistent and Very Bioaccumulative                                                        |
| vPvM    | Very Persistent and Very Mobile                                                                 |
| As      | Allergenic substance                                                                            |
| DS      | Dermal Sensitizer                                                                               |
| Ot      | Ototoxicant                                                                                     |
| pOt     | Ototoxicant - potential to cause hearing disorders                                              |
| PS      | Photosensitizer                                                                                 |
| RS      | Respiratory Sensitizer                                                                          |
| S       | Sensitizer                                                                                      |
| poS     | Sensitizer - capable of causing occupational asthma                                             |
| Sa      | Simple asphyxiant                                                                               |
| Sd      | Skin designation                                                                                |

|     |                                                       |
|-----|-------------------------------------------------------|
| pSd | Skin designation - potential for cutaneous absorption |
| Sdv | Skin designation - vacated                            |
| Sk  | Skin notation                                         |
| dSk | Skin notation - danger of cutaneous absorption        |
| pSk | Skin notation - potential for cutaneous absorption    |

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

U.S. Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
U.S. Environmental Protection Agency  
U.S. EPA 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  
U.S. Hazardous Substance Data Bank (HSDB)  
International Uniform Chemical Information Database (IUCLID)  
Japan National Institute of Technology and Evaluation (NITE)  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
U.S. National Institute for Occupational Safety and Health (NIOSH)  
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)  
International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications  
International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program  
International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set  
United Nations World Health Organization (WHO)

**Prepared By** PacBio  
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1305 O'Brien Drive  
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**Revision date** 03-Oct-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. 2026 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](https://pacb.com/license). Pacific Biosciences, the PacBio logo, PacBio, Circulomics, Omniome, SMRT, SMRTbell, Iso-Seq, Sequel, Nanobind, Revio, Revio SPRQ, Kinnex, PureTarget, SPRQ, Vega and Vega SPRQ 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  
which includes the amended Hazardous Products Act (HPA) and the Hazardous Products  
Regulation (HPR)

Revision date 03-Oct-2024

Revision Number 1

## 1. Identification

### Product identifier

**Product Name** Kinnex adapter bc04 mix

### Other means of identification

**Product Code(s)** 103-109-900

### Recommended use of the chemical and restrictions on use

**Recommended use** See product insert

**Restrictions on use** For research use only

### Details of the supplier of the safety data sheet

#### Manufacturer Address

PacBio  
1305 O'Brien Drive  
Menlo Park, CA 94025  
USA  
www.pacb.com

**E-mail address** techsupport@pacb.com

### Emergency telephone number

**Emergency Telephone** CHEMTREC 1-800-424-9300 (CCN#656805)

## 2. Hazard(s) identification

### Classification of the substance or mixture

This product is not considered hazardous by either the US OSHA Hazard Communication Standard 2024, or Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended.

### Label elements

#### **Hazard statements**

This product is not considered hazardous by either the US OSHA Hazard Communication Standard 2024, or Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended.

#### **Hazards classified under paragraph (d)(1)(ii) of 1910.1200**

No information available.

### Other information

No information available.

## 3. Composition/information on ingredients

**Substance**

Not applicable.

**Mixture**

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

**4. First-aid measures****Description of first aid measures**

|              |                                                                                                                         |
|--------------|-------------------------------------------------------------------------------------------------------------------------|
| Inhalation   | Remove to fresh air.                                                                                                    |
| Eye contact  | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.<br>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**

|                                            |                                                                                                         |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b><u>Suitable Extinguishing Media</u></b> | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------|

|                                                          |                           |
|----------------------------------------------------------|---------------------------|
| <b><u>Specific hazards arising from the chemical</u></b> | No information available. |
|----------------------------------------------------------|---------------------------|

**Explosion data**

|                                  |       |
|----------------------------------|-------|
| Sensitivity to mechanical impact | None. |
| Sensitivity to static discharge  | None. |

|                                                                              |                                                                                                                                       |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b><u>Special protective equipment and precautions for fire-fighters</u></b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.<br>Use personal protective 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.                                 |
| Prevention of secondary hazards | Clean contaminated objects and areas thoroughly observing environmental regulations. |

**7. Handling and storage****Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

**8. Exposure controls/personal protection****Control Parameters**

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

**Appropriate engineering controls**

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

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

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

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties****Information on basic physical and chemical properties**

**Appearance** Liquid  
**Physical state** Liquid  
**Color** clear colorless  
**Odor** Odorless

| <b><u>Property</u></b>                                           | <b><u>Values</u></b> | <b><u>Remarks • Method</u></b> |
|------------------------------------------------------------------|----------------------|--------------------------------|
| <b>Melting point / freezing point</b>                            | No data available    | None known                     |
| <b>Boiling point (or initial boiling point or boiling range)</b> | No data available    | None known                     |
| <b>Flammability</b>                                              | No data available    | None known                     |
| <b>Flammability Limit in Air</b>                                 |                      | None known                     |
| <b>Upper flammability or explosive limits</b>                    | No data available    |                                |
| <b>Lower flammability or explosive limits</b>                    | No data available    |                                |

|                                                   |                   |            |
|---------------------------------------------------|-------------------|------------|
| Flash point                                       | No data available | None known |
| Autoignition temperature                          | No data available | None known |
| Decomposition temperature                         | No data available | None known |
| SADT (°C)                                         | No data available | None known |
| pH                                                | 7 - 8.5           | None known |
| pH (as aqueous solution)                          | No data available | None known |
| Kinematic viscosity                               | No data available | None known |
| Dynamic viscosity                                 | No data available | None known |
| Solubility                                        | No data available | None known |
| Water solubility                                  | No data available | None known |
| Partition coefficient n-octanol/water (log value) | No data available | None known |
| Vapor pressure (includes evaporation rate)        | No data available | None known |
| Evaporation rate                                  | No data available | None known |
| Density and/or relative density                   | No data available | None known |
| Bulk density                                      | No data available |            |
| Liquid Density                                    | No data available |            |
| Relative vapor density                            | No data available | None known |
| Particle characteristics                          |                   | None known |
| Particle Size                                     | No data available |            |
| Particle Size Distribution                        | No data available |            |

Other information**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 | No information available. |

Numerical measures of toxicity

The following ATE values have been calculated for the mixture

|                                     |                 |
|-------------------------------------|-----------------|
| ATE <sub>mix</sub> (oral)           | 99,999.00 mg/kg |
| ATE <sub>mix</sub> (dermal)         | 99,999.00 mg/kg |
| ATE <sub>mix</sub> (inhalation-gas) | 99,999.00 ppm   |

|                               |                |
|-------------------------------|----------------|
| ATEmix (inhalation-vapor)     | 99,999.00 mg/L |
| ATEmix (inhalation-dust/mist) | 99,999.00 mg/L |

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

|                                          |                           |
|------------------------------------------|---------------------------|
| <b>Skin corrosion/irritation</b>         | No information available. |
| <b>Serious eye damage/eye irritation</b> | No information available. |
| <b>Respiratory or skin sensitization</b> | No information available. |
| <b>Germ cell mutagenicity</b>            | No information available. |
| <b>Carcinogenicity</b>                   | No information available. |
| <b>Reproductive toxicity</b>             | No information available. |
| <b>STOT - single exposure</b>            | No information available. |
| <b>STOT - repeated exposure</b>          | No information available. |
| <b>Aspiration hazard</b>                 | No information available. |

**12. Ecological information**

|                                      |                                                                           |
|--------------------------------------|---------------------------------------------------------------------------|
| <b>Ecotoxicity</b>                   | The environmental impact of this product has not been fully investigated. |
| <b>Persistence and degradability</b> | No information available.                                                 |
| <b>Bioaccumulative potential</b>     | There is no data for this product.                                        |
| <b>Other adverse effects</b>         | No information available.                                                 |

**13. Disposal considerations****Disposal methods**

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

**14. Transport information**

**DOT** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**15. Regulatory information****International Inventories**

**TSCA** Contact supplier for inventory compliance status.

\*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/NDL       | Contact supplier for inventory compliance status. |
| EINECS/ELINCS | Contact supplier for inventory compliance status. |
| ENCS          | Contact supplier for inventory compliance status. |
| IECSC         | Contact supplier for inventory compliance status. |
| KECL          | Contact supplier for inventory compliance status. |
| PICCS         | Contact supplier for inventory compliance status. |
| AIIC          | Contact supplier for inventory compliance status. |
| NZIoC         | Contact supplier for inventory compliance status. |

**Legend:**

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

**DSL/NDL** - 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 Chemicals Inventory

**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).

**CAA (Clean Air Act)**

This product does not contain any substances regulated as pollutants pursuant to Clean Air Act (CAA).

