



# Material Safety Data Sheet

12601 Twinbrook Parkway,  
Rockville, MD 20852 USA

Phone Calls: 301-816-8129  
8 a.m. to 5 p.m. EST Mon. - Fri.

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## HEPARIN SODIUM

Catalog Number: 1304005

Revision Date:

April 11, 2008

### SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

**Common Name:** Heparin Sodium

**Manufacturer:** U. S. Pharmacopeia

**Responsible Party:** Reference Standards Technical Services

**Mailing Address:** 12601 Twinbrook Parkway, Rockville, MD 20852 USA

**Phone:** 301-816-8129

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**Product Use:** USP Reference Standards and Authentic Substances are used for chemical tests and assays in analytical, clinical, pharmaceutical, and research laboratories.

### SECTION 2 - HAZARD INFORMATION

**Adverse Effects:** Following injection, adverse effects may include nausea or vomiting; constipation; unusual bleeding or bruising; troubled breathing; unusual tiredness or weakness; body aches or pain; joint or muscle pain; chills; fever; sore throat; sores, ulcers, or white spots on lips or mouth; swollen glands; blurred vision; tearing of eyes; dizziness; severe or continuing dull nervousness; headache; pounding in ears; confusion; hallucinations or distorted perception; fainting or lightheadedness; sweating; tingling of hands or feet; difficulty swallowing; paralysis; skin rash, hives, or itching; low blood pressure; irregular heartbeat; change in facial skin color; painful or difficult urination; frequent urge to urinate; frequent or persistent erection; and trouble sleeping. Possible allergic reaction to material if inhaled, ingested, or in contact with skin.

**Overdose Effects:** Following injection, overdose effects may include bleeding complications or hemorrhage.

**Acute:** Eye, skin, gastrointestinal, and/or respiratory tract irritation.

**Chronic:** Possible hypersensitization, hair loss, and osteoporosis.

**Medical Conditions Aggravated by Exposure:** Hypersensitivity to material; bleeding or blood disorders; gastrointestinal ulcers, lesions, or bleeding; severe trauma; severe, uncontrolled hypertension; dalteparin- or heparin-induced thrombocytopenia; bacterial endocarditis; stroke; severely impaired kidney or liver function; retinopathy; and recent brain, eye, or spine surgery.

**Cross Sensitivity:** Persons with a history of allergies, especially to swine, beef, or other animal proteins may be allergic to this material also.

**Target Organs:** Blood

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For additional information on toxicity, see Section 11.

## SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

**Common Name:** Heparin Sodium

**Formula:** n/f

**Synonym:** Sodium heparinate

**Chemical Name:** Heparin, sodium salt

**CAS:** 9041-08-1

**RTECS Number:** MIO850000

**Chemical Family:** Mucopolysaccharide

**Therapeutic Category:** Anticoagulant

**Composition:** Heparin Sodium: Approximately 0.2%  
0.15 M Sodium Chloride Aqueous Solution: >99%

## SECTION 4 - FIRST AID MEASURES

**Inhalation:** May cause irritation. Avoid inhalation. Remove to fresh air.

**Eye:** May cause irritation. Flush with copious quantities of water.

**Skin:** May cause irritation and tissue damage. Avoid contact. Flush with copious quantities of soap and water.

**Ingestion:** May cause irritation. Flush out mouth with water. This material is not absorbed from the gastrointestinal tract.

**General First Aid Procedures:** Remove from exposure. Remove contaminated clothing. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention. If person is not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention.

### Note to Physicians

**Overdose Treatment:** For current information about the treatment of overdose, consult a certified Regional Poison Control Center by calling the number listed in your local telephone directory.

## SECTION 5 - FIREFIGHTING MEASURES

**Extinguisher Media:** Water spray, dry chemical, carbon dioxide, or foam as appropriate for surrounding fire and materials.

**Fire and Explosion Hazards:** This material is assumed to be combustible.

**Firefighting Procedures:** As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**Spill Response:** Wear approved respiratory protection, chemically compatible gloves, and protective clothing. Wipe up spillage or collect spillage using a high-efficiency vacuum cleaner. Avoid breathing vapor. Place spillage in appropriately labeled container for disposal. Wash spill site.

