Section 1. Chemical Product and Company Identification

<table>
<thead>
<tr>
<th>Common Name/Trade Name</th>
<th>D-Glucosamine sulfate (Stabilized with Potassium Chloride)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248</td>
</tr>
<tr>
<td>Commercial Name(s)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Synonym</td>
<td>2-Amino-2-deoxy-D-Glucan-Sulfate Potassium Salt</td>
</tr>
<tr>
<td>Chemical Name</td>
<td>D-Glucose, 2-amino-2-deoxy-, sulfate Potassium salt</td>
</tr>
<tr>
<td>Chemical Family</td>
<td>Not available.</td>
</tr>
<tr>
<td>Chemical Formula</td>
<td>C12-H26-N2-O10.H2SO4.2KCl</td>
</tr>
<tr>
<td>Supplier</td>
<td>SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248</td>
</tr>
</tbody>
</table>

Section 2. Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>TWA (mg/m³)</th>
<th>STEL (mg/m³)</th>
<th>CEIL (mg/m³)</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) (D-)Glucosamine sulfate (Stabilized with Potassium Chloride)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

Toxicological Data on Ingredients

Not applicable.

Section 3. Hazards Identification

Potential Acute Health Effects

Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects

CARCINOGENIC EFFECTS: Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
Repeated or prolonged exposure is not known to aggravate medical condition.
### Section 4. First Aid Measures

**Eye Contact**  
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

**Skin Contact**  
Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

**Serious Skin Contact**  
Not available.

**Inhalation**  
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Serious Inhalation**  
Not available.

**Ingestion**  
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

**Serious Ingestion**  
Not available.

### Section 5. Fire and Explosion Data

<table>
<thead>
<tr>
<th>Flammability of the Product</th>
<th>May be combustible at high temperature.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto-Ignition Temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash Points</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammable Limits</td>
<td>Not available.</td>
</tr>
<tr>
<td>Products of Combustion</td>
<td>These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2...), sulfur oxides (SO2, SO3...). Some metallic oxides.</td>
</tr>
<tr>
<td>Fire Hazards in Presence of Various Substances</td>
<td>Slightly flammable to flammable in presence of heat.</td>
</tr>
<tr>
<td>Fire Fighting Media and Instructions</td>
<td>SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.</td>
</tr>
<tr>
<td>Special Remarks on Fire Hazards</td>
<td>As with most organic solids, fire is possible at elevated temperatures. Material in powder form, capable of creating a dust explosion.</td>
</tr>
<tr>
<td>Special Remarks on Explosion Hazards</td>
<td>Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.</td>
</tr>
</tbody>
</table>

### Section 6. Accidental Release Measures

**Small Spill**  
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill**  
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.
Section 7. Handling and Storage

Precautions
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not breathe dust.

Storage
Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

Engineering Controls
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection
Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits
Not available.

Section 9. Physical and Chemical Properties

Physical state and appearance Solid. (Solid crystalline powder.)
Molecular Weight 605.52 g/mole
pH (1% soln/water) Not available.
Boiling Point Not available.
Melting Point Not available.
Critical Temperature Not available.
Specific Gravity Not available.
Vapor Pressure Not applicable.
Vapor Density Not available.
Volatile Not available.
Odor Threshold Not available.
Water/Oil Dist. Coeff. Not available.
Ionicity (in Water) Not available.
Dispersion Properties Not available.
Solubility Not available.

Section 10. Stability and Reactivity Data

Stability The product is stable.
Instability Temperature Not available.
Conditions of Instability Excess heat, dust generation
Incompatibility with various substances Not available.
Corrosivity Non-corrosive in presence of glass.

Special Remarks on Reactivity Not available.

continued on next page
# Section 11. Toxicological Information

## Routes of Entry
- Inhalation. Ingestion.

## Toxicity to Animals
- LD50: Not available.
- LC50: Not available.

## Chronic Effects on Humans
Not available.

## Other Toxic Effects on Humans
Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

## Special Remarks on Toxicity to Animals
Not available.

## Special Remarks on Chronic Effects on Humans
Not available.

## Special Remarks on other Toxic Effects on Humans
Acute Potential Health Effects:
- Skin: May cause skin irritation.
- Eyes: May cause eye irritation.
- Inhalation: Dust may cause respiratory tract irritation.
- Ingestion: Low hazard. May cause nausea, dyspepsia, vomiting, abdominal or epigastric pain, dyspepsia, constipation, diarrhea, heartburn, anorexia. May affect behavior/central nervous system (drowsiness, headache, insomnia). May also cause myalgia with painful, heavy legs and edema.

# Section 12. Ecological Information

## Ecotoxicity
Not available.

## BOD5 and COD
Not available.

## Products of Biodegradation
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

## Toxicity of the Products of Biodegradation
The product itself and its products of degradation are not toxic.

## Special Remarks on the Products of Biodegradation
Not available.

# Section 13. Disposal Considerations

## Waste Disposal
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

# Section 14. Transport Information

## DOT Classification
Not a DOT controlled material (United States).

## Identification
Not applicable.

## Special Provisions for Transport
Not applicable.

## DOT (Pictograms)

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Continued on Next Page
Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations
No products were found.

California Proposition 65
Warnings
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.
California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

Other Regulations
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications
<table>
<thead>
<tr>
<th>WHMIS (Canada)</th>
<th>Not controlled under WHMIS (Canada).</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSCL (EEC)</td>
<td>This product is not classified according to the EU regulations.</td>
</tr>
</tbody>
</table>

HMIS (U.S.A.)

<table>
<thead>
<tr>
<th>Health Hazard</th>
<th>Fire Hazard</th>
<th>Reactivity</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>0</td>
<td>E</td>
</tr>
</tbody>
</table>

National Fire Protection Association (U.S.A.)

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
<th>Specific hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

WHMIS (Canada) (Pictograms)

DSCL (Europe) (Pictograms)

TDG (Canada) (Pictograms)

ADR (Europe) (Pictograms)

Protective Equipment
- Gloves.
- Lab coat.
- Dust respirator. Be sure to use an approved/certified respirator or equivalent.
- Safety glasses.

Continued on Next Page
**Section 16. Other Information**

<table>
<thead>
<tr>
<th>MSDS Code</th>
<th>G3121</th>
</tr>
</thead>
<tbody>
<tr>
<td>References</td>
<td>Not available.</td>
</tr>
<tr>
<td>Other Special Considerations</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Verified by Sonia Owen.  

**Notice to Reader**

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user’s responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.

CALL (310) 516-8000

**Verified by** Sonia Owen.