SAFETY DATA SHEET

VITAMIN B12 INJECTION 1000 mcg/mL

Section 1: Identification of the Substance and Supplier

Product Name
Vitamin B12 Injection 1000 mcg/mL

Recommended Use
For use as a supplemental nutritive source of Vitamin B12 in cattle, horses, sheep, swine, dogs and cats.

Company Details
Sparhawk Laboratories Inc. 12340 Santa Fe Trail Dr. Lenexa, Ks. 66215

Emergency Telephone
800-424-9300

Date of Preparations
11/09/15

Section 2: Hazards Identification

Hazard Classification
None

Priority Identifiers
Warning

Secondary Identifiers
Acute overexposure may cause irritation to eyes and skin. Ingestion of large amounts may cause nausea or vomiting. Product is essentially non-toxic nutritive substance.

Risk & Safety Phrases
None Applicable.

Section 3: Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium Sulfate</td>
<td>7783-20-2</td>
<td>1mg</td>
</tr>
<tr>
<td>Benzyl Alcohol</td>
<td>100-51-6</td>
<td>10mg</td>
</tr>
<tr>
<td>Citric Acid</td>
<td>77-92-9</td>
<td>119mcg</td>
</tr>
<tr>
<td>Cyanocobalamin</td>
<td>68-19-9</td>
<td>1000mcg</td>
</tr>
<tr>
<td>Sodium Chloride</td>
<td>7647-14-5</td>
<td>2.2mg</td>
</tr>
<tr>
<td>Sodium Citrate</td>
<td>6132-04-3</td>
<td>72mcg</td>
</tr>
<tr>
<td>Water for Injection</td>
<td>7732-18-5</td>
<td>QS</td>
</tr>
</tbody>
</table>

Section 4: First Aid Measures

Necessary First Aid Measures
Eyes: Flush with large amounts of water and seek medical attention
Skin: Thoroughly wash area with soap and water
Inhalation: Provide fresh air and if necessary give oxygen
Ingestion: Give several glasses of water to dilute and seek medical attention.

Section 5: Fire Fighting Measures

Type of Hazard
Not classified as flammable.

Fire Hazard Properties
None Applicable.

Regulatory Requirements
None Applicable

Extinguishing Media and Methods
Use water spray to cool fire exposed containers.

Hazchem Code
None Allocated.

Recommended Protective Clothing
Self-contained breathing apparatus and protective clothing.

Section 6: Accidental Release Measures

Emergency Procedures
Protective clothing required. Absorb spill on inert material and place in appropriate waste container for disposal. Flush area with detergent and water. Follow Federal, State and local disposal requirements.
SAFETY DATA SHEET

Section 7: Handling and Storage

Precautions for Safe Handling
Avoid contact with skin, eyes and mucosa. Keep containers adequately sealed during material transfer, transport or when not in use.

Regulatory Requirements
None Required.

Handling Practices
Avoid contact with skin, eyes and mucosa. Keep containers adequately sealed when not in use.

Approved Handlers
Not Required.

Conditions for Safe Storage
Store at controlled room temperature between 15°C and 30°C (59°F – 86°F). Avoid exposure to light.

Store Site Requirements
Avoid exposure to light.

Section 8: Exposure control/Personal Protection

Workplace Exposure Standards
None Applicable.

Application in the workplace
None Applicable.

Exposure standards outside the workplace
None Applicable.

Personal protection
Self-contained breathing apparatus, rubber gloves and goggles.

Section 9: Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Red liquid solution.</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>103°C</td>
</tr>
<tr>
<td>Melting/Softening point</td>
<td>None Applicable</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.045</td>
</tr>
<tr>
<td>Solubility (H₂O)</td>
<td>Complete</td>
</tr>
<tr>
<td>Percent Volatiles</td>
<td>None Applicable</td>
</tr>
<tr>
<td>Evaporation Rates</td>
<td>None Applicable</td>
</tr>
</tbody>
</table>

Section 10: Stability and Reactivity

Stability of the Substance
Stable

Conditions to Avoid
None

Material to Avoid
Strong bases, strong acids and oxidizing agents.

Hazardous Decomposition Products
May yield carbon monoxide and carbon dioxide fumes.

Section 11: Toxicological Information

Acute effects for individual ingredients only
Acute overexposure may cause irritation to eyes and skin. Large amounts ingested may cause nausea or vomiting.

Section 12: Environmental Information

Effects for individual ingredients only
None Applicable
### Section 13: Disposal Considerations

**Disposal Information**
Absorb spill on inert material and place in appropriate waste container for disposal. Flush area with detergent and water. Follow Federal, State and local disposal requirements.

**Reference**
None Applicable

### Section 14: Transport Information

**Relevant Information**
Not classified as a dangerous good for transport.

### Section 15: Regulatory Information

**Regulatory Status**
None Applicable

### Section 16: Other Information

**Additional Information**
Federal law restricts this drug to use by or on the order of a licensed Veterinarian. Keep out of reach of children. For animal use only