

SAFETY DATA SHEET (SDS)

SDS DATE : Oct, 2021

Section 1. Product And Company Identification

1. **Product identifier**
 - 1.1. Product Name : PAGE-Mark™ 3-Color Mid/Regular/Broad-Range Protein Marker
 - 1.2. Product Code : BPM1000, BPM1100, BPM2100
2. **Details of the supplier of the safety data sheet**
 - 2.1. Company: BIOMAX, Inc.,
 - 2.2. Address : Keumkang Penterium IX Tower CORE-C 7F, 46, Galmaesunhwan-ro 166beon-gil, Guri-si, Gyeonggi-do, Republic of Korea
 - 2.3. Telephone: +82-2-3296-3158
 - 2.4. Emergency Phone : +82-2-3296-3159
 - 2.5. FAX: +82-2-973-2858
3. **Product use**
 - 3.1. For research use only.

Section 2. Hazard identification

Component	Description	Volume	Safety Information
Protein Marker	Liquid	250 μ l x 2 vials	See below

1.1 SDS:

Emergency Overview

OSHA Hazards: Flammable solid, Target organ effect, Harmful by ingestion, Irritant, Toxic by skin absorption

Target Organs: Lungs

GHS Classification: Flammable solids (Category 1)

Acute toxicity, Oral (Category 3)

Acute toxicity, Dermal (Category 3)

Skin irritation (Category 2)

Eye irritation (Category 2A)

Specific target organ toxicity – single exposure (Category 3)

Acute aquatic toxicity (Category 2)

GHS Label elements, including precautionary statements

Pictogram:



Signal word: Warning

Hazard statement(s): H315 Causes skin irritation.

H319 Causes serious eye irritation.

H412: Harmful to aquatic life with long-lasting effects.

Precautionary statement(s): P210 Keep away from heat/sparks/open flames/hot surfaces – no smoking.

P261 Avoid breathing dust/fumes/gas/mist/vapors/spray.

P264 Wash hands thoroughly after handling.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310 IF SWALLOWED: Call a POISON CENTER or doctor/physician.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P501 Dispose of contents/container to an approved waste disposal plant.

HMIS Classification

Health hazard: 2

Chronic Health Hazard: *

Flammability: 3

Physical hazards: 3

NFPA Rating

Health Hazard: 2

Fire: 3

Reactivity Hazard: 3

Potential Health Effects

Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.

Skin: Toxic if absorbed through skin. Causes skin irritation.

Eyes: Causes eye irritation.

Ingestion: May be harmful if swallowed.

1.2 **DTT:**

Emergency Overview

OSHA Hazards: Target Organ Effect, Toxic by ingestion, Irritant

Target Organs: Central nervous system

GHS Classification:

Acute toxicity, Oral (Category 5)

Skin irritation (Category 2)

Eye irritation (Category 2A)

GHS Label elements, including precautionary statements

Pictogram:



Signal word: Warning

Hazard statement(s): H303 May be harmful if swallowed

H315 Causes skin irritation

H319 Causes serious eye irritation

Precautionary statement(s):

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

HMIS Classification

Health hazard: 2

Chronic Health Hazard: *

Flammability: 0

Physical hazards: 0

NFPA Rating

Health Hazard: 2

Fire: 0

Reactivity Hazard: 0

Potential Health Effects

Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.

Skin: May be harmful if absorbed through skin. Causes skin irritation.

Eyes: Causes eye irritation.

Ingestion: Toxic if swallowed.

Section 3. Composition/Information on ingredients

Component	CAS Number	EC-No.	Molecular Weight	Chemical Formula	Concentration
Glycerol	56-81-5	200-289-5	92.09	C ₃ H ₈ O ₃	10-25%
Urea	57-13-6	200-315-5	60.06	CH ₄ N ₂ O	< 10 %
SDS	151-21-3	205-788-1	288.38	C ₁₂ H ₂₅ SO ₄ Na	1-5%
DTT	3483-12-03	222-468-7	154.25	C ₄ H ₁₀ O ₂ S ₂	< 0.5 %

Glycerol & Urea are not hazardous products. No the components need to be disclosed according to the applicable regulations.

Section 4. First Aid Measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed: DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5. Fire-fighting Measures

SDS:

Condition of flammability: Not flammable or combustible.

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products: Hazardous decomposition products formed under fire conditions— see section 10.

Further information: Use water spray to cool unopened containers.

DTT:

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products: Hazardous decomposition products formed under fire conditions— carbon oxides, sulfur oxides, hydrogen sulfide gas.

Conditions of flammability: Not flammable or combustible.

Section 6. Accidental Release Measures

Personal precautions:

Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Environmental precautions: Do not let product enter drains.

Methods for cleaning up: Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Section 7. Handling And Storage

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Normal measures for preventive fire protection.

Conditions for safe storage

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

Recommended storage temperature: 4°C(about 3 months)/-20°C.

Section 8: Exposure Controls/Personal Protection

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Avoid contact with skin, eyes, and clothing. Wash hands before breaks and immediately after handling the product.

