Material Safety Data Sheet

Section 1 - Product and Company Information

Product Name: Renhardt's Solution Lyophilized Powder
Product Number: D9905
Brand: Sigma Chemical
Company: Sigma-Aldrich
Street Address: 3550 Spruce Street
City, State, Zip: SAINT LOUIS, MO 63103 US
Technical Phone: 314 771 6765
Fax: 800 325 5052
Emergency Phone: 414 273 3850 Ext. 5996

Section 2 - Composition/Information on Ingredient

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>CAS #</th>
<th>SARA 313</th>
<th>EC no</th>
<th>Annex I Index Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENHARDT'S SOLUTION LYOPHILIZED POWDER</td>
<td>None</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ingredient Name</td>
<td>CAS #</td>
<td>Percent</td>
<td>SARA 313</td>
<td></td>
</tr>
<tr>
<td>SERUM ALBUMIN</td>
<td>9048-46-8</td>
<td>33.300 %</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>FICOLL</td>
<td>26673-86-8</td>
<td>33.300 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POLYVINYL POLYPYRIDINE</td>
<td>5003-29-8</td>
<td>33.300 %</td>
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</tr>
</tbody>
</table>

Section 3 - Hazards Identification

Emergency Overview
Caution: Avoid contact and inhalation.

HAZARD RATING
Health: 0 Flammability: 0 Reactivity: 0

NFPA RATING
Health: 0 Flammability: 0 Reactivity: 0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

Section 5 - Fire Fighting Measures

Autoignition Temp: N/A

Extinguishing Media
Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting
Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Methods for Cleaning Up
Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling
Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

Storage
Suitable: Keep tightly closed.

Section 8 - Exposure Controls / PPE

Engineering Controls
Safety shower and eye bath. Mechanical exhaust required.

Personal Protective Equipment
Respiratory: Wear dust mask
Hand: Protective gloves.
Eye: Chemical safety goggles.
Section 9 - Physical/Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Solid</td>
</tr>
<tr>
<td>Physical State</td>
<td></td>
</tr>
<tr>
<td>Form</td>
<td>Powder</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>N/A</td>
</tr>
<tr>
<td>pH</td>
<td>N/A</td>
</tr>
<tr>
<td>BP/IP Range</td>
<td>N/A</td>
</tr>
<tr>
<td>MP/IP Range</td>
<td>N/A</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor Pressure</td>
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<tr>
<td>Vapor Density</td>
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<tr>
<td>Saturated Vapor Conc.</td>
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<tr>
<td>SG/Density</td>
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<tr>
<td>Bulk Density</td>
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<tr>
<td>Odor Threshold</td>
<td>N/A</td>
</tr>
<tr>
<td>Volatility</td>
<td>N/A</td>
</tr>
<tr>
<td>VOC Content</td>
<td>N/A</td>
</tr>
<tr>
<td>Water Content</td>
<td>N/A</td>
</tr>
<tr>
<td>Solvent Content</td>
<td>N/A</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>N/A</td>
</tr>
<tr>
<td>Viscosity</td>
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</tr>
<tr>
<td>Partition Coefficient</td>
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</tr>
<tr>
<td>Decomposition Temp.</td>
<td>N/A</td>
</tr>
<tr>
<td>Flash Point 'F'</td>
<td>N/A</td>
</tr>
<tr>
<td>Flash Point 'C'</td>
<td>N/A</td>
</tr>
<tr>
<td>Explosion Limits</td>
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<tr>
<td>Flammability</td>
<td>N/A</td>
</tr>
<tr>
<td>Autoignition Temp.</td>
<td>N/A</td>
</tr>
<tr>
<td>Solubility</td>
<td>N/A</td>
</tr>
</tbody>
</table>

N/A = not available

Section 10 - Stability and Reactivity

Stability
- Stable

Materials to Avoid
- Strong oxidizing agents

Hazardous Decomposition Products
- Carbon monoxide
- Carbon dioxide

Section 11 - Toxicological Information

Route of Exposure
- Skin Contact: May cause skin irritation.
- Skin Absorption: May be harmful if absorbed through the skin.
- Eye Contact: May cause eye irritation.
- Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
- Ingestion: May be harmful if swallowed.

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

RTECS Number: N/A

Section 12 - Ecological Information
No data available.

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation
Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
- Proper Shipping Name: None
- Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

ATA
- Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

US Classification and Label Text
- US Statements: Caution: Avoid contact and inhalation.

United States Regulatory Information
- SARA Listed: No

Canada Regulatory Information
- WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPSC, and the MSDS contains all the information required by the CPSC.
- DSL: No
- NDSL: No
Section 16 - Other Information

Disclaimer
For R&D use only. Not for drug, household or other uses.

Warranty
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. Sigma-Aldrich 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. Copyright 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.