**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<br>7732-18-5                          | -          | -             | X            |
| Ethylenediamine tetraacetic acid<br>60-00-4 | X          | X             | X            |

**16. Other information**

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

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

List may include phrases which are not applicable to this product

**Legend**

|         |                                                                                                 |
|---------|-------------------------------------------------------------------------------------------------|
| ACGIH   | American Conference of Governmental Industrial Hygienists                                       |
| ADN     | Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe) |
| ADR     | Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)             |
| ATE     | Acute Toxicity Estimate                                                                         |
| ASTM    | American Society for the Testing of Materials                                                   |
| bar     | Biological Reference Values for Chemical Compounds in the Work Area                             |
| BAT     | Biological tolerance values for occupational exposure                                           |
| BEL     | Biological exposure limits                                                                      |
| bw      | Body weight                                                                                     |
| Ceiling | Maximum limit value                                                                             |
| CMR     | Carcinogen, Mutagen or Reproductive Toxicant                                                    |
| DOT     | Department of Transportation (United States)                                                    |
| EPA     | U.S. Environmental Protection Agency                                                            |
| GHS     | Globally Harmonized System                                                                      |
| HMIS    | Hazardous Materials Identification System                                                       |
| IARC    | International Agency for Research on Cancer                                                     |
| IATA    | International Air Transport Association                                                         |
| ICAO    | International Civil Aviation Organization                                                       |
| IMDG    | International Maritime Dangerous Goods                                                          |
| IMO     | International Maritime Organization                                                             |
| ISO     | International Organization for Standardization                                                  |
| LC50    | Lethal Concentration to 50% of a test population                                                |
| LD50    | Lethal Dose to 50% of a test population (Median Lethal Dose)                                    |
| NFPA    | National Fire Protection Association                                                            |
| NIOSH   | National Institute for Occupational Safety and Health                                           |
| n.o.s.  | Not Otherwise Specified                                                                         |
| NOAEC   | No Observed Adverse Effect Concentration                                                        |
| NOAEL   | No Observed Adverse Effect Level                                                                |
| NOELR   | No Observable Effect Loading Rate                                                               |
| NTP     | National Toxicology Program (United States)                                                     |
| OECD    | Organization for Economic Cooperation and Development                                           |
| OEL     | Occupational exposure limits                                                                    |
| OSHA    | Occupational Safety and Health Administration of the US Department of Labor                     |
| PBT     | Persistent, Bioaccumulative and Toxic substance                                                 |
| PMT     | Persistent, Mobile and Toxic                                                                    |
| PPE     | Personal protective equipment                                                                   |
| SADT    | Self-Accelerating Decomposition Temperature                                                     |
| SARA    | Superfund Amendments and Reauthorization Act                                                    |
| SDS     | Safety Data Sheet                                                                               |
| SL      | Surface Limit                                                                                   |
| STEL    | Short Term Exposure Limit                                                                       |
| STOT RE | Specific target organ toxicity - Repeated exposure                                              |
| STOT SE | Specific target organ toxicity - Single exposure                                                |
| TDG     | Transport of Dangerous Goods (Canada)                                                           |
| TWA     | Time-Weighted Average                                                                           |
| UN      | United Nations                                                                                  |
| VOC     | Volatile organic compounds                                                                      |
| vPvB    | Very Persistent and Very Bioaccumulative                                                        |
| vPvM    | Very Persistent and Very Mobile                                                                 |
| As      | Allergenic substance                                                                            |
| DS      | Dermal Sensitizer                                                                               |
| Ot      | Ototoxicant                                                                                     |
| pOt     | Ototoxicant - potential to cause hearing disorders                                              |
| PS      | Photosensitizer                                                                                 |
| RS      | Respiratory Sensitizer                                                                          |
| S       | Sensitizer                                                                                      |
| poS     | Sensitizer - capable of causing occupational asthma                                             |
| Sa      | Simple asphyxiant                                                                               |
| Sd      | Skin designation                                                                                |

|     |                                                       |
|-----|-------------------------------------------------------|
| pSd | Skin designation - potential for cutaneous absorption |
| Sdv | Skin designation - vacated                            |
| Sk  | Skin notation                                         |
| dSk | Skin notation - danger of cutaneous absorption        |
| pSk | Skin notation - potential for cutaneous absorption    |

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

U.S. Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
U.S. Environmental Protection Agency  
U.S. EPA 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  
U.S. Hazardous Substance Data Bank (HSDB)  
International Uniform Chemical Information Database (IUCLID)  
Japan National Institute of Technology and Evaluation (NITE)  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
U.S. National Institute for Occupational Safety and Health (NIOSH)  
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)  
International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications  
International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program  
International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set  
United Nations World Health Organization (WHO)

**Prepared By** PacBio  
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**Revision date** 03-Oct-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. 2026 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](https://pacb.com/license). Pacific Biosciences, the PacBio logo, PacBio, Circulomics, Omniome, SMRT, SMRTbell, Iso-Seq, Sequel, Nanobind, Revio, Revio SPRQ, Kinnex, PureTarget, SPRQ, Vega and Vega SPRQ 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  
which includes the amended Hazardous Products Act (HPA) and the Hazardous Products  
Regulation (HPR)

Revision date 10-Apr-2025

Revision Number 2

## 1. Identification

### Product identifier

**Product Name** Nuclease mix

### Other means of identification

**Product Code(s)** 103-110-100

### Recommended use of the chemical and restrictions on use

**Recommended use** See product insert

**Restrictions on use** For research use only

### Details of the supplier of the safety data sheet

#### Manufacturer Address

PacBio  
1305 O'Brien Drive  
Menlo Park, CA 94025  
USA  
www.pacb.com

**E-mail address** techsupport@pacb.com

### Emergency telephone number

**Emergency Telephone** CHEMTREC 1-800-424-9300 (CCN#656805)

## 2. Hazard(s) identification

### Classification of the substance or mixture

This product is not considered hazardous by either the US OSHA Hazard Communication Standard 2024, or Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended.

### Label elements

#### **Hazard statements**

This product is not considered hazardous by either the US OSHA Hazard Communication Standard 2024, or Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended.

#### **Hazards classified under paragraph (d)(1)(ii) of 1910.1200**

No information available.

### 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.<br>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**

|                                            |                                                                                                         |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b><u>Suitable Extinguishing Media</u></b> | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------|

|                                                          |                           |
|----------------------------------------------------------|---------------------------|
| <b><u>Specific hazards arising from the chemical</u></b> | No information available. |
|----------------------------------------------------------|---------------------------|

**Explosion data**

|                                  |       |
|----------------------------------|-------|
| Sensitivity to mechanical impact | None. |
| Sensitivity to static discharge  | None. |

|                                                                              |                                                                                                                                       |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b><u>Special protective equipment and precautions for fire-fighters</u></b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.<br>Use personal protective 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.  |

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. Handling and storage

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. Exposure controls/personal protection

### Control Parameters

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

### Appropriate engineering controls

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

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

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

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

**Appearance** Liquid  
**Physical state** Liquid  
**Color** clear colorless  
**Odor** Odorless

| <u>Property</u>                                                  | <u>Values</u>     | <u>Remarks • Method</u> |
|------------------------------------------------------------------|-------------------|-------------------------|
| <b>Melting point / freezing point</b>                            | No data available | None known              |
| <b>Boiling point (or initial boiling point or boiling range)</b> | No data available | None known              |
| <b>Flammability</b>                                              | No data available | None known              |
| <b>Flammability Limit in Air</b>                                 |                   | None known              |

|                                                   |                   |            |
|---------------------------------------------------|-------------------|------------|
| Upper flammability or explosive limits            | No data available |            |
| Lower flammability or explosive limits            | No data available |            |
| Flash point                                       | No data available | None known |
| Autoignition temperature                          | No data available | None known |
| Decomposition temperature                         | No data available | None known |
| SADT (°C)                                         | No data available | None known |
| pH                                                | 7 - 8.5           | None known |
| pH (as aqueous solution)                          | No data available | None known |
| Kinematic viscosity                               | No data available | None known |
| Dynamic viscosity                                 | No data available | None known |
| Solubility                                        | No data available | None known |
| Water solubility                                  | No data available | None known |
| Partition coefficient n-octanol/water (log value) | No data available | None known |
| Vapor pressure (includes evaporation rate)        | No data available | None known |
| Evaporation rate                                  | No data available | None known |
| Density and/or relative density                   | No data available | None known |
| Bulk density                                      | No data available |            |
| Liquid Density                                    | No data available |            |
| Relative vapor density                            | No data available | None known |
| Particle characteristics                          |                   | None known |
| Particle Size                                     | No data available |            |
| Particle Size Distribution                        | No data available |            |

Other information**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 | No information available. |

Numerical measures of toxicity

The following ATE values have been calculated for the mixture  
 ATE<sub>mix</sub> (oral) 25,200.00 mg/kg

|                               |                 |
|-------------------------------|-----------------|
| ATEmix (dermal)               | 20,000.00 mg/kg |
| ATEmix (inhalation-gas)       | 99,999.00 ppm   |
| ATEmix (inhalation-vapor)     | 99,999.00 mg/L  |
| ATEmix (inhalation-dust/mist) | 5.50 mg/L       |

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

|                                          |                           |
|------------------------------------------|---------------------------|
| <b>Skin corrosion/irritation</b>         | No information available. |
| <b>Serious eye damage/eye irritation</b> | No information available. |
| <b>Respiratory or skin sensitization</b> | No information available. |
| <b>Germ cell mutagenicity</b>            | No information available. |
| <b>Carcinogenicity</b>                   | No information available. |
| <b>Reproductive toxicity</b>             | No information available. |
| <b>STOT - single exposure</b>            | No information available. |
| <b>STOT - repeated exposure</b>          | No information available. |
| <b>Aspiration hazard</b>                 | No information available. |

**12. Ecological information**

|                                      |                                                                           |
|--------------------------------------|---------------------------------------------------------------------------|
| <b>Ecotoxicity</b>                   | The environmental impact of this product has not been fully investigated. |
| <b>Persistence and degradability</b> | No information available.                                                 |
| <b>Bioaccumulative potential</b>     | There is no data for this product.                                        |
| <b>Other adverse effects</b>         | No information available.                                                 |

**13. Disposal considerations****Disposal methods**

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

**14. Transport information**

**DOT** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**15. Regulatory information****International Inventories**

**TSCA** Contact supplier for inventory compliance status.

\*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

|                      |                                                   |
|----------------------|---------------------------------------------------|
| <b>DSL/NDSL</b>      | Contact supplier for inventory compliance status. |
| <b>EINECS/ELINCS</b> | Contact supplier for inventory compliance status. |
| <b>ENCS</b>          | Contact supplier for inventory compliance status. |
| <b>IECSC</b>         | Contact supplier for inventory compliance status. |
| <b>KECL</b>          | Contact supplier for inventory compliance status. |
| <b>PICCS</b>         | Contact supplier for inventory compliance status. |
| <b>AIIC</b>          | Contact supplier for inventory compliance status. |
| <b>NZIoC</b>         | Contact supplier for inventory compliance status. |

**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 Chemicals Inventory

**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).

**CAA (Clean Air Act)**

This product does not contain any substances regulated as pollutants pursuant to Clean Air Act (CAA).

