

**Material Safety Data Sheet**  
**Version No.: 0.0(Rev.date 2020-04-01)**

***AccuLadder™* 3-color Prestained Protein size marker (Broad)**

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**1. Product and Company Information**

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- . Product Name : *AccuLadder™* 3-color Prestained Protein size marker (Broad)
- . Product Number : D-2030
- . Product Use : For research use only and are not intended for human or animal diagnostics, therapeutic, or other clinical uses, unless otherwise stated.
- . Company : Bioneer corporation  
8-11, Munpyeongseo-ro, Daedeok-gu, Daejeon 306-220, Republic of Korea  
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**2. Hazards Identification**

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- . The preparation is not classified as dangerous according to Directive 1999/45/EC or Directive 67/548/EC, and is not labelled with danger symbols or indications of danger.
- . Hazards deriving from physical-chemical properties :
  - The data available do not support any physical or chemical hazard.
- . Human health hazards :
  - Inappropriate handling may cause formation of aerosols. Inhalation of aerosols may cause allergic type reactions in sensitized individuals. Prolonged skin contact may cause minor irritation.
- . Caution :
  - Avoid inhalation, ingestion, and skin contacts.
- . Environmental hazards :
  - The data available do not support any environmental hazard.

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### 3. Composition/Information on ingredients

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Chemical name	Synonyms	CAS No.	Weight(%)
Water		7732-18-5	> 50 % (v/v)
Glycerol		56-81-5	10 - 25 % (v/v)
Sodium Dodecyl Sulfate		151-21-3	1 - 3 %
Urea		57-13-6	< 25 %
Tris phosphate monobasic		6992-39-8	1 - 2 %
Dithiothreitol		3483-12-3	3 - 16%

Other components: Components not listed here are not dangerous or their concentrations do not exceed the limits specified in the EU directive 1999/45/EC.

Additional information: For the wording of the listed risk phrases refer to section 16.

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### 4. First aid measures

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- . Ingestion : If swallowed, rinse mouth and throat thoroughly with water. Consult a doctor in event of any complaints.
  - . Inhalation : If inhaled, remove victim from area of exposure. If symptoms of irritation or respiratory allergy occur, consult a doctor.
  - . Skin contact : If symptoms of irritation after prolonged exposure occur, consult a doctor.
  - . Eye contact : In case of contact, wash out opened eyes with plenty of water for several minutes.  
Consult a doctor in event of any complaints.
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### 5. Fire-fighting measures

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- . The preparation cannot cause fire.
  - . Suitable Extinguishing agents : Water spray, Carbon Dioxide, dry chemical powder or appropriate foam.
  - . Special exposure hazards from decomposition products: Not thoroughly investigated.
  - . Protective Equipment and Precautions for Firefighters : As in any fire, wear self- contained breathing apparatus pressure-demand and full protective gear.
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### 6. Accidental release measures

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- . Personal Precautions : Wear appropriate gloves (see Section 8), safety glasses to clean small releases/spillage.  
In case of vapor/aerosol formation, wear suitable respiratory protection means. Ventilate the area.
  - . Environmental precautions : No special measures required.
  - . Methods for cleaning up : Absorb spillages with liquid-binding material. Ventilate and wash the area after the spillage is completely removed.
  - . Additional information : No dangerous substances are released.
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## 7. Handling and Storage

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. Handling : No further requirements.

Use appropriate personal protection measures (see Section 8). Avoid any contact with the liquid. Avoid the formation of aerosols. Ventilate area.

. Storage : Store at - 20°C. None other specific requirements relating to the preparation.

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## 8. Exposure controls/personal protection

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. Ingredients with limit values that require monitoring at the workplace :

- The product does not contain any relevant quantities of materials with critical values that need to be monitored at the workplace.

. General protective and hygienic measures :

- The usual precautionary measures are the same as for chemicals handling.

. Engineering measures :

- None specific requirements relating to the preparation.

. Personal protection :

- Respiratory protection : No special measures required.
  - Hand protection : Wear rubber gloves. None special requirements to rubber.
  - Eye protection : No need to wear glasses (goggles) when ordinary operations with the preparation. Safety glasses are recommended during certain operations when aerosol formation is possible.
  - Skin protection : The usual precautionary measures accepted in research laboratories, e.g. protective clothes (gowns). None specific requirements.
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## 9. Physical and chemical properties

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. Appearance : Liquid

. Color : Blue

. Odor : Odorless or weak

. pH-value at 25°C : ~7.5.

. Boiling point : ~ 100°C.

. Flash Point : Not applicable.

. Flammability / autoflammability : The preparation is not flammable/self-igniting.

. Explosive properties : The preparation does not possess explosive properties.

. Oxidizing properties : Not applicable.

. Vapor pressure : Not applicable.

. Relative density at 20°C : ~1 g/cm<sup>3</sup>.

. Solubility in/miscibility with water : Fully miscible.

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- . Fat solubility : Not applicable.
  - . Vapor density : Not applicable.
  - . Evaporation rate : Not applicable.
  - . Conductivity : Not applicable.
  - . Viscosity : Not viscous.
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## 10. Stability and Reactivity

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- . Stability : Stable under storage conditions (see Section 7).
  - . Conditions to avoid : No conditions which may cause dangerous reactions.
  - . Possibility of hazardous reactions : No dangerous reactions known.
  - . Materials to avoid : Strong oxidizing agents, strong bases.
  - . Hazardous decomposition products : No dangerous decomposition products known.
  - . Hazardous polymerization : Will not occur.
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## 11. Toxicological information

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- . Routes of exposure :
    - Inhalation : Inhalation of aerosols may cause allergic type reactions in sensitized individuals.
    - Ingestion : Repeated ingestion or excessive dosage may be irritating.
    - Skin and eye contact : Prolonged contact may cause irritation.
  - . Additional toxicological information :

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.
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## 12. Ecological Information

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- . Ecotoxicity :
    - The preparation is considered not dangerous to the environment with respect to mobility, persistence and degradability, bioaccumulation, aquatic toxicity and other data relating to ecotoxicity.
  - . Persistence and degradability :
    - The preparation is readily biodegradable.
  - . Bioaccumulative potential :
    - It is considered that the preparation does not accumulate in biota, and does not pass through the food chain.
  - . Other adverse effects :
    - Not applicable.
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## 13. Disposable considerations

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- . Waste treatment methods : Offer surplus and non-recyclable solutions to a licensed disposal company.
  - . Contaminated packaging : Dispose of as unused product.
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## 14. Transport Information

- . Special precautions : None known.
  - . Proper shipping name : Not dangerous goods according to transport regulations.
  - . Transport regulations : No additional transport regulations are known to the supplier.
  - . 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.
  - . Other information : The preparation may be stored in ice during the transportation.
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## 15. Regulatory information

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- . US
    - Labelling according to US Regulations: Caution: Avoid contact and inhalation.
    - US Regulatory information: SARA LISTED: No.
  - . EU
    - Labelling according to EU Guidelines: The preparation is not dangerous within the meaning of Directives 67/548/EC, 1999/45/EC, and 88/379/ECC, and is not labelled with danger symbols or indications of danger.
  - . Canada
    - WHMIS classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR. DSL: No.
  - . NDSL: No.
  - . Safety, health and environmental regulations/legislation specific for the substance or mixture : no data available.
  - . Chemical Safety Assessment : For this product a chemical safety assessment was not carried out
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## 16. Other information

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This information is based on our present knowledge and shall be used only as a guide. However, this shall not constitute a guarantee for any specific product features. BIONEER is not held liable for any damage resulting from handling or from contact with the above products.

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