

**1. Identification of the substance/mixture and of the company/undertaking****1.1 Identification of the substance/preparation**

**Product name :** ProMetric™ TriColor Low Range Protein Ladder, 2 to 40 kDa

**Product code :** PM6628

**Recommended use :** For Research Use Only. Suitable for use as molecular weight standards for SDS-PAGE electrophoresis.

**1.2 Company/Undertaking identification**

SMOBIO Technology, Inc.

3F, No. 15, Industry E. 9th Rd., Hsinchu Science Park, Hsinchu 300096, Taiwan

Tel : +886 3 5799292

Fax : +886 3 5790202

E-mail : [support@smobio.com](mailto:support@smobio.com)

**1.3 Emergency telephone number**

**Emergency telephone :** +886 3 5799292 (09.00-18.00 TST)

**2. Hazards identification****2.1 Classification of the substance or mixture**

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS) Classification to Regulation (EC) No 1272/2008

**2.2 Label elements**

**Symbol(s) :** Void

**Signal Word :** Warning!

May cause eye, skin and respiratory tract irritation. Combustible liquid and vapor.

**2.3 Other information**

**Hazards deriving from physical-chemical properties :** The data available do not support any physical or chemical hazard , but not flammable.

**Human health hazards :** May be irritating to eyes, respiratory system and skin.

\*Caution: Avoid inhalation, ingestion, and skin contacts.

**Environmental hazards :** The data available do not support any environmental hazard.

### 3. Composition/information on ingredient

#### 3.1 Ingredients

<u>Chemical name</u>	<u>Concentration</u>	<u>EC No.</u>	<u>CAS No.</u>	<u>Classification</u>
Sodium dodecyl sulfate	1 %	205-788-1	51-21-3	Xn;R21/22-36/38, Acute Tox.4;H302/H312
Urea	< 25 %	200-315-5	57-13-6	Not classified
Tris-phosphate	1-2 %	230-260-2	6992-39-8	Not classified
Dimethyl sulfoxide	20 %	200-664-3	67-68-5	Xi ; R36/R37/R38

#### 3.2 Other components

Components not listed here are not dangerous or their concentrations do not exceed the limits specified in the EU directive 1272/2008/EC.

#### 3.3 Additional information

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

### 4. First aid measures

#### 4.1 General information

No special measures required.

#### 4.2 Description of first aid measures

**In case of ingestion :** Wash out mouth with water and give 100 - 200 ml of water to drink. Do NOT induce vomiting. If symptoms develop obtain medical attention.

**In case of inhalation :** Remove patient from exposure, keep warm and at rest. If symptoms develop obtain medical attention.

**In case of skin contact :** Wash off immediately with plenty of water. If symptoms develop obtain medical attention.

**In case of eye contact :** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms develop obtain medical attention.

### 5. Fire fighting measures

#### 5.1 Suitable extinguishing agents

Water spray, Carbon dioxide (CO<sub>2</sub>), dry chemical powder or appropriate foam.

#### 5.2 Not suitable extinguishing agents

None.

### 5.3 Special exposure hazards from decomposition products

Not thoroughly investigated.

### 5.4 Protective equipment

Wear self-contained breathing apparatus and protective clothing.

## **6. Accidental release measures**

### 6.1 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.

### 6.2 Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

### 6.3 Methods for cleaning up

Absorb spillages with liquid-binding material. Ventilate and wash the area after the spillage is completely removed.

### 6.4 Additional information

No dangerous substance are released.

## **7. Handling and storage**

### 7.1 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.

### 7.2 Storage

Protected from light, store at 4°C. No other specific requirements relating to the preparation.

## **8. Exposure controls/personal protection**

### 8.1 Control parameters

<u>Chemical name</u>	<u>CAS No.</u>		<u>Exposure limits</u>
Dimethyl sulfoxide	67-68-5	Germany	TWA:50ppm TWA:160mg/m <sup>3</sup>
		Finland	TWA:50ppm
		Denmark	TWA:50ppm TWA:160mg/m <sup>3</sup>
		Austria	TWA:50ppm TWA:160mg/m <sup>3</sup>
		Switzerland	TWA:50ppm TWA:160mg/m <sup>3</sup>
Sodium dodecyl sulfate	151-21-3		No data available

Urea	57-13-6	No data available
Tris-phosphate	6992-39-8	No data available

### 8.2 Exposure controls

**Engineering measures** : Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors.

### 8.3 Personal protection

**Respiratory protection** : No special measures required. In case of insufficient ventilation wear suitable respiratory equipment.

