Section 1. Identification

1.1 Product identifier
Product name: Vacuum Pump Oil - GP Type Mechanical Pump Fluid
Part no.: 8829951700, K7516301, K7516302, K7516303
Validation date: 2/18/2019

1.2 Relevant identified uses of the substance or mixture and uses advised against
Material uses:
- Reagents and Standards for Analytical Chemistry Laboratory Use
- Agilent Vacuum Fluid Silver, 1 LITER
- K7516301 40-OIL MECH. ROUGH PUMP, 1 LITER GP TYPE
- K7516302 OIL MECH. ROUGH PUMP, 1 GAL. GP TYPE
- K7516303 OIL MECH. ROUGH PUMP 5 GAL. GP. TYPE

1.3 Details of the supplier of the safety data sheet
Supplier/Manufacturer: Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

1.4 Emergency telephone number
In case of emergency: CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture
OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture: Not classified.

2.2 GHS label elements
Signal word: Warning
Hazard statements: No known significant effects or critical hazards.
Precautionary statements:
- Prevention: Not applicable.
- Response: Not applicable.
- Storage: Not applicable.
- Disposal: Not applicable.
Supplemental label elements: Avoid contact with skin and clothing. Wash thoroughly after handling.

2.3 Other hazards
Hazards not otherwise classified: Prolonged or repeated contact may dry skin and cause irritation.
Section 3. Composition/information on ingredients

Substance/mixture : Substance

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated heavy paraffinic</td>
<td>100</td>
<td>64742-54-7</td>
</tr>
</tbody>
</table>

Contains: DMSO (< 3 %)

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

### 4.1 Description of necessary first aid measures

- **Eye contact**: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention.
- **Inhalation**: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- **Skin contact**: Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- **Ingestion**: Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

### 4.2 Most important symptoms/effects, acute and delayed

- **Potential acute health effects**
  - **Eye contact**: No known significant effects or critical hazards.
  - **Inhalation**: No known significant effects or critical hazards.
  - **Skin contact**: Defatting to the skin. May cause skin dryness and irritation.
  - **Ingestion**: No known significant effects or critical hazards.

- **Over-exposure signs/symptoms**
  - **Eye contact**: No specific data.
  - **Inhalation**: No specific data.
  - **Skin contact**: Adverse symptoms may include the following: irritation dryness cracking
  - **Ingestion**: No specific data.

### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

- **Notes to physician**: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- **Specific treatments**: No specific treatment.
- **Protection of first-aiders**: No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Date of issue : 02/18/2019
Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media: Use dry chemical, CO₂, alcohol-resistant foam or water spray (fog).

Unsuitable extinguishing media: Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical: In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products: Decomposition products may include the following materials:
- Carbon dioxide
- Carbon monoxide

5.3 Advice for firefighters

Special protective actions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Section 7. Handling and storage

7.2 Conditions for safe storage, including any incompatibilities
Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)
Recommendations:
Industrial applications, Professional applications.

Industrial sector specific solutions:
Not applicable.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated heavy paraffinic</td>
<td>ACGIH TLV (United States, 3/2018). TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction. NIOSH REL (United States, 10/2016). TWA: 5 mg/m³ 10 hours. Form: Mist. STEL: 10 mg/m³ 15 minutes. Form: Mist. OSHA PEL (United States, 5/2018). TWA: 5 mg/m³ 8 hours.</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Appropriate engineering controls:
Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls:
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures:
Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection:
Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection:
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection:
Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Section 8. Exposure controls/personal protection

**Other skin protection**: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection**: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

**Appearance**

- **Physical state**: Liquid. [Clear. / Oily liquid.]
- **Color**: Straw. / Yellow.
- **Odor**: Petroleum oil. [Slight]
- **Odor threshold**: Not available.
- **pH**: Not available.
- **Melting point**: Not available.
- **Boiling point**: 112°C (233.6°F) [0.01 mmHg]
- **Flash point**: Open cup: 213°C (415.4°F)
- **Evaporation rate**: Not available.
- **Flammability (solid, gas)**: Not applicable.
- **Lower and upper explosive (flammable) limits**: Not available.
- **Vapor pressure**: <0.000013 kPa (<0.0001 mm Hg) [room temperature] [25 °C]
- **Vapor density**: Not available.
- **Relative density**: 0.87
- **Solubility**: Insoluble in the following materials: cold water and hot water.
- **Partition coefficient: n-octanol/water**: Not available.
- **Auto-ignition temperature**: Not available.
- **Decomposition temperature**: Not available.
- **Viscosity**: Kinematic (40°C (104°F)): 0.55 cm²/s (55 cSt)

Section 10. Stability and reactivity

10.1 Reactivity: No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability: The product is stable.

10.3 Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid: No specific data.

10.5 Incompatible materials: May react or be incompatible with oxidizing materials.

10.6 Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Date of issue: 02/18/2019
# Section 11. Toxicological information

## 11.1 Information on toxicological effects

### Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated heavy paraffinic</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;2000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

#### Irritation/Corrosion

Not available.

#### Sensitization

Not available.

#### Mutagenicity

- **Conclusion/Summary**: Not available.

#### Carcinogenicity

- **Conclusion/Summary**: Not available.

#### Reproductive toxicity

- **Conclusion/Summary**: Not available.

#### Teratogenicity

- **Conclusion/Summary**: Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated heavy paraffinic</td>
<td>Category 1</td>
<td>Skin</td>
<td>adrenal, bone marrow, kidneys, liver, lymphatic system, stomach and thymus</td>
</tr>
</tbody>
</table>

#### Aspiration hazard

<table>
<thead>
<tr>
<th>Name</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated heavy paraffinic</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
</tbody>
</table>

### Information on the likely routes of exposure

- Routes of entry anticipated: Oral, Dermal, Inhalation.

