1 Identification

· **Product identifier**
  · **Trade name:** Beryllium 1000 µg/g in Mineral Oil
  · **Article number:** BEOMS

· Details of the supplier of the safety data sheet
  · **Manufacturer/Supplier:** High-Purity Standards
    7221 Investment Drive, North Charleston, SC 29418 United States
    Telephone: +1-843-767-7900
    Fax: +1-843-767-7906
    highpuritystandards.com
    Email: info@highpuritystandards.com

· **Information department:** Product safety department

· **Emergency telephone number:** INFOTRAC
  Emergency telephone numbers 1-800-535-5053
  Other emergency telephone numbers 1-352-323-3500

2 Hazard(s) identification

· **Classification of the substance or mixture**
  
  ![GHS08 Health hazard](image)
  
  **Carc. 1B H350** May cause cancer.
  **Asp. Tox. 1 H304** May be fatal if swallowed and enters airways.

  ![GHS07](image)
  
  **Skin Sens. 1 H317** May cause an allergic skin reaction.

· **Label elements**
  · **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
  · **Hazard pictograms**
    
    ![GHS07](image)  ![GHS08](image)

· **Signal word** Danger

· **Hazard-determining components of labeling:**
  White mineral oil, petroleum
  beryllium

(Contd. on page 2)
51. Hazard statements
- H317 May cause an allergic skin reaction.
- H350 May cause cancer.
- H304 May be fatal if swallowed and enters airways.

52. Precautionary statements
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Avoid breathing dust/fume/gas/mist/vapors/spray.
- Contaminated work clothing must not be allowed out of the workplace.
- Wear protective gloves/protective clothing/eye protection/face protection.
- If swallowed: Immediately call a poison center/doctor.
- Specific treatment (see on this label).
- Do NOT induce vomiting.
- If on skin: Wash with plenty of water.
- If exposed or concerned: Get medical advice/attention.
- If skin irritation or rash occurs: Get medical advice/attention.
- Wash contaminated clothing before reuse.
- Store locked up.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

53. Classification system:
- NFPA ratings (scale 0 - 4)
  - Health = 0
  - Fire = 1
  - Reactivity = 0
- HMIS-ratings (scale 0 - 4)
  - HEALTH Health = *0
  - FIRE Fire = 1
  - REACTIVITY Reactivity = 0

54. Other hazards
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

3. Composition/information on ingredients
- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.
- Dangerous components:
<table>
<thead>
<tr>
<th>Code</th>
<th>Substance</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>8042-47-5</td>
<td>White mineral oil, petroleum</td>
<td>99.9%</td>
</tr>
<tr>
<td>7440-41-7</td>
<td>beryllium</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

(Contd. on page 3)
4 First-aid measures

- Description of first aid measures
  - After inhalation:
    Supply fresh air and to be sure call for a doctor.
    In case of unconsciousness place patient stably in side position for transportation.
  - After skin contact: Immediately wash with water and soap and rinse thoroughly.
  - After eye contact: Rinse opened eye for several minutes under running water.
  - After swallowing: If symptoms persist consult doctor.

- Information for doctor:
  - Most important symptoms and effects, both acute and delayed: No further relevant information available.
  - Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
  - Suitable extinguishing agents: Use fire fighting measures that suit the environment.

- Special hazards arising from the substance or mixture: No further relevant information available.

- Advice for firefighters
  - Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures: Not required.
- Environmental precautions:
  Dilute with plenty of water.
  Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

- Protective Action Criteria for Chemicals

- PAC-1:
  7440-41-7 beryllium 0.0023 mg/m³

- PAC-2:
  7440-41-7 beryllium 0.025 mg/m³
7 Handling and storage

Handling:

- Precautions for safe handling
  Ensure good ventilation/exhaustion at the workplace.
  Open and handle receptacle with care.
  Prevent formation of aerosols.
- Information about protection against explosions and fires: Keep respiratory protective device available.
- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: Keep receptacle tightly sealed.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- Control parameters
- Components with limit values that require monitoring at the workplace:
  The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
  At this time, the remaining constituent has no known exposure limits.