Section 9: Physical And Chemical Properties

Property	PAGE-Mark™ Solution
Appearance:	blue liquid
pH:	7.5
Water Solubility:	Soluble
Other Solubility:	No data available
Boiling Point (°C):	No data available
Melting Point (°C):	No data available
Flash Point (°C):	No data available
Ignition Temperature (°C):	No data available
Density:	No data available

Section 10: Stability And Reactivity

Property	SDS	DTT
Chemical Stability:	Stable under recommended storage conditions	

Conditions to Avoid:	Heat, flames and sparks. Extremes of temperature and direct sunlight.	No data available
Materials to Avoid:	Oxidizing agents	Bases, Oxidizing agents, Reducing agents, Alkali metals
Hazardous decomposition: products:	Carbon oxides, sulfur oxides, sodium oxides	Carbon oxides, sulfur oxides, hydrogen sulfide gas

Section 11: Toxicological Information

SDS:

Acute toxicity: LD50 Oral - rat - 1,288 mg/kg

LC50 Inhalation – rat – 1 h – >3,900 mg/m³

LC50 Dermal – rabbit – 580 mg/kg

Skin corrosion/irritation: Skin – rabbit – skin irritation – 24 h

Serious eye damage/eye irritation: Eyes – rabbit – risk of serious damage to eyes. OECD Test Guideline 405.

Respiratory or skin sensitization: Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity – single exposure (GHS): Inhalation – may cause respiratory irritation.

Specific target organ toxicity – repeated exposure (GHS): no data available

Aspiration hazard: no data available

Potential Health Effects

Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.

Skin: Toxic if absorbed through skin. Causes skin irritation.

Eyes: Causes eye irritation.

Ingestion: Harmful if swallowed.

Synergistic effects: no data available

Additional information: RTECS: WT1050000

DTT:

Acute toxicity: no data available

Irritation and corrosion: no data available

Sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Potential Health Effects

Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.

Skin: May be harmful if absorbed through skin. Causes skin irritation.

Eyes: Causes eye irritation.

Ingestion: Toxic if swallowed.

Section 12: Ecological Information

SDS:

Persistence and degradability: Biodegradability: Result-> 90% readily biodegradable

Toxicity: Toxicity to fish: mortality NOEC – Oncorhynchus mykiss (rainbow trout) – 19.5 mg/l – 96 h

Mortality LOEC – Pimephales promelas (fathead minnow) – 4.6 mg/l – 8 d

LC50 – Oncorhynchus mykiss (rainbow trout) – 3.6 mg/l – 96 h

Toxicity to algae: Growth inhibition LOEC – Pseudokirchneriella subcapitata – 2.68 mg/l – 6 d

Bioaccumulative potential: Bioaccumulation: Cyprinus carpio (Carp) – 72 h

Bioconcentration factor (BCF): 3.9-5.3

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life.

DTT:

Elimination information (persistence and degradability): no data available

Ecotoxicity effects: no data available

Further information on ecology: no data available

Section 13: Disposal Considerations

Product: Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging: Dispose of as unused product.

Section 14: Transport Information

SDS:

DOT (US): UN-number: 2926, Class: 4.1 (6.1), Packing group: II; Proper shipping name: Flammable solids, toxic, organic, n.o.s. (Sodium dodecyl sulfate); Marine pollutant: No; Poison Inhalation Hazard: No

IMDG: UN-number: 2926, Class: 4.1 (6.1), Packing group: II; EMS-No: F-A, S-G; Proper shipping name: FLAMMABLE SOLID, TOXIC, ORGANIC, N.O.S. (Sodium dodecyl sulfate); Marine pollutant: No

IATA: UN-number: 2926, Class: 4.1 (6.1), Packing group: II; Proper shipping name: Flammable solids, toxic, organic, n.o.s. (Sodium dodecyl sulfate)

DTT:

DOT (US): Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

Section 15: Regulatory Information

1. **Regulation under the Occupational Safety and Health Act**
 - 1.1 Harmful Substances Required Permission for Manufacture - Not relevant
 - 1.2 Harmful Substances Prohibited from Manufacturing - Not relevant
 - 1.3 Carcinogenic Substances - Not relevant
 - 1.4 Controlled Substances Subject to Environment Monitoring - Not relevant
 - 1.5 Controlled Substances Subject to Health Examination - Not relevant
 - 1.6 Hazardous substances requiring management - Not relevant
2. **Act on the Registration and Evaluation, etc. of Chemical Substances, Chemicals Control Act**
 - 2.1 Toxic Chemicals - Not relevant
 - 2.2 Observational chemicals - Not relevant
 - 2.3 Restricted Chemicals - Not relevant
 - 2.4 Prohibited Chemicals - Not relevant
 - 2.5 Accident Precaution Chemicals - Not relevant
3. **Dangerous Substances Safety Management Act**
 - 3.1 Not relevant
4. **Wastes Control Act**
 - 4.1 Follow article 13 of the act to dispose the product waste
5. **Other regulations**

KECI Number
Not in compliance with the inventory

Section 16: Other information

OTHER INFORMATION:

PREPARATION INFORMATION:

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. BIOMAX, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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