**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<br>56-81-5 | X          | X             | X            |
| Water<br>7732-18-5  | -          | -             | X            |
| Water<br>7732-18-5  | -          | -             | X            |
| Glycerol<br>56-81-5 | X          | X             | X            |
| Glycerol<br>56-81-5 | X          | X             | X            |
| Water               | -          | -             | X            |

|                                             |   |   |   |
|---------------------------------------------|---|---|---|
| 7732-18-5                                   |   |   |   |
| 2-mercaptoethanol<br>60-24-2                | X | X | X |
| Ethylenediamine tetraacetic acid<br>60-00-4 | X | X | X |
| Ethylenediamine tetraacetic acid<br>60-00-4 | X | X | X |
| Ethylenediamine tetraacetic acid<br>60-00-4 | X | X | X |

## 16. Other information

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

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

List may include phrases which are not applicable to this product

#### Legend

|         |                                                                                                 |
|---------|-------------------------------------------------------------------------------------------------|
| ACGIH   | American Conference of Governmental Industrial Hygienists                                       |
| ADN     | Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe) |
| ADR     | Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)             |
| ATE     | Acute Toxicity Estimate                                                                         |
| ASTM    | American Society for the Testing of Materials                                                   |
| bar     | Biological Reference Values for Chemical Compounds in the Work Area                             |
| BAT     | Biological tolerance values for occupational exposure                                           |
| BEL     | Biological exposure limits                                                                      |
| bw      | Body weight                                                                                     |
| Ceiling | Maximum limit value                                                                             |
| CMR     | Carcinogen, Mutagen or Reproductive Toxicant                                                    |
| DOT     | Department of Transportation (United States)                                                    |
| EPA     | U.S. Environmental Protection Agency                                                            |
| GHS     | Globally Harmonized System                                                                      |
| HMIS    | Hazardous Materials Identification System                                                       |
| IARC    | International Agency for Research on Cancer                                                     |
| IATA    | International Air Transport Association                                                         |
| ICAO    | International Civil Aviation Organization                                                       |
| IMDG    | International Maritime Dangerous Goods                                                          |
| IMO     | International Maritime Organization                                                             |
| ISO     | International Organization for Standardization                                                  |
| LC50    | Lethal Concentration to 50% of a test population                                                |
| LD50    | Lethal Dose to 50% of a test population (Median Lethal Dose)                                    |
| NFPA    | National Fire Protection Association                                                            |
| NIOSH   | National Institute for Occupational Safety and Health                                           |
| n.o.s.  | Not Otherwise Specified                                                                         |
| NOAEC   | No Observed Adverse Effect Concentration                                                        |
| NOAEL   | No Observed Adverse Effect Level                                                                |
| NOELR   | No Observable Effect Loading Rate                                                               |
| NTP     | National Toxicology Program (United States)                                                     |
| OECD    | Organization for Economic Cooperation and Development                                           |
| OEL     | Occupational exposure limits                                                                    |
| OSHA    | Occupational Safety and Health Administration of the US Department of Labor                     |
| PBT     | Persistent, Bioaccumulative and Toxic substance                                                 |
| PMT     | Persistent, Mobile and Toxic                                                                    |
| PPE     | Personal protective equipment                                                                   |
| SADT    | Self-Accelerating Decomposition Temperature                                                     |
| SARA    | Superfund Amendments and Reauthorization Act                                                    |
| SDS     | Safety Data Sheet                                                                               |
| SL      | Surface Limit                                                                                   |
| STEL    | Short Term Exposure Limit                                                                       |

|         |                                                       |
|---------|-------------------------------------------------------|
| STOT RE | Specific target organ toxicity - Repeated exposure    |
| STOT SE | Specific target organ toxicity - Single exposure      |
| TDG     | Transport of Dangerous Goods (Canada)                 |
| TWA     | Time-Weighted Average                                 |
| UN      | United Nations                                        |
| VOC     | Volatile organic compounds                            |
| vPvB    | Very Persistent and Very Bioaccumulative              |
| vPvM    | Very Persistent and Very Mobile                       |
| As      | Allergenic substance                                  |
| DS      | Dermal Sensitizer                                     |
| Ot      | Ototoxicant                                           |
| pOt     | Ototoxicant - potential to cause hearing disorders    |
| PS      | Photosensitizer                                       |
| RS      | Respiratory Sensitizer                                |
| S       | Sensitizer                                            |
| poS     | Sensitizer - capable of causing occupational asthma   |
| Sa      | Simple asphyxiant                                     |
| Sd      | Skin designation                                      |
| pSd     | Skin designation - potential for cutaneous absorption |
| Sdv     | Skin designation - vacated                            |
| Sk      | Skin notation                                         |
| dSk     | Skin notation - danger of cutaneous absorption        |
| pSk     | Skin notation - potential for cutaneous absorption    |

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

U.S. Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 U.S. Environmental Protection Agency  
 U.S. EPA 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  
 U.S. Hazardous Substance Data Bank (HSDB)  
 International Uniform Chemical Information Database (IUCLID)  
 Japan National Institute of Technology and Evaluation (NITE)  
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 U.S. National Institute for Occupational Safety and Health (NIOSH)  
 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)  
 International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications  
 International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program  
 International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set  
 United Nations World Health Organization (WHO)

**Prepared By**  
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 USA  
 safety@pacb.com.

**Revision date** 10-Apr-2025

**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. 2026 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](https://pacb.com/license). Pacific Biosciences, the PacBio logo, PacBio, Circulomics, Omniome, SMRT, SMRTbell, Iso-Seq, Sequel, Nanobind, Revio, Revio SPRQ, Kinnex, PureTarget, SPRQ, Vega and Vega SPRQ 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  
which includes the amended Hazardous Products Act (HPA) and the Hazardous Products  
Regulation (HPR)

Revision date 10-Apr-2025

Revision Number 2

## 1. Identification

### Product identifier

**Product Name** Nuclease buffer

### Other means of identification

**Product Code(s)** 103-110-200

### Recommended use of the chemical and restrictions on use

**Recommended use** See product insert

**Restrictions on use** For research use only

### Details of the supplier of the safety data sheet

#### Manufacturer Address

PacBio  
1305 O'Brien Drive  
Menlo Park, CA 94025  
USA  
www.pacb.com

**E-mail address** techsupport@pacb.com

### Emergency telephone number

**Emergency Telephone** CHEMTREC 1-800-424-9300 (CCN#656805)

## 2. Hazard(s) identification

### Classification of the substance or mixture

This product is not considered hazardous by either the US OSHA Hazard Communication Standard 2024, or Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended.

### Label elements

#### **Hazard statements**

This product is not considered hazardous by either the US OSHA Hazard Communication Standard 2024, or Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended.

#### **Hazards classified under paragraph (d)(1)(ii) of 1910.1200**

No information available.

### Other information

No information available.

## 3. Composition/information on ingredients

**Substance**

Not applicable.

**Mixture**

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

| Chemical name | CAS No.   | Weight-%  | Hazardous Material Information Review Act registry number (HMIRA registry #) | Date HMIRA filed and date exemption granted (if applicable) |
|---------------|-----------|-----------|------------------------------------------------------------------------------|-------------------------------------------------------------|
| Water         | 7732-18-5 | 90 - 100% | -                                                                            | -                                                           |

**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**

|                                            |                                                                                                         |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b><u>Suitable Extinguishing Media</u></b> | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------|

|                                                          |                           |
|----------------------------------------------------------|---------------------------|
| <b><u>Specific hazards arising from the chemical</u></b> | No information available. |
|----------------------------------------------------------|---------------------------|

**Explosion data**

|                                  |       |
|----------------------------------|-------|
| Sensitivity to mechanical impact | None. |
| Sensitivity to static discharge  | None. |

|                                                                              |                                                                                                                                    |
|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| <b><u>Special protective equipment and precautions for fire-fighters</u></b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protective 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.                                 |
| Prevention of secondary hazards | Clean contaminated objects and areas thoroughly observing environmental regulations. |

## 7. Handling and storage

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. Exposure controls/personal protection