### 7440-41-7 beryllium

<table>
<thead>
<tr>
<th>Limit Value</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL</td>
<td>Short-term value: 0.002 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Long-term value: 0.0002; 0.002* mg/m³</td>
</tr>
<tr>
<td></td>
<td>Ceiling limit value: 0.025**/** mg/m³, 0.005* ppm</td>
</tr>
<tr>
<td></td>
<td>as Be; *see 1910.1024; **30 min peak/8-hr shift</td>
</tr>
<tr>
<td>REL</td>
<td>Ceiling limit value: 0.0005 mg/m³</td>
</tr>
<tr>
<td></td>
<td>as Be; See Pocket Guide App. A</td>
</tr>
<tr>
<td>TLV</td>
<td>Long-term value: 0.00005 mg/m³</td>
</tr>
<tr>
<td></td>
<td>as Be; inhalable; RSEN; soluble comp.: Skin, DSEN</td>
</tr>
</tbody>
</table>

- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- Personal protective equipment:
- General protective and hygienic measures:
  Keep away from foodstuffs, beverages and feed.
  Immediately remove all soiled and contaminated clothing.
  Wash hands before breaks and at the end of work.
Store protective clothing separately.

- **Breathing equipment:**
  In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- **Protection of hands:**

  **Protective gloves**
  The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
  The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**
  The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**

  **Tightly sealed goggles**

---

**9 Physical and chemical properties**

- **Information on basic physical and chemical properties**
  - **General Information**
  - **Appearance:**
    - **Form:** Liquid
    - **Color:** colorless
  - **Odor:** Characteristic
  - **Odor threshold:** Not determined.
  - **pH-value:** Not determined.

- **Change in condition**
  - **Melting point/Melting range:** Undetermined.
  - **Boiling point/Boiling range:** Undetermined.

- **Flash point:** >112 °C (>233.6 °F)

- **Flammability (solid, gaseous):** Not applicable.
Safety Data Sheet
acc. to OSHA HCS

Trade name: Beryllium 1000 µg/g in Mineral Oil

10 Stability and reactivity

- Reactivity: No further relevant information available.
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions: No dangerous reactions known.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
  - Acute toxicity:
  - Primary irritant effect:
  - on the skin: No irritant effect.
Trade name: Beryllium 1000 µg/g in Mineral Oil

- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
  The product shows the following dangers according to internally approved calculation methods for preparations:
  Irritant

**Carcinogenic categories**

<table>
<thead>
<tr>
<th>IARC (International Agency for Research on Cancer)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-41-7 beryllium</td>
<td>I</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NTP (National Toxicology Program)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-41-7 beryllium</td>
<td>K</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OSHA-Ca (Occupational Safety &amp; Health Administration)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients is listed.</td>
<td></td>
</tr>
</tbody>
</table>

### 12 Ecological information

- **Toxicity**
  - **Aquatic toxicity:** No further relevant information available.
  - **Persistence and degradability** No further relevant information available.
  - **Behavior in environmental systems:**
    - **Bioaccumulative potential** No further relevant information available.
    - **Mobility in soil** No further relevant information available.
  - **Additional ecological information:**
    - **General notes:**
      - Water hazard class 1 (Self-assessment): slightly hazardous for water
      - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

<table>
<thead>
<tr>
<th>Results of PBT and vPvB assessment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PBT: Not applicable.</td>
<td></td>
</tr>
<tr>
<td>vPvB: Not applicable.</td>
<td></td>
</tr>
</tbody>
</table>

- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation:**
    - Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packagings:**
  - **Recommendation:** Disposal must be made according to official regulations.
  - **Recommended cleansing agent:** Water, if necessary with cleansing agents.
Safety Data Sheet
acc. to OSHA HCS

