Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

<table>
<thead>
<tr>
<th>Common Name/ Trade Name</th>
<th>Beryllium AA Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>SPECTRUM QUALITY 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>Not available.</td>
</tr>
<tr>
<td>Chemical Name</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Chemical Family</td>
<td>Metal. Element. (Inert material.)</td>
</tr>
<tr>
<td>Chemical Formula</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Supplier</td>
<td>SPECTRUM QUALITY 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) Beryllium</td>
<td>7440-41-7</td>
<td>0.002</td>
<td>0.02</td>
<td>0.1</td>
<td>98.5</td>
</tr>
<tr>
<td>2) Water</td>
<td>7732-18-5</td>
<td>5</td>
<td>4</td>
<td>1.4</td>
<td></td>
</tr>
<tr>
<td>3) Nitric acid, fuming</td>
<td>7697-37-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Toxicological Data on Ingredients

- Beryllium
  - LD50: Not available.
  - LC50: Not available.
- Nitric acid, fuming
  - LD50: Not available.
  - LC50: Not available.
### Section 3. Hazards Identification

| Potential Acute Health Effects | Hazardous in case of skin contact (corrosive, irritant, permeator), of eye contact (irritant), of ingestion, of inhalation. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation. Severe over-exposure can result in death. |
| Potential Chronic Health Effects | Hazardous in case of skin contact (corrosive, irritant, permeator), of eye contact (irritant), of ingestion, of inhalation. Non-sensitizer for skin. **CARCINOGENIC EFFECTS**: Classified A2 (Suspected for human.) by ACGIH, 2 (Some evidence.) by NTP [Beryllium]. **MUTAGENIC EFFECTS**: Not available. **TERATOGENIC EFFECTS**: Not available. **DEVELOPMENTAL TOXICITY**: Not available. The substance is toxic to lungs, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs. |

### 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. Cold water may be used. Get medical attention. |
| Skin Contact | In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention. |
| Serious Skin Contact | Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention. |
| Inhalation | If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately. |
| Serious Inhalation | Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention. |
| 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

| Flammability of the Product | Non-flammable. |
| Auto-Ignition Temperature | Not applicable. |
| Flash Points | Not applicable. |
| Flammable Limits | Not applicable. |
| Products of Combustion | Not available. |
| Fire Hazards in Presence of Various Substances | Not applicable. |
Section 6. Accidental Release Measures

**Small Spill**
Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute solution of sodium carbonate.

**Large Spill**
Corrosive liquid. Oxidizing material. Poisonous liquid. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Use water spray curtain to divert vapor drift. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of sodium carbonate. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7. Handling and Storage

**Precautions**
Keep locked up. Keep container dry. Keep away from heat. Keep away from sources of ignition. Keep away from combustible material. Do not ingest. Do not breathe gas/fumes/vapor/spray. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

**Storage**

Section 8. Exposure Controls/Personal Protection

**Engineering Controls**
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

**Personal Protection**

**Personal Protection in Case of a Large Spill**
Splash goggles. Full suit. Vapor 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**
Beryllium
- TWA: 0.002 CEIL: 0.02
- Nitric acid, fuming
  - TWA: 2 CEIL: 4
  - TWA: 5 CEIL: 10

Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

**Physical state and appearance**
Liquid.

**Molecular Weight**
Not applicable.

**pH (1% soln/water)**
Acidic.

**Boiling Point**
The lowest known value is 82.6 (180.7°F) (Nitric acid, fuming). Weighted average: 99.76°C (211.6°F)

**Melting Point**
May start to solidify at -41.6°C (-42.9°F) based on data for: Nitric acid, fuming.

**Critical Temperature**
Not available.

**Specific Gravity**
Weighted average: 1 (Water = 1)

**Vapor Pressure**
The highest known value is 6 kPa (@ 20°C) (Nitric acid, fuming). Weighted average: 2.35 kPa (@ 20°C)

Continued on Next Page
Beryllium AA Standard

Vapor Density The highest known value is 0.62 (Air = 1) (Water).
Volatile Not available.
Odor Threshold The highest known value is 0.29 ppm (Nitric acid, fuming)
Water/Oil Dist. Coeff. Not available.
Ionicity (in Water) Not available.
Dispersion Properties See solubility in water.
Solubility Easily soluble in cold water.

Section 10. Stability and Reactivity Data

Stability The product is stable.
Instability Temperature Not available.
Conditions of Instability Not available.
Incompatibility with various substances Slightly reactive to reactive with reducing agents, combustible materials, organic materials, metals, acids, alkalis.
Corrosivity Non-corrosive in presence of glass.

Special Remarks on Reactivity Not available.
Special Remarks on Corrosivity Not available.
Polymerization Will not occur.

Section 11. Toxicological Information

Routes of Entry Dermal contact. Eye contact. Inhalation. Ingestion.
Toxicity to Animals LD50: Not available.
LC50: Not available.
Chronic Effects on Humans CARCINOGENIC EFFECTS: Classified A2 (Suspected for human.) by ACGIH, 2 (Some evidence.) by NTP [Beryllium].
Other Toxic Effects on Humans Hazardous in case of skin contact (irritant, permeator), 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 Not available.

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 products of degradation are more toxic.

Continued on Next Page
Section 13. Disposal Considerations

Waste Disposal

Section 14. Transport Information

DOT Classification  
Class 8: Corrosive material

Identification  
: Corrosive liquid, n.o.s. (Nitric acid, Beryllium Acetate, solution)  (Nitric acid, fuming) UNNA: UN1760  PG: II

Special Provisions for Transport  
Marine Pollutant

DOT (Pictograms)

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations  
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Beryllium
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: Beryllium
Pennsylvania RTK: Beryllium; Nitric acid, 70%
Massachusetts RTK: Beryllium; Nitric acid, 70%; Water
SARA 302/304/311/312 extremely hazardous substances: Nitric acid, 70%
SARA 313 toxic chemical notification and release reporting: Beryllium 0.1%; Nitric acid, 70% 2%
CERCLA: Hazardous substances.: Beryllium; Nitric acid, 70%;

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: Beryllium

Other Regulations  

Other Classifications  
WHMIS (Canada)  
CLASS C: Oxidizing material.  
CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).  
CLASS D-2A: Material causing other toxic effects (VERY TOXIC).  
CLASS E: Corrosive liquid.

DSCL (EEC)  
R23- Toxic by inhalation.  
R36/38- Irritating to eyes and skin.  
R45- May cause cancer.

HMIS (U.S.A.)  
Health Hazard 2  
Fire Hazard 0  
Reactivity 0  
Personal Protection

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

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# Protective Equipment

- **Vapor respirator.** Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
- **Full suit.**
- **Face shield.**

## Section 16. Other Information

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<tr>
<th>MSDS Code</th>
<th>ABERY</th>
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<table>
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<table>
<thead>
<tr>
<th>Other Special Considerations</th>
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</thead>
</table>

Verified by Sonia Owen.  

**CALL (310) 516-8000**

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**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.