### Control Parameters

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

### Appropriate engineering controls

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

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

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

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

|                |                 |
|----------------|-----------------|
| Appearance     | Liquid          |
| Physical state | Liquid          |
| Color          | clear colorless |
| Odor           | Odorless        |

| <u>Property</u>                            | <u>Values</u>     | <u>Remarks • Method</u> |
|--------------------------------------------|-------------------|-------------------------|
| Melting point / freezing point             | No data available | None known              |
| Boiling point (or initial boiling point or | No data available | None known              |

|                                                   |                   |            |
|---------------------------------------------------|-------------------|------------|
| boiling range)                                    |                   |            |
| Flammability                                      | 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 |            |
| Flash point                                       | No data available | None known |
| Autoignition temperature                          | No data available | None known |
| Decomposition temperature                         | No data available | None known |
| SADT (°C)                                         | No data available | None known |
| pH                                                | 7 - 8.5           | None known |
| pH (as aqueous solution)                          | No data available | None known |
| Kinematic viscosity                               | No data available | None known |
| Dynamic viscosity                                 | No data available | None known |
| Solubility                                        | No data available | None known |
| Water solubility                                  | No data available | None known |
| Partition coefficient n-octanol/water (log value) | No data available | None known |
| Vapor pressure (includes evaporation rate)        | No data available | None known |
| Evaporation rate                                  | No data available | None known |
| Density and/or relative density                   | No data available | None known |
| Bulk density                                      | No data available |            |
| Liquid Density                                    | No data available |            |
| Relative vapor density                            | No data available | None known |
| Particle characteristics                          |                   | None known |
| Particle Size                                     | No data available |            |
| Particle Size Distribution                        | No data available |            |

Other information**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 | No information available. |

Numerical measures of toxicity

The following ATE values have been calculated for the mixture

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

| Chemical name | Oral LD50          | Dermal LD50 | Inhalation LC50 |
|---------------|--------------------|-------------|-----------------|
| Water         | > 90 mL/kg ( Rat ) | -           | -               |

#### 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.

**Bioaccumulative potential** 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

**IATA** Not regulated

**IMDG** Not regulated

## 15. Regulatory information

### International Inventories

**TSCA** Contact supplier for inventory compliance status.

**DSL/NDSL** Contact supplier for inventory compliance status.  
**EINECS/ELINCS** Contact supplier for inventory compliance status.  
**ENCS** Contact supplier for inventory compliance status.  
**IECSC** Contact supplier for inventory compliance status.  
**KECL** Contact supplier for inventory compliance status.  
**PICCS** Contact supplier for inventory compliance status.  
**AIIC** Contact supplier for inventory compliance status.  
**NZIoC** Contact supplier for inventory compliance status.

#### 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 Chemicals Inventory

**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).

#### CAA (Clean Air Act)

This product does not contain any substances regulated as pollutants pursuant to Clean Air Act (CAA).

#### 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<br>7732-18-5 | -          | -             | X            |

## 16. Other information

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

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

List may include phrases which are not applicable to this product

**Legend**

|         |                                                                                                 |
|---------|-------------------------------------------------------------------------------------------------|
| ACGIH   | American Conference of Governmental Industrial Hygienists                                       |
| ADN     | Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe) |
| ADR     | Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)             |
| ATE     | Acute Toxicity Estimate                                                                         |
| ASTM    | American Society for the Testing of Materials                                                   |
| bar     | Biological Reference Values for Chemical Compounds in the Work Area                             |
| BAT     | Biological tolerance values for occupational exposure                                           |
| BEL     | Biological exposure limits                                                                      |
| bw      | Body weight                                                                                     |
| Ceiling | Maximum limit value                                                                             |
| CMR     | Carcinogen, Mutagen or Reproductive Toxicant                                                    |
| DOT     | Department of Transportation (United States)                                                    |
| EPA     | U.S. Environmental Protection Agency                                                            |
| GHS     | Globally Harmonized System                                                                      |
| HMIS    | Hazardous Materials Identification System                                                       |
| IARC    | International Agency for Research on Cancer                                                     |
| IATA    | International Air Transport Association                                                         |
| ICAO    | International Civil Aviation Organization                                                       |
| IMDG    | International Maritime Dangerous Goods                                                          |
| IMO     | International Maritime Organization                                                             |
| ISO     | International Organization for Standardization                                                  |
| LC50    | Lethal Concentration to 50% of a test population                                                |
| LD50    | Lethal Dose to 50% of a test population (Median Lethal Dose)                                    |
| NFPA    | National Fire Protection Association                                                            |
| NIOSH   | National Institute for Occupational Safety and Health                                           |
| n.o.s.  | Not Otherwise Specified                                                                         |
| NOAEC   | No Observed Adverse Effect Concentration                                                        |
| NOAEL   | No Observed Adverse Effect Level                                                                |
| NOELR   | No Observable Effect Loading Rate                                                               |
| NTP     | National Toxicology Program (United States)                                                     |
| OECD    | Organization for Economic Cooperation and Development                                           |
| OEL     | Occupational exposure limits                                                                    |
| OSHA    | Occupational Safety and Health Administration of the US Department of Labor                     |
| PBT     | Persistent, Bioaccumulative and Toxic substance                                                 |
| PMT     | Persistent, Mobile and Toxic                                                                    |
| PPE     | Personal protective equipment                                                                   |
| SADT    | Self-Accelerating Decomposition Temperature                                                     |
| SARA    | Superfund Amendments and Reauthorization Act                                                    |
| SDS     | Safety Data Sheet                                                                               |
| SL      | Surface Limit                                                                                   |
| STEL    | Short Term Exposure Limit                                                                       |
| STOT RE | Specific target organ toxicity - Repeated exposure                                              |
| STOT SE | Specific target organ toxicity - Single exposure                                                |
| TDG     | Transport of Dangerous Goods (Canada)                                                           |
| TWA     | Time-Weighted Average                                                                           |
| UN      | United Nations                                                                                  |
| VOC     | Volatile organic compounds                                                                      |
| vPvB    | Very Persistent and Very Bioaccumulative                                                        |
| vPvM    | Very Persistent and Very Mobile                                                                 |
| As      | Allergenic substance                                                                            |
| DS      | Dermal Sensitizer                                                                               |
| Ot      | Ototoxicant                                                                                     |
| pOt     | Ototoxicant - potential to cause hearing disorders                                              |
| PS      | Photosensitizer                                                                                 |

|     |                                                       |
|-----|-------------------------------------------------------|
| RS  | Respiratory Sensitizer                                |
| S   | Sensitizer                                            |
| poS | Sensitizer - capable of causing occupational asthma   |
| Sa  | Simple asphyxiant                                     |
| Sd  | Skin designation                                      |
| pSd | Skin designation - potential for cutaneous absorption |
| Sdv | Skin designation - vacated                            |
| Sk  | Skin notation                                         |
| dSk | Skin notation - danger of cutaneous absorption        |
| pSk | Skin notation - potential for cutaneous absorption    |

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

U.S. Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
U.S. Environmental Protection Agency  
U.S. EPA 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  
U.S. Hazardous Substance Data Bank (HSDB)  
International Uniform Chemical Information Database (IUCLID)  
Japan National Institute of Technology and Evaluation (NITE)  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
U.S. National Institute for Occupational Safety and Health (NIOSH)  
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)  
International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications  
International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program  
International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set  
United Nations World Health Organization (WHO)

**Prepared By** PacBio  
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safety@pacb.com.

**Revision date** 10-Apr-2025

**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. 2026 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](https://pacb.com/license). Pacific Biosciences, the PacBio logo, PacBio, Circulomics, Omniome, SMRT, SMRTbell, Iso-Seq, Sequel, Nanobind, Revio, Revio SPRQ, Kinnex, PureTarget, SPRQ, Vega and Vega SPRQ 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  
which includes the amended Hazardous Products Act (HPA) and the Hazardous Products  
Regulation (HPR)

Revision date 04-Oct-2024

Revision Number 1

## 1. Identification

### Product identifier

**Product Name** Kinnex array and repair buffer

### Other means of identification

**Product Code(s)** 103-110-300

### Recommended use of the chemical and restrictions on use

**Recommended use** See product insert

**Restrictions on use** For research use only

### Details of the supplier of the safety data sheet

#### Manufacturer Address

PacBio  
1305 O'Brien Drive  
Menlo Park, CA 94025  
USA  
www.pacb.com

**E-mail address** techsupport@pacb.com

### Emergency telephone number

**Emergency Telephone** CHEMTREC 1-800-424-9300 (CCN#656805)

## 2. Hazard(s) identification

### Classification of the substance or mixture

This product is not considered hazardous by either the US OSHA Hazard Communication Standard 2024, or Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended.

### Label elements

#### **Hazard statements**

This product is not considered hazardous by either the US OSHA Hazard Communication Standard 2024, or Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended.

#### **Hazards classified under paragraph (d)(1)(ii) of 1910.1200**

No information available.

### Other information

No information available.

