

**Material Safety Data Sheet**  
**Version No.: 0(Rev. date : 2021-07-12)****Dilution Buffer**

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**1. Product and Company Information**

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A. Product Name : Dilution Buffer

B. Recommended Use : For Research Use Only

C. Supply Information :

 Company : Bioneer Address : 8-11 Munpyeongseo-ro, Daedeok-gu, Daejeon 34302, Republic of Korea Emergency telephone number : +82-42-930-8777

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**2. Product and Company Information**

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A. Risk-Hazard Classification : Acute toxicity classification : Class 4

B. Caution Items Including Preventative measures

 Pictogram : No Information Signal word : No Information Hazard statement(s) : No Information Precautionary statements

Prevention : No Information

Response : No Information

Storage : No Information

Disposal : No Information

C. Other Risks-Hazards Not Included in Risk-Hazard Classification (NFPA) : No information.

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**3. Composition/Information on ingredient**

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Chemical name	Synonyms	CAS No.	Weight(%)
Glycerine	Glycerol	56-81-5	30-60
Sodium Chloride		7647-14-5	1-5

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Tris-HCl	1185-53-1	0.1-1
Dithiothreitol	3483-12-3	<0.1
Ethylenediamine tetra	60-00-4	<0.1

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#### 4. First Aid Measure

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- A. Upon Eye contact : Rinse thoroughly with plenty of water for at least 20 minutes.
  - B. Upon Skin Contact : Rinse thoroughly with plenty of water for at least 20 minutes.
  - C. Upon Inhalation: Seek medical attention if exposure or contact is suspected.
  - D. Upon Ingestion : Seek medical attention if exposure or contact is suspected.
  - E. The most important acute and delayed symptoms/effects : No information.
  - F. Notes to Physician : No Information..
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#### 5. Fire-fighting Measures

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- A. Proper(Improper) Extinguishing Material : To extinguish fire related to this material, use alcohol foam , dioxide or water spraying.
  - B. Specific Hazards from Chemicals : No Information.
  - C. Firefighting Protection and Precautions : Rescuers must wear appropriate protection.
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#### 6. Accidental Release Measures

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- A. Personal precautions : Immediately wipe spills and follow prevention measures.
  - B. Environmental precautions : Prevent introduction into waterways, sewers, basements and sealed spaces.
  - C. Methods and materials for containment and cleaning up : Absorb liquids and clean contaminated area with detergent and water.
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#### 7. Handling and Storage

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- A. Handling Precautions : Be aware of conditions and chemicals to avoid.
  - B. Storage Precautions : Keep -20 °C.
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#### 8. Exposure Controls / Personal Protection

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- A. Chemical Exposure Standards, Biological Exposure Standards Etc. : No information.
- B. Proper Physical Management : No Information.
- C. Personal Protection
- Respiratory Protection : wear respiratory mask approved by KOSHA(Korea Occupation Safety Health Agency)
  - Eye Protection : wear Chemical Safety protective goggle or glasses approved by KOSHA(Korea Occupation Safety Health Agency)
  - Hand Protection : wear Chemical Safety gloves approved by KOSHA(Korea Occupation Safety Health Agency)
  - Body Protection : wear protective clothes approved by KOSHA(Korea Occupation Safety Health Agency)
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## 9. Physical and Chemical Properties

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- A. Appearance : Liquid, transparentness
- B. Odor : None.
- C. Odor threshold : No Information
- D. pH : No Information
- E. Melting point/Freezing point : No Information
- F. Initial boiling point/range : No Information
- G. Flash point : No Information
- H. Evaporation rate : No Information
- I. Flammability(Solid, Liquid) : No Information
- J. Flammability Limits upper/lower : No Information
- K. Vapor pressure : No Information
- L. Solubility : No Information
- M. Vapor density : No Information
- N. Viscosity : No Information
- O. n octanol/water partition coefficient : No Information
- P. Autoignition temperature : No Information
- Q. Decomposition temperature : No Information
- R. Specific gravity : No Information
- S. Molecular weight : No Information
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## 10. Stability and Reactivity

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- A. Stability : Stable under recommended storage conditions.
  - B. Possibility of harmful response : No Information.
  - C. Conditions to avoid (electric discharge, impact, vibration etc) : Ignition source of Heat, spark, flame
  - D. Material to avoid : Combustible materials.
  - E. Hazardous Decomposition Products : No Information.
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## 11. Toxicological Information

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- A. Probable Exposure Path
    - Respiratory : can be harmful if inhaled.
    - Ingestion : can be harmful if swallowed.
    - Eye/Skin : Harmful in contact with skin. Can be caused skin irritation.
  - B. Health Hazard Information
    - Acute Toxicity : No Information.
    - Skin corrosive or irritant : can be caused skin irritation.
    - Serious eye damage or irritant : can be caused eye irritation.
    - Respiratory Hypersensitivity : No Information.
    - Skin Hypersensitivity : No Information.
    - Carcinogenic Properties : No Information.
    - Reproductive Cell Mutation Properties : No Information.
    - Reproductive Toxicity : No Information
    - Target Organ Toxicity (Single Exposure) : No Information
    - Target Organ Toxicity (Repeat Exposure) : No Information
    - Inhalation Toxicity : No Information
  - C. Numerical measures of toxicity(Acute toxicity estimates etc) : No Information
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## 12. Ecological Information

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- A. Biological Toxicity : No Information
  - B. Persistency and Degradability : No Information
  - C. Bioconcentration : No Information
  - D. Soil Mobility : No Information
  - E. Other Toxic Effects : No Information
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### 13. Disposal Considerations

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- A. Waste disposal method : Dispose of material in accordance with formally disposal company.
  - B. Disposal Considerations : Dispose contents and vessel in accordance with regulation by the waste disposal law.
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### 14. Transport Information

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- A. Not regulated in the meaning of transport regulations.

IMDG: Non-hazardous for sea freight.

ADR: Non-hazardous for road transport.

RID: Non-hazardous for rail transport.

ICAO/IATA: Non-hazardous for air transport.

- B. UN Number: Not applicable
  - C. UN Proper Shipping Name: Not applicable
  - D. Transport hazard class: Not applicable
  - E. Packing group: Not applicable
  - F. Marine pollutant: Not applicable
  - G. The special vehicle Safety measures: Not applicable
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### 15. Regulatory Information

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This safety datasheet compiles with the requirements of Regulation (EC) No. 1272/2008

- A. Regulation by Industrial safety and health act: Not applicable
  - B. Regulation by chemicals control act: Not applicable
  - C. Regulation by Safety control of dangerous substance act: Not applicable
  - D. Regulation by the waste control act: Not applicable
  - E. Regulation by other domestic and foreign regulatory: Not information available
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### 16. Other References

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