**Hand protection** : Wear rubber gloves. No special requirements to rubber.

**Eye protection** : Safety glasses (goggles) are recommended during ordinary operations with the preparation.

**Skin protection** : The usual precautionary measures accepted in research laboratories, e.g. protective clothes (gowns). No specific requirements.

## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**Appearance**: Liquid.

**Color**: Blue-purple.

**Odor**: Odorless or weak.

**pH-value at 25°C**: 7.5.

**Boiling point**: 189°C.

**Flash Point**: 89°C.

**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.

**Fat solubility**: Not applicable.

**Vapor density**: Not applicable.

**Evaporation rate**: Not applicable.

**Conductivity**: Not applicable.

**Viscosity**: Not viscous.

### 9.2 Other information

No further relevant information available.

## 10. Stability and reactivity

### 10.1 Stability

Stable under normal temperature conditions.

### 10.2 Reactivity

No information available.

### 10.3 Possibility of hazardous reactions

No dangerous reactions known.

### 10.4 Conditions to avoid

No conditions which may cause dangerous reactions.

### 10.5 Incompatible materials

No in particular.

### 10.6 Hazardous decomposition products

No dangerous decomposition products known.

## 11. Toxicological information

### 11.1 Information on toxicology effects

#### Acute toxicity:

Not hazardous.

#### Inhalation:

Inhalation of aerosols may cause allergic type reactions in sensitized individuals.

#### Ingestion:

Repeated ingestion or excessive dosage may cause irritation of the gastrointestinal tract.

#### Skin and eye contact:

Generally, the product does not irritate the skin and eyes. Prolonged skin or eye contact may cause minor irritation.

<u>Chemical name</u>	<u>LD50 Oral</u>	<u>LD50 Dermal</u>	<u>LD50 Inhalation</u>
Dimethyl sulfoxide	145000 mg/kg(Rat)	40000 mg/kg(Rat)	
Sodium dodecyl sulfate	1288 mg/kg(Rat)	580 mg/kg(Rat)	3900 mg/m3 (Rat)1h

**Chronic toxicity :** May cause injury to the liver and kidneys.

#### Carcinogenic effects:

Product does not present a carcinogenic effects based on known or supplied information.

#### Mutagenic effects:

Product does not present a c mutagenic effects based on known or supplied information.

**Reproductive toxicity:**

Product does not present a reproductive toxicity hazard based on known or supplied information.

**Sensitization:**

Product does not present a sensitization hazard based on known or supplied information.

**Target organ effects:**

Product does not present a target organ effects based on known or supplied information.

**12. Ecological information****12.1 Ecotoxicity**

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can make harmful or damaging effects on the environment.

**12.2 Persistence and degradability**

No data available.

**12.3 Bioaccumulative potential**

No data available on bioaccumulation.

**12.4 Other adverse effects**

No data available.

**13. Disposal consideration****13.1 Waste treatment methods**

**Waste from residues / unused products:** Dispose of in accordance with local regulations.

**Contaminated packaging:** Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. Transport information**

**IMDG/IMO:** Non-hazardous for sea freight.

**RID:** Non-hazardous for rail transport.

**ARD:** Non-hazardous for road transport.

**ICAO/IATA:** Non-hazardous for air transport.

**15. Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

No information available.

**15.2 Chemical safety assessment**

No information available.

**15.3 Regulatory information**

**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 1272/2008/EC, 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.

**16. Other information**

**16.1 Full text of R-phrases referred to under sections 3**

R36/37/38 - Irritating to eyes, respiratory system and skin

**16.2 Hazard Ratings**

	Health Hazard	Fire Hazard	Instability	Special Hazard
NFPA	2	2	0	0

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

NFPA Label colored diamond code: Blue - Health; Red - Flammability; Yellow - Instability; White - Special Hazards

	Health Hazard	Flammability	Physical Hazard	Personal Protection
HMIS	2	2	0	B

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe \*- Chronic Health Effect

Personal Protection codes: B - Safety Glasses, Gloves

HMIS Label colored bar code: Blue - Health; Red - Flammability; Orange - Physical Hazards; White - Special

The above information is believed to be correct but does not purport to be all-inclusive



## SAFETY DATA SHEET

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and shall be used only as a guide. The company shall not be held liable for any damage resulting from handling or from contact with the above product.