### Potential acute health effects

- **Eye contact**: No known significant effects or critical hazards.
- **Inhalation**: No known significant effects or critical hazards.
- **Skin contact**: Defatting to the skin. May cause skin dryness and irritation.
- **Ingestion**: No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

- **Eye contact**: No specific data.
- **Inhalation**: No specific data.
**Section 11. Toxicological information**

**Skin contact**: Adverse symptoms may include the following: irritation, dryness, cracking.

**Ingestion**: No specific data.

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure**
- **Potential immediate effects**: Not available.
- **Potential delayed effects**: Not available.

**Long term exposure**
- **Potential immediate effects**: Not available.
- **Potential delayed effects**: Not available.

**Potential chronic health effects**
- **General**: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- **Carcinogenicity**: No known significant effects or critical hazards.
- **Mutagenicity**: No known significant effects or critical hazards.
- **Teratogenicity**: No known significant effects or critical hazards.
- **Developmental effects**: No known significant effects or critical hazards.
- **Fertility effects**: No known significant effects or critical hazards.

**Numerical measures of toxicity**

**Acute toxicity estimates**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Oral (mg/kg)</th>
<th>Dermal (mg/kg)</th>
<th>Inhalation (gases) (ppm)</th>
<th>Inhalation (vapors) (mg/l)</th>
<th>Inhalation (dusts and mists) (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated heavy paraffinic</td>
<td>N/A</td>
<td>2500</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Section 12. Ecological information**

**12.1 Toxicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated heavy paraffinic</td>
<td>Acute EC50 &gt;100 mg/l</td>
<td>Aquatic plants</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 &gt;100 mg/l</td>
<td>Daphnia</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 &gt;100 mg/l</td>
<td>Fish</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

**12.2 Persistence and degradability**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated heavy paraffinic</td>
<td>-</td>
<td>-</td>
<td>Inherent</td>
</tr>
</tbody>
</table>

Date of issue: 02/18/2019
Section 12. Ecological information

12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated heavy paraffinic</td>
<td>3.9 to 6</td>
<td>-</td>
<td>high</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

Soil/water partition coefficient (K<sub>OC</sub>) : Not available.

12.5 Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

DOT / TDG / Mexico / IMDG / IATA : Not regulated.

Special precautions for user : Transport within user’s premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Date of issue : 02/18/2019
Section 15. Regulatory information

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

U.S. Federal regulations

- TSCA 8(a) CDR Exempt/Partial exemption: All components are listed or exempted.
- Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs): Not listed
- Clean Air Act Section 602 Class I Substances: Not listed
- Clean Air Act Section 602 Class II Substances: Not listed
- DEA List I Chemicals (Precursor Chemicals): Not listed
- DEA List II Chemicals (Essential Chemicals): Not listed
- SARA 302/304
  - Composition/information on ingredients: No products were found.
- SARA 304 RQ: Not applicable.
- SARA 311/312
  - Classification: HNOC - Defatting irritant
  - Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated heavy paraffinic</td>
<td>100</td>
<td>CARCINOGENICITY - Category 1B TOXIC TO REPRODUCTION (Unborn child) (dermal) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (adrenal, bone marrow, kidneys, liver, lymphatic system, stomach, thymus) (dermal) - Category 1 ASPIRATION HAZARD - Category 1 HNOC - Defatting irritant</td>
</tr>
</tbody>
</table>

State regulations

- Massachusetts: The following components are listed: OIL MIST, MINERAL
- New York: None of the components are listed.
- New Jersey: None of the components are listed.
- Pennsylvania: None of the components are listed.
- California Prop. 65
  - This product does not require a Safe Harbor warning under California Prop. 65.

International regulations


Date of issue: 02/18/2019
Section 15. Regulatory information

UNECE Aarhus Protocol on POPs and Heavy Metals
Not listed.

Inventory list

Australia : All components are listed or exempted.
Canada : All components are listed or exempted.
China : All components are listed or exempted.
Europe : All components are listed or exempted.
Japan : Japan inventory (ENCS): All components are listed or exempted.
        Japan inventory (ISHL): All components are listed or exempted.
New Zealand : All components are listed or exempted.
Philippines : All components are listed or exempted.
Republic of Korea : All components are listed or exempted.
Taiwan : All components are listed or exempted.
Thailand : Not determined.
Turkey : All components are listed or exempted.
United States : All components are listed or exempted.
Viet Nam : Not determined.

Section 16. Other information

History
Date of issue : 02/18/2019
Date of previous issue : 07/25/2017
Version : 5

Key to abbreviations : ATE = Acute Toxicity Estimate
                      BCF = Bioconcentration Factor
                      GHS = Globally Harmonized System of Classification and Labelling of Chemicals
                      IATA = International Air Transport Association
                      IBC = Intermediate Bulk Container
                      IMDG = International Maritime Dangerous Goods
                      LogPow = logarithm of the octanol/water partition coefficient
                      MARPOL = International Convention for the Prevention of Pollution From Ships, 1973
                      as modified by the Protocol of 1978. ("Marpol" = marine pollution)
                      N/A = Not available
                      UN = United Nations

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not classified.</td>
<td></td>
</tr>
</tbody>
</table>

Indicates information that has changed from previously issued version.

Notice to reader

Disclaimer: The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

Date of issue : 02/18/2019