## 3. Composition/information on ingredients

**Substance**

| Chemical name                  | CAS No.      | Weight-%  | Hazardous Material Information Review Act registry number (HMIRA registry #) | Date HMIRA filed and date exemption granted (if applicable) |
|--------------------------------|--------------|-----------|------------------------------------------------------------------------------|-------------------------------------------------------------|
| Kinnex array and repair buffer | Trade secret | 90 - 100% | -                                                                            | -                                                           |

**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**

|                                            |                                                                                                         |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b><u>Suitable Extinguishing Media</u></b> | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------|

|                                                          |                           |
|----------------------------------------------------------|---------------------------|
| <b><u>Specific hazards arising from the chemical</u></b> | No information available. |
|----------------------------------------------------------|---------------------------|

**Explosion data**

|                                  |       |
|----------------------------------|-------|
| Sensitivity to mechanical impact | None. |
| Sensitivity to static discharge  | None. |

|                                                                              |                                                                                                                                    |
|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| <b><u>Special protective equipment and precautions for fire-fighters</u></b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protective 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.                                 |
| Prevention of secondary hazards | Clean contaminated objects and areas thoroughly observing environmental regulations. |

**7. Handling and storage****Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

**8. Exposure controls/personal protection****Control Parameters**

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

**Appropriate engineering controls**

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

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

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

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties****Information on basic physical and chemical properties**

**Appearance** Liquid  
**Physical state** Liquid  
**Color** clear colorless  
**Odor** Odorless

| <b><u>Property</u></b>                                           | <b><u>Values</u></b> | <b><u>Remarks • Method</u></b> |
|------------------------------------------------------------------|----------------------|--------------------------------|
| <b>Melting point / freezing point</b>                            | No data available    | None known                     |
| <b>Boiling point (or initial boiling point or boiling range)</b> | No data available    | None known                     |
| <b>Flammability</b>                                              | No data available    | None known                     |
| <b>Flammability Limit in Air</b>                                 |                      | None known                     |
| <b>Upper flammability or explosive limits</b>                    | No data available    |                                |
| <b>Lower flammability or explosive limits</b>                    | No data available    |                                |

|                                                   |                   |            |
|---------------------------------------------------|-------------------|------------|
| Flash point                                       | No data available | None known |
| Autoignition temperature                          | No data available | None known |
| Decomposition temperature                         | No data available | None known |
| SADT (°C)                                         | No data available | None known |
| pH                                                | 7 - 8.5           | None known |
| pH (as aqueous solution)                          | No data available | None known |
| Kinematic viscosity                               | No data available | None known |
| Dynamic viscosity                                 | No data available | None known |
| Solubility                                        | No data available | None known |
| Water solubility                                  | No data available | None known |
| Partition coefficient n-octanol/water (log value) | No data available | None known |
| Vapor pressure (includes evaporation rate)        | No data available | None known |
| Evaporation rate                                  | No data available | None known |
| Density and/or relative density                   | No data available | None known |
| Bulk density                                      | No data available |            |
| Liquid Density                                    | No data available |            |
| Relative vapor density                            | No data available | None known |
| Particle characteristics                          |                   | None known |
| Particle Size                                     | No data available |            |
| Particle Size Distribution                        | No data available |            |

Other information**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                 | No information available. |
| Numerical measures of toxicity | No information available. |

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.                                                 |
| Bioaccumulative potential     | 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

IATA Not regulated

IMDG Not regulated

## 15. Regulatory information

### International Inventories

**TSCA** Contact supplier for inventory compliance status.  
\*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** Contact supplier for inventory compliance status.  
**EINECS/ELINCS** Contact supplier for inventory compliance status.  
**ENCS** Contact supplier for inventory compliance status.  
**IECSC** Contact supplier for inventory compliance status.  
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**Legend:**

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

**16. Other information**

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

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

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|---------|-------------------------------------------------------------------------------------------------|
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| bar     | Biological Reference Values for Chemical Compounds in the Work Area                             |
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| DS      | Dermal Sensitizer                                                           |
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| pOt     | Ototoxicant - potential to cause hearing disorders                          |
| PS      | Photosensitizer                                                             |
| RS      | Respiratory Sensitizer                                                      |
| S       | Sensitizer                                                                  |
| poS     | Sensitizer - capable of causing occupational asthma                         |
| Sa      | Simple asphyxiant                                                           |
| Sd      | Skin designation                                                            |
| pSd     | Skin designation - potential for cutaneous absorption                       |
| Sdv     | Skin designation - vacated                                                  |
| Sk      | Skin notation                                                               |
| dSk     | Skin notation - danger of cutaneous absorption                              |
| pSk     | Skin notation - potential for cutaneous absorption                          |

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

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U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
U.S. Hazardous Substance Data Bank (HSDB)  
International Uniform Chemical Information Database (IUCLID)  
Japan National Institute of Technology and Evaluation (NITE)  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
U.S. National Institute for Occupational Safety and Health (NIOSH)  
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)  
International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications  
International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program  
International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set  
United Nations World Health Organization (WHO)

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**Revision date** 04-Oct-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. 2026 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](https://pacb.com/license). Pacific Biosciences, the PacBio logo, PacBio, Circulomics, Omniome, SMRT, SMRTbell, Iso-Seq, Sequel, Nanobind, Revio, Revio SPRQ, Kinnex, PureTarget, SPRQ, Vega and Vega SPRQ 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  
which includes the amended Hazardous Products Act (HPA) and the Hazardous Products  
Regulation (HPR)

Revision date 04-Oct-2024

Revision Number 1

## 1. Identification

### Product identifier

**Product Name** Kinnex enzyme

### Other means of identification

**Product Code(s)** 103-110-400

### Recommended use of the chemical and restrictions on use

**Recommended use** See product insert

**Restrictions on use** For research use only

### Details of the supplier of the safety data sheet

#### Manufacturer Address

PacBio  
1305 O'Brien Drive  
Menlo Park, CA 94025  
USA  
www.pacb.com

**E-mail address** techsupport@pacb.com

### Emergency telephone number

**Emergency Telephone** CHEMTREC 1-800-424-9300 (CCN#656805)

## 2. Hazard(s) identification

### Classification of the substance or mixture

This product is not considered hazardous by either the US OSHA Hazard Communication Standard 2024, or Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended.

### Label elements

#### **Hazard statements**

This product is not considered hazardous by either the US OSHA Hazard Communication Standard 2024, or Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended.

#### **Hazards classified under paragraph (d)(1)(ii) of 1910.1200**

No information available.

### 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.<br>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**

|                                            |                                                                                                         |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b><u>Suitable Extinguishing Media</u></b> | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------|

|                                                          |                           |
|----------------------------------------------------------|---------------------------|
| <b><u>Specific hazards arising from the chemical</u></b> | No information available. |
|----------------------------------------------------------|---------------------------|

**Explosion data**

|                                  |       |
|----------------------------------|-------|
| Sensitivity to mechanical impact | None. |
| Sensitivity to static discharge  | None. |

|                                                                              |                                                                                                                                       |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b><u>Special protective equipment and precautions for fire-fighters</u></b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.<br>Use personal protective 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.  |

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. Handling and storage

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. Exposure controls/personal protection

### Control Parameters

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

### Appropriate engineering controls

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

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

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

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

**Appearance** Liquid  
**Physical state** Liquid  
**Color** clear colorless  
**Odor** Odorless

| <u>Property</u>                                                  | <u>Values</u>     | <u>Remarks • Method</u> |
|------------------------------------------------------------------|-------------------|-------------------------|
| <b>Melting point / freezing point</b>                            | No data available | None known              |
| <b>Boiling point (or initial boiling point or boiling range)</b> | No data available | None known              |
| <b>Flammability</b>                                              | No data available | None known              |
| <b>Flammability Limit in Air</b>                                 |                   | None known              |

|                                                   |                   |            |
|---------------------------------------------------|-------------------|------------|
| Upper flammability or explosive limits            | No data available |            |
| Lower flammability or explosive limits            | No data available |            |
| Flash point                                       | No data available | None known |
| Autoignition temperature                          | No data available | None known |
| Decomposition temperature                         | No data available | None known |
| SADT (°C)                                         | No data available | None known |
| pH                                                | 7 - 8.5           | None known |
| pH (as aqueous solution)                          | No data available | None known |
| Kinematic viscosity                               | No data available | None known |
| Dynamic viscosity                                 | No data available | None known |
| Solubility                                        | No data available | None known |
| Water solubility                                  | No data available | None known |
| Partition coefficient n-octanol/water (log value) | No data available | None known |
| Vapor pressure (includes evaporation rate)        | No data available | None known |
| Evaporation rate                                  | No data available | None known |
| Density and/or relative density                   | No data available | None known |
| Bulk density                                      | No data available |            |
| Liquid Density                                    | No data available |            |
| Relative vapor density                            | No data available | None known |
| Particle characteristics                          |                   | None known |
| Particle Size                                     | No data available |            |
| Particle Size Distribution                        | No data available |            |

Other information**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 | No information available. |

Numerical measures of toxicity

The following ATE values have been calculated for the mixture  
 ATE<sub>mix</sub> (oral) 25,200.00 mg/kg

|                               |                 |
|-------------------------------|-----------------|
| ATEmix (dermal)               | 20,000.00 mg/kg |
| ATEmix (inhalation-gas)       | 99,999.00 ppm   |
| ATEmix (inhalation-vapor)     | 99,999.00 mg/L  |
| ATEmix (inhalation-dust/mist) | 5.50 mg/L       |

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

|                                          |                           |
|------------------------------------------|---------------------------|
| <b>Skin corrosion/irritation</b>         | No information available. |
| <b>Serious eye damage/eye irritation</b> | No information available. |
| <b>Respiratory or skin sensitization</b> | No information available. |
| <b>Germ cell mutagenicity</b>            | No information available. |
| <b>Carcinogenicity</b>                   | No information available. |
| <b>Reproductive toxicity</b>             | No information available. |
| <b>STOT - single exposure</b>            | No information available. |
| <b>STOT - repeated exposure</b>          | No information available. |
| <b>Aspiration hazard</b>                 | No information available. |

**12. Ecological information**

|                                      |                                                                           |
|--------------------------------------|---------------------------------------------------------------------------|
| <b>Ecotoxicity</b>                   | The environmental impact of this product has not been fully investigated. |
| <b>Persistence and degradability</b> | No information available.                                                 |
| <b>Bioaccumulative potential</b>     | There is no data for this product.                                        |
| <b>Other adverse effects</b>         | No information available.                                                 |

**13. Disposal considerations****Disposal methods**

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

**14. Transport information**

**DOT** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**15. Regulatory information****International Inventories**

**TSCA** Contact supplier for inventory compliance status.

\*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/NDL       | Contact supplier for inventory compliance status. |
| EINECS/ELINCS | Contact supplier for inventory compliance status. |
| ENCS          | Contact supplier for inventory compliance status. |
| IECSC         | Contact supplier for inventory compliance status. |
| KECL          | Contact supplier for inventory compliance status. |
| PICCS         | Contact supplier for inventory compliance status. |
| AIIC          | Contact supplier for inventory compliance status. |
| NZIoC         | Contact supplier for inventory compliance status. |

**Legend:**

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

**DSL/NDL** - 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 Chemicals Inventory

**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).

**CAA (Clean Air Act)**

This product does not contain any substances regulated as pollutants pursuant to Clean Air Act (CAA).

