



## SAFETY DATA SHEET

alamanda-polymers.com

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### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product name:** PLKC<sub>100</sub>-b-PEG<sub>1K</sub>-b-PLKC<sub>100</sub>  
**Supplier:** Alamanda Polymers, Inc.  
**Address:** 1031 Putman Drive, Suite A  
Huntsville, AL 35816 (USA)

**Emergency phone:** 1-877-257-6597

**Fax:** 1-256-489-4529

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

CAS#	Chemical name	Percent	EINECS/ELINCS
Unknown	Poly(L-lysine hydrochloride)-block-poly(ethylene glycol)-block-poly(L-lysine hydrochloride)	90-100	Unlisted

No ingredients are hazardous according to OSHA criteria.

No components need to be disclosed according to applicable regulations.

### 3. HAZARD IDENTIFICATION

**Classification of the substance or mixture:** Not a hazardous substance or mixture

**GHS Label elements, including precautionary statements:** Not a hazardous substance or mixture

**Hazards not otherwise classified (HNOC) or not covered by GHS:** None

### EMERGENCY OVERVIEW

#### Potential Health Effects

**Eye:** May cause pain and conjunctival irritation

**Skin:** May cause pain and swelling on prolonged contact

**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea

**Inhalation:** May cause irritation to mucous membranes and upper respiratory tract system

**Chronic effects:** Prolonged exposure may cause eye irritation. Exposure may affect cell growth rate and morphology.

**Carcinogenicity:** NPT

**IARC:** Not listed

**OSHA:** Not regulated

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#### 4. FIRST AID MEASURES

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**Eyes:** In case of eye contact, flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, seek medical attention.

**Skin:** In case of skin contact, wash skin with plenty of soap and water. Seek medical attention if irritation develops or persists.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

**Inhalation:** If inhalation occurs, remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if cough or other symptoms appear.

**Notes to physician:** Treat symptomatically and supportively.

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#### 5. FIRE-FIGHTING MEASURES

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**General information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

**Extinguishing media:** In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.

**Special hazards:** Nature of decomposition not known

**Flash point:** Not determined

**Autoignition temperature:** Not available

**Explosion limits, lower/upper:** Not available

**NFPA rating:** (estimated) Health: 0; Flammability: 1; Instability: 0

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#### 6. ACCIDENTAL RELEASE MEASURES

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**General information:** Avoid dust formation, breathing vapors, mist, or gas.

**Large spills:** Sweep up with a broom or shovel up, and then place in a chemical waste container. Clean spill area with soap and water.

**Small spills:** Sweep up with a broom, or collect by a vacuum cleaner. Clean spill area with soap and water.

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## 7. HANDLING AND STORAGE

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**Handling:** Provide for appropriate ventilation in places where dust is formed, and wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Keep product container tightly closed.

**Storage:** Store under argon, protect from light, and keep below -15°C.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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**Components:** Contains no substances with occupational exposure limit values

**Engineering controls:** General industrial hygiene

### PERSONAL PROTECTION

**Respiratory protection:** Respiratory protection is not required. If protection from nuisance levels of dust is required, use type N95 (US) or P1 (EN 143) dust masks. If desired, use NIOSH (US)/CEN (EU) approved respirator.

**Skin protection:** Handle with gloves that are inspected prior to use. Use proper glove removal techniques to avoid contact with skin. Dispose of gloves in accordance with applicable laws and good laboratory practices.

**Eye protection:** Use glasses/goggles for eye protection tested and approved under appropriate government standards.

**Additional clothing and/or equipment:** Safety shower and eye bath

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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**Appearance and physical state:** White or faint-yellow solid or powder

**Odor** (threshold): Slight

**Specific gravity** (H<sub>2</sub>O=1): Not determined

**Vapor pressure** (mm Hg): Not determined

**Vapor density** (air=1): Not determined

**Percent volatile by volume:** Not determined

**Evaporation rate** (butyl acetate=1): Not determined

**Boiling point:** Not determined

**Freezing point / melting point:** Not determined

**pH:** Not determined

**Solubility in water:** Not determined

**Relative density:** Not determined

**Partition coefficient (n-octanol/water):** Not determined

**Auto-ignition temperature:** Not determined

**Decomposition temperature:** Not determined

**Viscosity:** Not determined

**Explosive properties:** Not determined

**Oxidizing properties:** Not determined

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## 10. STABILITY AND REACTIVITY

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**Reactivity:** Not determined

**Stability:** Stable under recommended storage conditions

**Conditions to avoid:** Strong oxidizing agents, open flames, high temperature, moisture, and light

**Incompatibility:** Strong oxidizing agents and strong acids

**Hazardous decomposition products:** Not determined

**Hazardous polymerization:** Will not occur

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## 11. TOXICOLOGICAL INFORMATION

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**Acute toxicity:** Not determined

**Oral effects:** Not determined

**Dermal effects:** Not determined

**Inhalation/respiratory effects:** Not determined

**Ocular effects:** Not determined

**Germ cell mutagenicity:** Not determined

**Carcinogenicity:** (See below)

**IARC** -- No components of this product present at levels greater than or equal to 0.1% are identified as probable, possible, or confirmed human carcinogen by IARC.

**ACGIH** -- No components of this product present at levels greater than or equal to 0.1% are identified as a carcinogen or potential carcinogen by ACGIH.

**NTP** -- No components of this product present at levels greater than or equal to 0.1% are identified as a known or anticipated carcinogen by NTP.

**OSHA** -- No components of this product present at levels greater than or equal to 0.1% are identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive effects:** Not determined

**Specific target organ effects (single exposure):** Not determined

**Specific target organ effects (repeated exposure):** Not determined

**Aspiration Hazard:** Not determined

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## 12. ECOLOGICAL INFORMATION

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No data are available on the toxicity, persistence and degradability, bioaccumulation potential, mobility in soil, or assessment of PBT/vPvB of this material.

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## 13. DISPOSAL CONSIDERATIONS

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**Waste disposal method:** Waste must be disposed of in accordance with federal, state, and local environmental control regulations. Offer surplus and non-recyclable solutions to a licensed disposal company.

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## 14. TRANSPORT INFORMATION

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**DOT (US):** Not a dangerous good

**IMDG:** Not a dangerous good

**IATA:** Not a dangerous good

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## 15. REGULATORY INFORMATION

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**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 & New Jersey Right to Know Components:** Poly(L-lysine hydrochloride)-block-poly(ethylene glycol)-block-poly(L-lysine hydrochloride), CAS#Unknown

**California Prop. 65 Components:** This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

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## 16. OTHER INFORMATION

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### HMIS Rating

Health hazard: 0

Chronic health hazard: Not determined

Flammability: 0

Physical hazard: 0

### NFPA Rating

Health hazard: 0

Fire hazard: 0

Reactivity hazard: 0

**Disclaimer:** Alamanda Polymers, Inc. makes no warranty of any kind regarding the information furnished herein. Users should independently determine the suitability and completeness of information from all sources. While this data is presented in good faith and believed to be accurate, it should be considered only as a supplement to other information gathered by the User. It is the User's responsibility to assure the proper use and disposal of these materials as well as the safety and health of all personnel who may work with or otherwise come in contact with these materials.

**NON-HAZARDOUS MATERIAL; APPROVED FOR AIR TRANSPORT**