## SECTION 7 - HANDLING AND STORAGE

**Handling:** As a general rule, when handling USP Reference Standards, avoid all contact and inhalation of dust, mists, and/or vapors associated with the material. Wash thoroughly after handling.

**Storage:** Store in tight container as defined in the USP-NF. This material should be handled and stored per label instructions to ensure product integrity. Store in a cool place and do not freeze.

## SECTION 8 - EXPOSURE CONTROL / PERSONAL PROTECTION

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**Engineering Controls:** Engineering controls such as exhaust ventilation are recommended.

**Respiratory Protection:** Use a NIOSH-approved respirator, if it is determined to be necessary by an industrial hygiene survey involving air monitoring. In the event that a respirator is not required, an approved dust mask should be used.

**Gloves:** Chemically compatible

**Eye Protection:** Safety glasses or goggles

**Protective Clothing:** Protect exposed skin.

**Exposure Limits:** n/f

<b>SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES</b>
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Properties as indicated on the MSDS are general and not necessarily specific to the USP Reference Standard Lot provided.

**Appearance and Odor:** Liquid; almost odorless.

**Odor Threshold:** n/f

**pH:** n/f

**Melting Range:** n/f

**Boiling Point:** n/f

**Flash Point:** n/f

**Autoignition Temperature:** n/f

**Evaporation Rate:** n/f

**Upper Flammability Limit:** n/f

**Lower Flammability Limit:** n/f

**Vapor Pressure:** n/f

**Vapor Density:** n/f

**Specific Gravity:** n/f

**Solubility in Water:** n/f

**Fat Solubility:** n/f

**Other Solubility:** n/f

**Partition Coefficient: n-octanol/water:** n/f

**Percent Volatile:** n/f

**Reactivity in Water:** n/f

**Explosive Properties:** n/f

**Oxidizing Properties:** n/f

**Formula:** n/f

**Molecular Weight:** n/f

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## SECTION 10 - STABILITY AND REACTIVITY

**Conditions to Avoid:** Avoid exposure to moisture and heat and extreme temperatures.

**Incompatibilities:** Oxidizing agents.

**Decomposition Products:** When heated to decomposition, material emits toxic fumes of NO<sub>x</sub> and Na<sub>2</sub>O. Emits toxic fumes under fire conditions.

**Stable?** Yes      **Hazardous Polymerization?** No

## SECTION 11 - TOXICOLOGICAL PROPERTIES

**Oral Rat:** LD50: >779000 international units/kg

**Oral Mouse:** LD50: >5000 mg/kg

**Other Toxicity Data:** n/f

**Irritancy Data:** n/f

**Corrosivity:** n/f

**Sensitization Data:** n/f

**Listed as a Carcinogen by:**      **NTP:** No      **IARC:** No      **OSHA:** No

**Other Carcinogenicity Data:** No

**Mutagenicity Data:** n/f

**Reproductive and Developmental Effects:** Although heparin has not been reported to cause birth defects, it has been reported to increase the risk of miscarriage, stillbirth, or prematurity. However, the underlying condition, rather than heparin itself, may have been responsible. In addition, caution is recommended when heparin is used therapeutically during the last trimester of pregnancy or during the postpartum period because of the increased risk of maternal bleeding.

## SECTION 12 - ECOLOGICAL INFORMATION

**Ecological Information:** n/f

## SECTION 13 - DISPOSAL CONSIDERATIONS

**Disposal:** Dispose of waste in accordance with all applicable Federal, State, and local laws.

## SECTION 14 - TRANSPORT INFORMATION

**Shipping Name:** n/f

**Class:** n/f

**UN Number:** n/f

**Packing Group:** n/f

**Additional Transport Information:** n/f

## SECTION 15 - REGULATORY INFORMATION

**U.S. Regulatory Information:** n/f

**International Regulatory Information:** n/f

## SECTION 16 - OTHER INFORMATION

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