**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<br>56-81-5                         | X          | X             | X            |
| Water<br>7732-18-5                          | -          | -             | X            |
| Ethylenediamine tetraacetic acid<br>60-00-4 | X          | X             | X            |

**16. Other information**

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

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

List may include phrases which are not applicable to this product

**Legend**

|         |                                                                                                 |
|---------|-------------------------------------------------------------------------------------------------|
| ACGIH   | American Conference of Governmental Industrial Hygienists                                       |
| ADN     | Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe) |
| ADR     | Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)             |
| ATE     | Acute Toxicity Estimate                                                                         |
| ASTM    | American Society for the Testing of Materials                                                   |
| bar     | Biological Reference Values for Chemical Compounds in the Work Area                             |
| BAT     | Biological tolerance values for occupational exposure                                           |
| BEL     | Biological exposure limits                                                                      |
| bw      | Body weight                                                                                     |
| Ceiling | Maximum limit value                                                                             |
| CMR     | Carcinogen, Mutagen or Reproductive Toxicant                                                    |
| DOT     | Department of Transportation (United States)                                                    |
| EPA     | U.S. Environmental Protection Agency                                                            |
| GHS     | Globally Harmonized System                                                                      |
| HMIS    | Hazardous Materials Identification System                                                       |
| IARC    | International Agency for Research on Cancer                                                     |
| IATA    | International Air Transport Association                                                         |
| ICAO    | International Civil Aviation Organization                                                       |
| IMDG    | International Maritime Dangerous Goods                                                          |
| IMO     | International Maritime Organization                                                             |
| ISO     | International Organization for Standardization                                                  |
| LC50    | Lethal Concentration to 50% of a test population                                                |
| LD50    | Lethal Dose to 50% of a test population (Median Lethal Dose)                                    |
| NFPA    | National Fire Protection Association                                                            |
| NIOSH   | National Institute for Occupational Safety and Health                                           |
| n.o.s.  | Not Otherwise Specified                                                                         |
| NOAEC   | No Observed Adverse Effect Concentration                                                        |
| NOAEL   | No Observed Adverse Effect Level                                                                |
| NOELR   | No Observable Effect Loading Rate                                                               |
| NTP     | National Toxicology Program (United States)                                                     |
| OECD    | Organization for Economic Cooperation and Development                                           |
| OEL     | Occupational exposure limits                                                                    |
| OSHA    | Occupational Safety and Health Administration of the US Department of Labor                     |
| PBT     | Persistent, Bioaccumulative and Toxic substance                                                 |
| PMT     | Persistent, Mobile and Toxic                                                                    |
| PPE     | Personal protective equipment                                                                   |
| SADT    | Self-Accelerating Decomposition Temperature                                                     |
| SARA    | Superfund Amendments and Reauthorization Act                                                    |
| SDS     | Safety Data Sheet                                                                               |
| SL      | Surface Limit                                                                                   |
| STEL    | Short Term Exposure Limit                                                                       |
| STOT RE | Specific target organ toxicity - Repeated exposure                                              |
| STOT SE | Specific target organ toxicity - Single exposure                                                |
| TDG     | Transport of Dangerous Goods (Canada)                                                           |
| TWA     | Time-Weighted Average                                                                           |
| UN      | United Nations                                                                                  |
| VOC     | Volatile organic compounds                                                                      |
| vPvB    | Very Persistent and Very Bioaccumulative                                                        |
| vPvM    | Very Persistent and Very Mobile                                                                 |
| As      | Allergenic substance                                                                            |
| DS      | Dermal Sensitizer                                                                               |
| Ot      | Ototoxicant                                                                                     |
| pOt     | Ototoxicant - potential to cause hearing disorders                                              |
| PS      | Photosensitizer                                                                                 |

|     |                                                       |
|-----|-------------------------------------------------------|
| RS  | Respiratory Sensitizer                                |
| S   | Sensitizer                                            |
| poS | Sensitizer - capable of causing occupational asthma   |
| Sa  | Simple asphyxiant                                     |
| Sd  | Skin designation                                      |
| pSd | Skin designation - potential for cutaneous absorption |
| Sdv | Skin designation - vacated                            |
| Sk  | Skin notation                                         |
| dSk | Skin notation - danger of cutaneous absorption        |
| pSk | Skin notation - potential for cutaneous absorption    |

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

U.S. Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 U.S. Environmental Protection Agency  
 U.S. EPA 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  
 U.S. Hazardous Substance Data Bank (HSDB)  
 International Uniform Chemical Information Database (IUCLID)  
 Japan National Institute of Technology and Evaluation (NITE)  
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 U.S. National Institute for Occupational Safety and Health (NIOSH)  
 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)  
 International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications  
 International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program  
 International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set  
 United Nations World Health Organization (WHO)

**Prepared By** PacBio  
 Environment, Health, and Safety  
 1305 O'Brien Drive  
 Menlo Park, CA 94025  
 USA  
 safety@pacb.com.

**Revision date** 04-Oct-2024

**Revision Note** No information available

**Disclaimer**

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**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  
which includes the amended Hazardous Products Act (HPA) and the Hazardous Products  
Regulation (HPR)

Revision date 15-Jul-2025

Revision Number 3

## 1. Identification

### Product identifier

**Product Name** Kinnex ligase

### Other means of identification

**Product Code(s)** 103-110-500

### Recommended use of the chemical and restrictions on use

**Recommended use** See product insert

**Restrictions on use** For research use only

### Details of the supplier of the safety data sheet

#### Manufacturer Address

PacBio  
1305 O'Brien Drive  
Menlo Park, CA 94025  
USA  
www.pacb.com

**E-mail address** techsupport@pacb.com

### Emergency telephone number

**Emergency Telephone** CHEMTREC 1-800-424-9300 (CCN#656805)

## 2. Hazard(s) identification

### Classification of the substance or mixture

This product is not considered hazardous by either the US OSHA Hazard Communication Standard 2024, or Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended.

### Label elements

#### **Hazard statements**

This product is not considered hazardous by either the US OSHA Hazard Communication Standard 2024, or Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended.

#### **Hazards classified under paragraph (d)(1)(ii) of 1910.1200**

No information available.

### Other information

No information available.

#### **Biological Material**

Product contains substance(s) derived from bacteria.

**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.<br>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**

|                                            |                                                                                                         |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b><u>Suitable Extinguishing Media</u></b> | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------|

|                                                          |                           |
|----------------------------------------------------------|---------------------------|
| <b><u>Specific hazards arising from the chemical</u></b> | No information available. |
|----------------------------------------------------------|---------------------------|

**Explosion data**

|                                  |       |
|----------------------------------|-------|
| Sensitivity to mechanical impact | None. |
| Sensitivity to static discharge  | None. |

|                                                                              |                                                                                                                                       |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b><u>Special protective equipment and precautions for fire-fighters</u></b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.<br>Use personal protective 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.  |

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. Handling and storage

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. Exposure controls/personal protection

### Control Parameters

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

### Appropriate engineering controls

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

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

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

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

**Appearance** Liquid  
**Physical state** Liquid  
**Color** clear colorless  
**Odor** Odorless

| <u>Property</u>                                                  | <u>Values</u>     | <u>Remarks • Method</u> |
|------------------------------------------------------------------|-------------------|-------------------------|
| <b>Melting point / freezing point</b>                            | No data available | None known              |
| <b>Boiling point (or initial boiling point or boiling range)</b> | No data available | None known              |
| <b>Flammability</b>                                              | No data available | None known              |
| <b>Flammability Limit in Air</b>                                 |                   | None known              |

|                                                   |                   |            |
|---------------------------------------------------|-------------------|------------|
| Upper flammability or explosive limits            | No data available |            |
| Lower flammability or explosive limits            | No data available |            |
| Flash point                                       | No data available | None known |
| Autoignition temperature                          | No data available | None known |
| Decomposition temperature                         | No data available | None known |
| SADT (°C)                                         | No data available | None known |
| pH                                                | 7 - 8.5           | None known |
| pH (as aqueous solution)                          | No data available | None known |
| Kinematic viscosity                               | No data available | None known |
| Dynamic viscosity                                 | No data available | None known |
| Solubility                                        | No data available | None known |
| Water solubility                                  | No data available | None known |
| Partition coefficient n-octanol/water (log value) | No data available | None known |
| Vapor pressure (includes evaporation rate)        | No data available | None known |
| Evaporation rate                                  | No data available | None known |
| Density and/or relative density                   | No data available | None known |
| Bulk density                                      | No data available |            |
| Liquid Density                                    | No data available |            |
| Relative vapor density                            | No data available | None known |
| Particle characteristics                          |                   | None known |
| Particle Size                                     | No data available |            |
| Particle Size Distribution                        | No data available |            |

