1 Identification

· Product identifier
· Trade name: VVOMS
· Article number: VVOMS

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
  Asp. Tox. 1  H304 May be fatal if swallowed and enters airways.

· Label elements
· GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
· Hazard pictograms

  GHS08

· Signal word Danger

· Hazard-determining components of labeling:
  White mineral oil, petroleum
· Hazard statements
  H304 May be fatal if swallowed and enters airways.
· Precautionary statements
  If swallowed: Immediately call a poison center/doctor.
  Do NOT induce vomiting.
  Store locked up.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 2)
Trade name: VVOMS

- Classification system:
  - NFPA ratings (scale 0 - 4)
    - Health = 0
    - Fire = 1
    - Reactivity = 0

- HMIS-ratings (scale 0 - 4)
  - Health = 0
  - Fire = 1
  - Reactivity = 0

- 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:
  - 8042-47-5 White mineral oil, petroleum 99.9%

- Chemical identification of the substance/preparation
  - 7440-62-2 vanadium 0.1%

### 4 First-aid measures

- Description of first aid measures
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- 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.
6 Accidental release measures

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

- **Personal precautions, protective equipment and emergency procedures** Not required.

- **Environmental precautions:** 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.

- **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**

<table>
<thead>
<tr>
<th>PAC</th>
<th>CAS Number</th>
<th>Limit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAC-1</td>
<td>7440-62-2</td>
<td>3 mg/m³</td>
</tr>
<tr>
<td>PAC-2</td>
<td>7440-62-2</td>
<td>5.8 mg/m³</td>
</tr>
<tr>
<td>PAC-3</td>
<td>7440-62-2</td>
<td>35 mg/m³</td>
</tr>
</tbody>
</table>

7 Handling and storage

- **Handling:**
  
- **Precautions for safe handling** No special precautions are necessary if used correctly.

- **Information about protection against explosions and fires:** No special measures required.

- **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 product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Trade name: VVOMS

- **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.
    Wash hands before breaks and at the end of work.
  - **Breathing equipment:** Not required.

- **Protection of hands:**
  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:** Goggles recommended during refilling.

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9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**

  - **Appearance:**
    - **Form:** Liquid
    - **Color:** Dark
  - **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.

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**
  - **Lower:** Not determined.
Trade name: VVOMS

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Vapor pressure</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Density</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Relative density</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Vapor density</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Evaporation rate</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Solubility in / Miscibility with Water</td>
<td>Not miscible or difficult to mix.</td>
</tr>
<tr>
<td>· Partition coefficient (n-octanol/water)</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Viscosity</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Dynamic</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Kinematic</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Solvent content:</td>
<td>VOC content:</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>· Solids content</td>
<td>0.1 %</td>
</tr>
<tr>
<td>· Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

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.
    - on the eye: No irritating effect.
  - Sensitization: No sensitizing effects known.
  - Additional toxicological information:
  The product shows the following dangers according to internally approved calculation methods for preparations:
# Safety Data Sheet

acc. to OSHA HCS

**Trade name:** VVOMS

## 50.0.3 Carcinogenic categories

- **IARC (International Agency for Research on Cancer)**
  None of the ingredients is listed.

- **NTP (National Toxicology Program)**
  None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**
  None of the ingredients is listed.

## 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.

- **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.

- **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.

## 14 Transport information

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

- **UN proper shipping name**
  - **DOT, ADR, IMDG, IATA**
    not regulated
### 50.0.3

#### Transport hazard class(es)
- DOT, ADR, ADN, IMDG, IATA
- Class: 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):**
    7440-62-2 vanadium
  
    - **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:**
      None of the ingredients is listed.
    
    - **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.
    
    - **Chemicals known to cause developmental toxicity:**
      None of the ingredients is listed.
  
  - **Carcinogenic categories**
  
  - **EPA (Environmental Protection Agency)**
    None of the ingredients is listed.
50.0.3

- **TLV (Threshold Limit Value established by ACGIH)**
  None of the ingredients is listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**
  None of the ingredients is listed.

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

  GHS08

- **Signal word** Danger

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

- **Hazard statements**
  H304 May be fatal if swallowed and enters airways.

- **Precautionary statements**
  If swallowed: Immediately call a poison center/doctor.
  Do NOT induce vomiting.
  Store locked up.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

- **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** 02/21/2020 / -
- **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)
Trade name: VVOMS

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
Asp. Tox. 1: Aspiration hazard – Category 1

(Contd. of page 8)