

MATERIAL SAFETY DATA SHEET

Heparin

SECTION I – NAME AND PRODUCT

Manufactured for: Separation Technology, Inc. 1096 Rainer Dr. Altamonte Springs, FL 32714 (407) 788-8791/(407) 788-3677 (Fax)	Chemical Name: Heparin Therapeutic Category: Anticoagulant Catalog #: 270-100, 270-106, 270-107, 270-108, 270-109
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SECTION II – HAZARDOUS INGREDIENTS

OSHA Hazard Communication Rule,
29 CFR 1910.1200: None found.

SECTION III – PHYSICAL AND CHEMICAL COMPOSITION

Chemical Name:	Heparin Ammonium, Calcium, Lithium, Sodium, Zinc and Low Molecular weight (Heparinate).
Chemical Family:	Glycosaminoglycans/Sulfomucopolysaccharides.
CAS RN:	9041-08-1 (Na); 60800-63-7 (NH ₄); 9045-22-1 (Li); 37270-89-8 (Calcium).
Appearance and Odor:	White powder, practically odorless
Solubility In Water:	25 g/100mL minimum
Percent Volatile by Volume (%):	None

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

Extinguisher Media: Water spray, dry chemical, carbon dioxide or foam as appropriate for surrounding fire and materials. As with all fires, evacuate personnel to safe areas. Self-contained breathing equipment and protective clothing recommended for firefighters.

SECTION V – HEALTH HAZARD DATA

Threshold Limit Value:	None established.	
Effects of Overexposure:		
TDLo...7 mg/kg/4D subcutaneous-man;		LD ₅₀ ...354 mg/kg oral-rat
TDLo...1400 units/kg/1W-1 subcutaneous-woman;		LD ₅₀ ...2800 mg/kg intravenous-mouse
TDLo...700 units/kg/13D-1 intravenous-woman;		LD ₅₀ ...1000 mg/kg intravenous dog;
Emergency and First Aid Procedures:	Can cause irritation. Upon eye or skin contact, remove to fresh air and flush with copious amounts of water. Obtain medical attention. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.	

Precautions to consider: Those developing hypersensitivity (anaphylactic) reactions must receive immediate medical attention. Avoid contact with eyes, skin or clothing. Avoid breathing dust.

Carcinogen or potential carcinogen: Not listed (National Toxicology Program/IARC and OSHA).

SECTION VI – REACTIVITY DATA

Stability: Stable.

Hazardous Depolymerization: Will not occur.

Hazardous Decomposition Products: Emits toxic fumes when heated to decomposition.

Incompatibility: None.

SECTION VII – SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled: Sweep up material for recovery. Handle with care to ensure product integrity.

Waste Disposal Method: Sweep up for recovery.

SECTION VIII – CONTROL MEASURES

Respiratory Protection: NIOSH approved dust respirator.

Ventilation: Local ventilation recommended.

Protective Gloves: Required to avoid product contamination.

Other Protective Equipment: Safety goggles and lab apparel.

SECTION IX – SPECIAL PRECAUTIONS

Precautions in Handling and Storage: Store in tightly sealed containers. Protect from heat, low pH and moisture.

Other Precautions: Follow GMP and GLP when handling material.

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