Other information**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 | No information available. |

Numerical measures of toxicity

The following ATE values have been calculated for the mixture  
 ATE<sub>mix</sub> (oral) 25,200.00 mg/kg

|                               |                 |
|-------------------------------|-----------------|
| ATEmix (dermal)               | 20,000.00 mg/kg |
| ATEmix (inhalation-gas)       | 99,999.00 ppm   |
| ATEmix (inhalation-vapor)     | 99,999.00 mg/L  |
| ATEmix (inhalation-dust/mist) | 5.50 mg/L       |

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

|                                          |                           |
|------------------------------------------|---------------------------|
| <b>Skin corrosion/irritation</b>         | No information available. |
| <b>Serious eye damage/eye irritation</b> | No information available. |
| <b>Respiratory or skin sensitization</b> | No information available. |
| <b>Germ cell mutagenicity</b>            | No information available. |
| <b>Carcinogenicity</b>                   | No information available. |
| <b>Reproductive toxicity</b>             | No information available. |
| <b>STOT - single exposure</b>            | No information available. |
| <b>STOT - repeated exposure</b>          | No information available. |
| <b>Aspiration hazard</b>                 | No information available. |

**12. Ecological information**

|                                      |                                                                           |
|--------------------------------------|---------------------------------------------------------------------------|
| <b>Ecotoxicity</b>                   | The environmental impact of this product has not been fully investigated. |
| <b>Persistence and degradability</b> | No information available.                                                 |
| <b>Bioaccumulative potential</b>     | There is no data for this product.                                        |
| <b>Other adverse effects</b>         | No information available.                                                 |

**13. Disposal considerations****Disposal methods**

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

**14. Transport information**

**DOT** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**15. Regulatory information****International Inventories**

**TSCA** Contact supplier for inventory compliance status.

\*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

|                      |                                                   |
|----------------------|---------------------------------------------------|
| <b>DSL/NDSL</b>      | Contact supplier for inventory compliance status. |
| <b>EINECS/ELINCS</b> | Contact supplier for inventory compliance status. |
| <b>ENCS</b>          | Contact supplier for inventory compliance status. |
| <b>IECSC</b>         | Contact supplier for inventory compliance status. |
| <b>KECL</b>          | Contact supplier for inventory compliance status. |
| <b>PICCS</b>         | Contact supplier for inventory compliance status. |
| <b>AIIC</b>          | Contact supplier for inventory compliance status. |
| <b>NZIoC</b>         | Contact supplier for inventory compliance status. |

**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 Chemicals Inventory

**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).

**CAA (Clean Air Act)**

This product does not contain any substances regulated as pollutants pursuant to Clean Air Act (CAA).

**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<br>56-81-5                         | X          | X             | X            |
| Water<br>7732-18-5                          | -          | -             | X            |
| Ethylenediamine tetraacetic acid<br>60-00-4 | X          | X             | X            |

**16. Other information**

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

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

List may include phrases which are not applicable to this product

**Legend**

|         |                                                                                                 |
|---------|-------------------------------------------------------------------------------------------------|
| ACGIH   | American Conference of Governmental Industrial Hygienists                                       |
| ADN     | Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe) |
| ADR     | Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)             |
| ATE     | Acute Toxicity Estimate                                                                         |
| ASTM    | American Society for the Testing of Materials                                                   |
| bar     | Biological Reference Values for Chemical Compounds in the Work Area                             |
| BAT     | Biological tolerance values for occupational exposure                                           |
| BEL     | Biological exposure limits                                                                      |
| bw      | Body weight                                                                                     |
| Ceiling | Maximum limit value                                                                             |
| CMR     | Carcinogen, Mutagen or Reproductive Toxicant                                                    |
| DOT     | Department of Transportation (United States)                                                    |
| EPA     | U.S. Environmental Protection Agency                                                            |
| GHS     | Globally Harmonized System                                                                      |
| HMIS    | Hazardous Materials Identification System                                                       |
| IARC    | International Agency for Research on Cancer                                                     |
| IATA    | International Air Transport Association                                                         |
| ICAO    | International Civil Aviation Organization                                                       |
| IMDG    | International Maritime Dangerous Goods                                                          |
| IMO     | International Maritime Organization                                                             |
| ISO     | International Organization for Standardization                                                  |
| LC50    | Lethal Concentration to 50% of a test population                                                |
| LD50    | Lethal Dose to 50% of a test population (Median Lethal Dose)                                    |
| NFPA    | National Fire Protection Association                                                            |
| NIOSH   | National Institute for Occupational Safety and Health                                           |
| n.o.s.  | Not Otherwise Specified                                                                         |
| NOAEC   | No Observed Adverse Effect Concentration                                                        |
| NOAEL   | No Observed Adverse Effect Level                                                                |
| NOELR   | No Observable Effect Loading Rate                                                               |
| NTP     | National Toxicology Program (United States)                                                     |
| OECD    | Organization for Economic Cooperation and Development                                           |
| OEL     | Occupational exposure limits                                                                    |
| OSHA    | Occupational Safety and Health Administration of the US Department of Labor                     |
| PBT     | Persistent, Bioaccumulative and Toxic substance                                                 |
| PMT     | Persistent, Mobile and Toxic                                                                    |
| PPE     | Personal protective equipment                                                                   |
| SADT    | Self-Accelerating Decomposition Temperature                                                     |
| SARA    | Superfund Amendments and Reauthorization Act                                                    |
| SDS     | Safety Data Sheet                                                                               |
| SL      | Surface Limit                                                                                   |
| STEL    | Short Term Exposure Limit                                                                       |
| STOT RE | Specific target organ toxicity - Repeated exposure                                              |
| STOT SE | Specific target organ toxicity - Single exposure                                                |
| TDG     | Transport of Dangerous Goods (Canada)                                                           |
| TWA     | Time-Weighted Average                                                                           |
| UN      | United Nations                                                                                  |
| VOC     | Volatile organic compounds                                                                      |
| vPvB    | Very Persistent and Very Bioaccumulative                                                        |
| vPvM    | Very Persistent and Very Mobile                                                                 |
| As      | Allergenic substance                                                                            |
| DS      | Dermal Sensitizer                                                                               |
| Ot      | Ototoxicant                                                                                     |
| pOt     | Ototoxicant - potential to cause hearing disorders                                              |
| PS      | Photosensitizer                                                                                 |

|     |                                                       |
|-----|-------------------------------------------------------|
| RS  | Respiratory Sensitizer                                |
| S   | Sensitizer                                            |
| poS | Sensitizer - capable of causing occupational asthma   |
| Sa  | Simple asphyxiant                                     |
| Sd  | Skin designation                                      |
| pSd | Skin designation - potential for cutaneous absorption |
| Sdv | Skin designation - vacated                            |
| Sk  | Skin notation                                         |
| dSk | Skin notation - danger of cutaneous absorption        |
| pSk | Skin notation - potential for cutaneous absorption    |

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

U.S. Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
U.S. Environmental Protection Agency  
U.S. EPA 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  
U.S. Hazardous Substance Data Bank (HSDB)  
International Uniform Chemical Information Database (IUCLID)  
Japan National Institute of Technology and Evaluation (NITE)  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
U.S. National Institute for Occupational Safety and Health (NIOSH)  
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)  
International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications  
International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program  
International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set  
United Nations World Health Organization (WHO)

**Prepared By** PacBio  
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safety@pacb.com.

**Revision date** 15-Jul-2025

**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. 2026 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](https://pacb.com/license). Pacific Biosciences, the PacBio logo, PacBio, Circulomics, Omniome, SMRT, SMRTbell, Iso-Seq, Sequel, Nanobind, Revio, Revio SPRQ, Kinnex, PureTarget, SPRQ, Vega and Vega SPRQ 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  
which includes the amended Hazardous Products Act (HPA) and the Hazardous Products  
Regulation (HPR)

Revision date 17-Aug-2026

Revision Number 1

## 1. Identification

### Product identifier

**Product Name** Kinnex repair mix

### Other means of identification

**Product Code(s)** 103-837-500

### Recommended use of the chemical and restrictions on use

**Recommended use** See product insert

**Restrictions on use** For research use only

### Details of the supplier of the safety data sheet

#### Manufacturer Address

PacBio  
1305 O'Brien Drive  
Menlo Park, CA 94025  
USA  
www.pacb.com

**E-mail address** techsupport@pacb.com

### Emergency telephone number

**Emergency Telephone** CHEMTREC 1-800-424-9300 (CCN#656805)

## 2. Hazard(s) identification

### Classification of the substance or mixture

This product is not considered hazardous by either the US OSHA Hazard Communication Standard 2024, or Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended.

### Label elements

#### **Hazard statements**

This product is not considered hazardous by either the US OSHA Hazard Communication Standard 2024, or Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended.