Printing date 05/23/2020
Reviewed on 05/23/2020

Trade name: Beryllium 1000 µg/g in Mineral Oil

14 Transport information

- UN-Number
  - DOT, ADR, IMDG, IATA: not regulated

- UN proper shipping name
  - DOT, ADR, IMDG, IATA: not regulated

- Transport hazard class(es)
  - DOT, ADR, ADN, IMDG, IATA: not regulated

- Packing group
  - DOT, ADR, IMDG, IATA: not regulated

- Environmental hazards: Not applicable.

- Special precautions for user: Not applicable.

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

- UN "Model Regulation": not regulated

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Sara

  - Section 355 (extremely hazardous substances):
    None of the ingredients is listed.

  - Section 313 (Specific toxic chemical listings):
    7440-41-7 beryllium

  - TSCA (Toxic Substances Control Act):
    All components have the value ACTIVE.

- Hazardous Air Pollutants
  None of the ingredients is listed.

- Proposition 65

  - Chemicals known to cause cancer:
    7440-41-7 beryllium

  - Chemicals known to cause reproductive toxicity for females:
    None of the ingredients is listed.

  - Chemicals known to cause reproductive toxicity for males:
    None of the ingredients is listed.
Trade name: Beryllium 1000 µg/g in Mineral Oil

- **Chemicals known to cause developmental toxicity:**
  None of the ingredients is listed.

- **Carcinogenic categories**
  - **EPA (Environmental Protection Agency)**
    7440-41-7 beryllium B1, K/L(inh), CBD(oral)
  - **TLV (Threshold Limit Value established by ACGIH)**
    7440-41-7 beryllium A1
  - **NIOSH-Ca (National Institute for Occupational Safety and Health)**
    7440-41-7 beryllium

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
    GHS07  GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**
  White mineral oil, petroleum
  beryllium

- **Hazard statements**
  H317 May cause an allergic skin reaction.
  H350 May cause cancer.
  H304 May be fatal if swallowed and enters airways.

- **Precautionary statements**
  Obtain special instructions before use.
  Do not handle until all safety precautions have been read and understood.
  Avoid breathing dust/fume/gas/mist/vapors/spray
  Contaminated work clothing must not be allowed out of the workplace.
  Wear protective gloves/protective clothing/eye protection/face protection.
  If swallowed: Immediately call a poison center/doctor.
  Specific treatment (see on this label).
  Do NOT induce vomiting.
  If on skin: Wash with plenty of water.
  IF exposed or concerned: Get medical advice/attention.
  If skin irritation or rash occurs: Get medical advice/attention.
  Wash contaminated clothing before reuse.
  Store locked up.
  Dispose of contents/container in accordance with local/regional/national/international regulations.
Trade name: Beryllium 1000 µg/g in Mineral Oil

- National regulations:

- Information about limitation of use:
  Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department issuing SDS: Environment protection department.
- Contact:
  High-Purity Standards
  Tel:  843-767-7900
  Fax: 843-767-7906
- Date of preparation / last revision 05/23/2020 / -
- Abbreviations and acronyms:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  IMDG: International Maritime Code for Dangerous Goods
  DOT: US Department of Transportation
  IATA: International Air Transport Association
  ACGIH: American Conference of Governmental Industrial Hygienists
  EINECS: European Inventory of Existing Commercial Chemical Substances
  ELINCS: European List of Notified Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)
  VOC: Volatile Organic Compounds (USA, EU)
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  NIOSH: National Institute for Occupational Safety
  OSHA: Occupational Safety & Health
  TLV: Threshold Limit Value
  PEL: Permissible Exposure Limit
  REL: Recommended Exposure Limit
  Skin Sens. 1: Skin sensitisation – Category 1
  Carc. 1B: Carcinogenicity – Category 1B
  Asp. Tox. 1: Aspiration hazard – Category 1