SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

1. Product Identifiers
   - Product Name: Poly-L-Lysine, Solution
   - Catalog No: 5048
   - Brand Name: Poly-L-Lysine hydrobromide
   - CAS No: 25988-63-0

2. Relevant identified uses of the substance or mixture and uses advised against
   - Identified Uses: Laboratory chemicals, Manufacturer of substances

3. Details of the supplier of the safety data sheet
   - Company: Advanced BioMatrix, Inc.
     5930 Sea Lion Place
     Carlsbad, CA 92010 USA
     Phone: 1-800-883-8220
     1-760-929-0755 outside USA
     Fax: 1-510-217-3452

4. Emergency telephone number
   - Emergency Phone No: 1-800-883-8220

SECTION 2 – HAZARDS IDENTIFICATION

1. Classification of the substance or mixture
   - Not a hazardous substance or mixture.

2. GHS Label elements, including precautionary statements
   - Not a hazardous substance or mixture.

3. Hazards not otherwise classified (HNOC) or not covered by GHS
   - None.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

1. Substances
   - Synonyms: Poly-L-Lysine, polylysine
   - No components need to be disclosed according to the applicable regulations.
SECTION 4 – FIRST AID MEASURES

1. **Eye Contact**
   Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Call a physician.

2. **Skin Contact**
   Wash skin with copious amounts of water.

3. **Inhalation**
   Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration.

4. **Ingestion**
   Never give anything by mouth to an unconscious person. Rinse mouth with water.

5. **Most important symptoms and effects, both acute and delayed**
   The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

6. **Indication of any immediate medical attention and special treatment needed**
   No data available

SECTION 5 – FIREFIGHTING MEASURES

1. **Extinguishing media**
   Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

2. **Special hazards arising from the substance or mixture**
   Carbon oxides, nitrogen oxides (NOx), Hydrogen bromide gas.

3. **Advice for firefighters**
   Wear self-contained breathing apparatus for firefight if necessary.

4. **Further Information**
   No data available

SECTION 6 – ACCIDENTAL RELEASE MEASURES

1. **Personal precautions, protective equipment and emergency procedures**
   Avoid dust formation.
   Avoid breath vapors, mist or gas.
   For personal protection see section 8.

2. **Environmental precautions**
   Do not let product enter drains.

3. **Methods and materials for containment and cleaning up**
   Sweep up and shovel. Keep in suitable, closed containers for disposal.

4. **Reference to other sections**
   For disposal see section 13.
SECTION 7 – HANDLING AND STORAGE

1. Precautions for safe handling
   Provide appropriate exhaust ventilation at places where dust is formed.
   For precaution see section 2.2

2. Conditions for safe storage, including any incompatibilities
   Keep container tightly closed in a dry and well-ventilated place.
   Recommended storage temperature 2 to 8°C.
   Keep in a dry place.

3. Specific end use(s)
   Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

1. Workplace control parameters
   Contains no substances with occupational exposure limit values.

2. Exposure controls
   Appropriate engineering controls
   General industrial hygiene practice.
   Personal protective equipment
     Eye/face protection
     Use equipment for eye protection tested and approved under appropriate
government standards such as NIOSH (US) or EN 166 (EU).
     Skin protection
     Handle with gloves. Gloves must be inspected prior to use. Use proper glove
removal technique to avoid skin contact with this product. Dispose of the
contaminated gloves after use in accordance with applicable laws and good
laboratory practices. Wash and dry hands.
     Body protection
     Impervious clothing. The type of protective equipment must be selected according
to the concentration and amount of the dangerous substance at the specific
workplace.
     Respiratory protection
     Respiratory protection is not required. For nuisance exposures use type OV/AG
(US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and
components tested and approved under appropriate government standards such as
NIOSH (US) or CEN (EU).
   Control of environmental exposure
   Do not let product enter drains.
### SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Data Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper/lower flammability</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

### SECTION 10 – STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Data Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>No data available</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>Stable under recommend storage conditions</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>No data available</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>No data available</td>
</tr>
<tr>
<td>Incompatible material</td>
<td>No data available</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known.</td>
</tr>
</tbody>
</table>

**In the event of fire: see section 5.**
### SECTION 11 – TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Category</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Inhalation</td>
<td>No data available</td>
</tr>
<tr>
<td>Dermal</td>
<td>No data available</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>No data available</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>No data available</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>No data available</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>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.</td>
</tr>
<tr>
<td>IARC</td>
<td>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.</td>
</tr>
<tr>
<td>ACGIH</td>
<td>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.</td>
</tr>
<tr>
<td>NTP</td>
<td>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.</td>
</tr>
<tr>
<td>OSHA</td>
<td>No data available</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific target organ toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Single exposure</td>
<td>No data available</td>
</tr>
<tr>
<td>Repeated exposure</td>
<td>No data available</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>No data available</td>
</tr>
<tr>
<td>Additional information</td>
<td>No data available</td>
</tr>
<tr>
<td>RTECS</td>
<td>No data available</td>
</tr>
<tr>
<td>Liver</td>
<td>Irregularities – Based on Human Evidence (Thimerosal)</td>
</tr>
</tbody>
</table>

**To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.**

### SECTION 12 – ECOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Category</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Persistence and degradability</td>
<td>No data available</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>No data available</td>
</tr>
<tr>
<td>Mobility in soil</td>
<td>No data available</td>
</tr>
<tr>
<td>Results of PBT and vPvB assessment</td>
<td>PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.</td>
</tr>
<tr>
<td>Other adverse effect</td>
<td>No data available</td>
</tr>
</tbody>
</table>
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

DOT (US) Not dangerous goods
IMDG Not dangerous goods
IATA Not dangerous goods

SECTION 15 – REGULATORY INFORMATION

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
No SARA Hazards

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right to Know Components
Water
L-Lysine, homopolymer, hydrobromide

New Jersey Right to Know Components
Water
L-Lysine, homopolymer, hydrobromide

California Prop. 65 Components
CAS No. 7732-18-5
CAS No. 25988-63-0
This product does not contain any chemicals known to State of California to cause cancer birth defects, or any other reproductive harm.
SECTION 16 – OTHER INFORMATION

HMIS Rating

- Health hazard: 0
- Chronic Health Hazard: 0
- Flammability: 0
- Physical Hazard: 0

NFPA Rating

- Health hazard: 0
- Fire Hazard: 0
- Reactivity Hazard: 0

Further information:
This information has been prepared by Advanced BioMatrix, Inc. 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. Advanced BioMatrix, Inc. and its Affiliates shall not be held liable for any damages resulting from handling or from contact with the above product. See [www.advancedbiomatrix.com](http://www.advancedbiomatrix.com) for additional terms and conditions of sale.

Preparation Information:
Advanced BioMatrix, Inc.
1-800-883-8220