#### **Hazards classified under paragraph (d)(1)(ii) of 1910.1200**

No information available.

### Other information

May be harmful if inhaled.

### **Biological Material**

Product contains substance(s) derived from bacteria and fungus. Product contains Bovine Serum Albumin (BSA).

### 3. Composition/information on ingredients

#### Substance

Not applicable.

#### Mixture

### 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

|                                     |                                                                                                         |
|-------------------------------------|---------------------------------------------------------------------------------------------------------|
| <u>Suitable Extinguishing Media</u> | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
|-------------------------------------|---------------------------------------------------------------------------------------------------------|

|                                                   |                           |
|---------------------------------------------------|---------------------------|
| <u>Specific hazards arising from the chemical</u> | No information available. |
|---------------------------------------------------|---------------------------|

#### Explosion data

|                                  |       |
|----------------------------------|-------|
| Sensitivity to mechanical impact | None. |
| Sensitivity to static discharge  | None. |

|                                                                       |                                                                                                                                    |
|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| <u>Special protective equipment and precautions for fire-fighters</u> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protective 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.  |

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. Handling and storage

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. Exposure controls/personal protection

### Control Parameters

#### Exposure Limits

**Note** See section 16 for terms and abbreviations.  
**Other information on limit values** Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

### Appropriate engineering controls

**Engineering controls** Showers  
 Eyewash stations  
 Ventilation systems.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

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

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

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

**Appearance** aqueous solution  
**Physical state** Liquid  
**Color** clear colorless  
**Odor** Odorless

| <u>Property</u>                                   | <u>Values</u>     | <u>Remarks • Method</u> |
|---------------------------------------------------|-------------------|-------------------------|
| <b>Melting point / freezing point</b>             | No data available | None known              |
| <b>Boiling point (or initial boiling point or</b> | No data available | None known              |

|                                                   |                   |            |
|---------------------------------------------------|-------------------|------------|
| boiling range)                                    |                   |            |
| Flammability                                      | 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 |            |
| Flash point                                       | No data available | None known |
| Autoignition temperature                          | No data available | None known |
| Decomposition temperature                         | No data available | None known |
| SADT (°C)                                         | No data available | None known |
| pH                                                | No data available | None known |
| pH (as aqueous solution)                          | No data available | None known |
| Kinematic viscosity                               | No data available | None known |
| Dynamic viscosity                                 | No data available | None known |
| Solubility                                        | No data available | None known |
| Water solubility                                  | No data available | None known |
| Partition coefficient n-octanol/water (log value) | No data available | None known |
| Vapor pressure (includes evaporation rate)        | No data available | None known |
| Evaporation rate                                  | No data available | None known |
| Density and/or relative density                   | No data available | None known |
| Bulk density                                      | No data available |            |
| Liquid Density                                    | No data available |            |
| Relative vapor density                            | No data available | None known |
| Particle characteristics                          |                   | None known |
| Particle Size                                     | No data available |            |
| Particle Size Distribution                        | No data available |            |

Other information**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   | May be harmful if inhaled.                                        |
| 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 | No information available. |

Numerical measures of toxicity

The following ATE values have been calculated for the mixture

|                               |                 |
|-------------------------------|-----------------|
| ATEmix (oral)                 | 49,009.00 mg/kg |
| ATEmix (dermal)               | 18,018.00 mg/kg |
| ATEmix (inhalation-gas)       | 99,999.00 ppm   |
| ATEmix (inhalation-vapor)     | 99,999.00 mg/L  |
| ATEmix (inhalation-dust/mist) | 10.50 mg/L      |

#### Component Information

##### 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

|                               |                           |
|-------------------------------|---------------------------|
| Persistence and degradability | No information available. |
|-------------------------------|---------------------------|

##### Bioaccumulative potential

##### Component Information

|                       |                           |
|-----------------------|---------------------------|
| 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

|            |               |
|------------|---------------|
| <u>DOT</u> | Not regulated |
|------------|---------------|

|             |               |
|-------------|---------------|
| <u>IATA</u> | Not regulated |
|-------------|---------------|

|             |               |
|-------------|---------------|
| <u>IMDG</u> | Not regulated |
|-------------|---------------|

**15. Regulatory information****International Inventories****TSCA** Contact supplier for inventory compliance status.

\*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

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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.

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**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<br>56-81-5                         | X          | X             | X            |
| Water<br>7732-18-5                          | -          | -             | X            |
| Ethylenediamine tetraacetic acid<br>60-00-4 | X          | X             | X            |

**16. Other information**

|             |                         |                       |                           |                              |
|-------------|-------------------------|-----------------------|---------------------------|------------------------------|
| <b>NFPA</b> | <b>Health hazards</b> 1 | <b>Flammability</b> 0 | <b>Instability</b> 0      | <b>Special hazards</b> -     |
| <b>HMIS</b> | <b>Health hazards</b> 0 | <b>Flammability</b> 0 | <b>Physical hazards</b> 0 | <b>Personal protection</b> X |

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

List may include phrases which are not applicable to this product

**Legend**

|         |                                                                                                 |
|---------|-------------------------------------------------------------------------------------------------|
| ACGIH   | American Conference of Governmental Industrial Hygienists                                       |
| ADN     | Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe) |
| ADR     | Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)             |
| ATE     | Acute Toxicity Estimate                                                                         |
| ASTM    | American Society for the Testing of Materials                                                   |
| bar     | Biological Reference Values for Chemical Compounds in the Work Area                             |
| BAT     | Biological tolerance values for occupational exposure                                           |
| BEL     | Biological exposure limits                                                                      |
| bw      | Body weight                                                                                     |
| Ceiling | Maximum limit value                                                                             |
| CMR     | Carcinogen, Mutagen or Reproductive Toxicant                                                    |
| DOT     | Department of Transportation (United States)                                                    |
| EPA     | U.S. Environmental Protection Agency                                                            |
| GHS     | Globally Harmonized System                                                                      |
| HMIS    | Hazardous Materials Identification System                                                       |
| IARC    | International Agency for Research on Cancer                                                     |
| IATA    | International Air Transport Association                                                         |
| ICAO    | International Civil Aviation Organization                                                       |
| IMDG    | International Maritime Dangerous Goods                                                          |
| IMO     | International Maritime Organization                                                             |
| ISO     | International Organization for Standardization                                                  |
| LC50    | Lethal Concentration to 50% of a test population                                                |
| LD50    | Lethal Dose to 50% of a test population (Median Lethal Dose)                                    |
| NFPA    | National Fire Protection Association                                                            |
| NIOSH   | National Institute for Occupational Safety and Health                                           |
| n.o.s.  | Not Otherwise Specified                                                                         |
| NOAEC   | No Observed Adverse Effect Concentration                                                        |
| NOAEL   | No Observed Adverse Effect Level                                                                |
| NOELR   | No Observable Effect Loading Rate                                                               |
| NTP     | National Toxicology Program (United States)                                                     |
| OECD    | Organization for Economic Cooperation and Development                                           |
| OEL     | Occupational exposure limits                                                                    |
| OSHA    | Occupational Safety and Health Administration of the US Department of Labor                     |
| PBT     | Persistent, Bioaccumulative and Toxic substance                                                 |
| PMT     | Persistent, Mobile and Toxic                                                                    |
| PPE     | Personal protective equipment                                                                   |
| SADT    | Self-Accelerating Decomposition Temperature                                                     |
| SARA    | Superfund Amendments and Reauthorization Act                                                    |
| SDS     | Safety Data Sheet                                                                               |
| SL      | Surface Limit                                                                                   |
| STEL    | Short Term Exposure Limit                                                                       |
| STOT RE | Specific target organ toxicity - Repeated exposure                                              |
| STOT SE | Specific target organ toxicity - Single exposure                                                |
| TDG     | Transport of Dangerous Goods (Canada)                                                           |
| TWA     | Time-Weighted Average                                                                           |
| UN      | United Nations                                                                                  |
| VOC     | Volatile organic compounds                                                                      |
| vPvB    | Very Persistent and Very Bioaccumulative                                                        |
| vPvM    | Very Persistent and Very Mobile                                                                 |
| As      | Allergenic substance                                                                            |
| DS      | Dermal Sensitizer                                                                               |

|     |                                                       |
|-----|-------------------------------------------------------|
| Ot  | Ototoxicant                                           |
| pOt | Ototoxicant - potential to cause hearing disorders    |
| PS  | Photosensitizer                                       |
| RS  | Respiratory Sensitizer                                |
| S   | Sensitizer                                            |
| poS | Sensitizer - capable of causing occupational asthma   |
| Sa  | Simple asphyxiant                                     |
| Sd  | Skin designation                                      |
| pSd | Skin designation - potential for cutaneous absorption |
| Sdv | Skin designation - vacated                            |
| Sk  | Skin notation                                         |
| dSk | Skin notation - danger of cutaneous absorption        |
| pSk | Skin notation - potential for cutaneous absorption    |

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

U.S. Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 U.S. Environmental Protection Agency  
 U.S. EPA 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  
 U.S. Hazardous Substance Data Bank (HSDB)  
 International Uniform Chemical Information Database (IUCLID)  
 Japan National Institute of Technology and Evaluation (NITE)  
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 U.S. National Institute for Occupational Safety and Health (NIOSH)  
 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)  
 International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications  
 International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program  
 International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set  
 United Nations World Health Organization (WHO)

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**Disclaimer**

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**End of Safety Data Sheet**