

# Safety Data Sheet



Revision Date 2023-12-29

Revision Number 6

## 1. Identification

### Product identifier

**Product Name** 4X Hybridization Buffer

### Other means of identification

**Product Code** S0693

**Synonyms** No information available

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

**Identified uses** For research use only. Not for use in diagnostic procedures

**Restrictions on use** No information available

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

#### Supplier

USA:

Takara Bio USA, Inc.

2560 Orchard Parkway

San Jose, CA 95131, USA

Phone: 800.662.2566/888.251.6618

Web: www.takarabio.com

### Emergency telephone number

**Emergency telephone** In case of emergency, call PERS (Professional Emergency Resource Services) 1-800-633-8253 (US) or 801-629-0667 (international).

## 2. Hazard(s) identification

### Product Classification Data

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

### Hazards not otherwise classified (HNOC)

Not applicable

### Label elements

#### Hazard statements

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

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

**Appearance** Clear, colorless      **Physical state** Liquid      **Odor** Characteristic

**Unknown acute toxicity****Other information**

May be harmful if swallowed.

### 3. Composition/information on ingredients

**Substance**

Not applicable.

**Mixture**

| Chemical name        | CAS No.   | Weight-% | Trade secret |
|----------------------|-----------|----------|--------------|
| HEPES, Nuclease free | 7365-45-9 | 1 - 5    | *            |

### 4. First-aid measures

**Description of first aid measures**

|                     |  |
|---------------------|--|
| <b>Inhalation</b>   | Remove to fresh air.   |
| <b>Eye contact</b>  | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. |
| <b>Skin contact</b> | Wash skin with soap and water.   |
| <b>Ingestion</b>    | Rinse mouth.   |

**Most important symptoms and effects, both acute and delayed**

**Symptoms** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

### 5. Fire-fighting measures

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

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

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

**Specific hazards arising from the chemical** No information available.

**Explosion Data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Ensure adequate ventilation.

### Methods and material for containment and cleaning up

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

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

## 7. Handling and storage

### Precautions for safe handling

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

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep container tightly closed in a dry and well-ventilated place.

## 8. Exposure controls/personal protection

### Control parameters

### Appropriate engineering controls

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

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

**Eye/face protection** No special protective equipment required.

**Skin and body protection** No special protective equipment required.

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

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

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

|                |                          |
|----------------|--------------------------|
| Physical state | Liquid                   |
| Appearance     | Clear, colorless         |
| Color          | Clear                    |
| Odor           | Characteristic           |
| Odor Threshold | No information available |

| <u>Property</u>                  | <u>Values</u>     | <u>Remarks • Method</u> |
|----------------------------------|-------------------|-------------------------|
| pH                               | No data available | None known              |
| Melting point / freezing point   | No data available | None known              |
| Boiling point/boiling range (°C) | No data available | None known              |
| Flash point                      | No data available | Open cup                |
| Evaporation Rate                 | No data available | None known              |
| Flammability (solid, gas)        | No data available | None known              |
| Flammability Limit in Air        |                   | None known              |
| Upper flammability limit:        | No data available |                         |
| Lower flammability limit:        | No data available |                         |
| Vapor pressure                   | No data available | None known              |
| Vapor density                    | No data available | None known              |
| Relative density                 | No data available | None known              |
| Water solubility                 | No data available | None known              |
| Solubility in other solvents     | No data available | None known              |
| Partition coefficient            | No data available | None known              |
| Autoignition temperature         | No data available | None known              |
| Decomposition temperature        |                   | None known              |
| Kinematic viscosity              | No data available | None known              |
| Dynamic Viscosity                | No data available | None known              |

### Other information

|                      |                          |
|----------------------|--------------------------|
| Explosive properties | No information available |
| Oxidizing properties | No information available |
| Softening point      | No information available |
| Molecular weight     | No information available |
| VOC content          | No information available |
| Liquid Density       | No information available |
| Bulk Density         | No information available |

## 10. Stability and reactivity

|                                    |   |
|------------------------------------|---|
| Reactivity                         | No information available.                 |
| Chemical stability                 | Stable under normal conditions.           |
| Possibility of hazardous reactions | None under normal processing.             |
| Conditions to Avoid                | 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

|                     |   |
|---------------------|---|
| <b>Inhalation</b>   | Specific test data for the substance or mixture is not available. |
| <b>Eye contact</b>  | Specific test data for the substance or mixture is not available. |
| <b>Skin contact</b> | Specific test data for the substance or mixture is not available. |
| <b>Ingestion</b>    | May be harmful if swallowed.                                      |

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** No information available.

**Acute toxicity****Numerical measures of toxicity**

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

|                        |                |
|------------------------|----------------|
| <b>ATEmix (oral)</b>   | 3,141.60 mg/kg |
| <b>ATEmix (dermal)</b> | 5,966.90 mg/kg |

**Unknown acute toxicity****Component Information**

| Chemical name                     | Oral LD50            | Dermal LD50          | Inhalation LC50 |
|-----------------------------------|----------------------|----------------------|-----------------|
| HEPES, Nuclease free<br>7365-45-9 | > 2000 mg/kg ( Rat ) | > 2000 mg/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.

**Other adverse effects** No information available.

**Interactive effects** No information available.

## 12. Ecological information

### Ecotoxicity

| Chemical name                     | Algae/aquatic plants | Fish                                 | Toxicity to microorganisms | Crustacea |
|-----------------------------------|----------------------|--------------------------------------|----------------------------|-----------|
| HEPES, Nuclease free<br>7365-45-9 | -                    | LC50: >100mg/L (96h,<br>Danio rerio) | -                          | -         |

**Persistence and degradability** No information available.

**Bioaccumulation** There is no data for this product.

### Component Information

| Chemical name                     | Partition coefficient |
|-----------------------------------|-----------------------|
| HEPES, Nuclease free<br>7365-45-9 | -3.85                 |

**Other adverse effects** No information available.

## 13. Disposal considerations

### Waste treatment 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

## 15. Regulatory information

### International Inventories

**TSCA** -.

**DSL/NDSL** -.  
**EINECS/ELINCS** -.  
**ENCS** -.  
**IECSC** -.

KECL -  
 PICCS -  
 AICS -

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

**US Federal Regulations****SARA 313**

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

**SARA 311/312 Hazard Categories**

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

**CWA (Clean Water Act)**

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

**CERCLA**

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

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

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

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

|                              |
|------------------------------|
| <b>16. Other information</b> |
|------------------------------|

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

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

|         |                       |      |                           |
|---------|-----------------------|------|---------------------------|
| TWA     | Time weighted average | STEL | Short term exposure limit |
| Ceiling | Maximum limit value   | *    | Skin designation          |

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

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

**Revision Date** 2023-12-29  
**Revision Note** No information available.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**