1. CHEMICAL PRODUCT AND COMPANY INFORMATION

PRODUCT: NATIONAL VACUUM PUMP OIL  
PRODUCT CODE: VPO  
CHEMICAL NAME/FAMILY: PETROLEUM LUBRICATING OIL  
OTHER NAME: VACUUM PUMP OIL  
MANUFACTURER: NATIONAL REFRIGERANTS, INC.  
ADDRESS: 11401 Roosevelt Boulevard Phila., Pa. 19154  
INFORMATION: 800-262-0012  
EMERGENCY: 800-424-9300  
DATE: 4/2018  
PREPARER: Matt Callahan

2. HAZARD IDENTIFICATION


OTHER HAZARDS: SKIN AND EYE CONTACT: Prolonged contact may cause minor skin or eye irritation. If swallowed can enter lungs and cause damage.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>CAS#</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Oils</td>
<td>See Below</td>
<td>&gt;99%</td>
</tr>
<tr>
<td><em>no hazardous ingredients</em></td>
<td></td>
<td></td>
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</tbody>
</table>

The Base Oil may contain one or more of the following ingredients: 61788-76-9, 64741-88-4, 64742-01-4, 64742-65-0, 64741-89-5, 64742-48-9, 64742-52-5, 64742-54-7, 64742-56-3, 64742-55-8

COMMON NAMES AND SYNONYMS
Vacuum Pump Oil

There are no stabilizers or impurities that contribute to the classification of the material identified in section 2

4. FIRST AID MEASURES

EYES: Flush with large amounts of water for at least 15 minutes. If redness or irritation persists, contact a physician.

SKIN CONTACT: Wash with soap and water.
INHALATION: If inhaled move to fresh air.

INGESTION: Do not induce vomiting. Get medical attention

NOTE TO PHYSICIAN: No specific treatment. Contact Poison Treatment Center if large amounts have been ingested or inhaled

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Dry chemical, CO2, foam, waterfog, sand/earth

SPECIAL FIREFIGHTING PROCEDURES: Wear self-contained breathing apparatus. Water spray is an unsuitable extinguishing agent.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE OF RELEASE OR SPILL: Stop leak. Dike up large spills. Use inert absorbent materials such as earth, sand or vermiculite for clean-up. Use personal protective equipment such as gloves, goggles, and coveralls to prevent contact with skin during clean up.

7. HANDLING AND STORAGE

PRECAUTIONS FOR STORAGE AND HANDLING: Avoid exposure to heat and flames. Protect against eye and skin contact. Store containers in an upright and secure position to prevent spills and protect against damage. Prohibit smoking, eating, or drinking in areas where material is handled

8. EXPOSURE CONTROLS/PERSOAL PROTECTION

ENGINEERING CONTROLS
Provide adequate ventilation when working in confined areas

PERSONAL PROTECTIVE EQUIPMENT

SKIN PROTECTION:
General work clothing and gloves (leather) should provide adequate protection. Any contaminated clothing should be promptly removed and washed before reuse.

EYE PROTECTION:
For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear chemical safety goggles.

**RESPIRATORY PROTECTION:**
None generally required for adequately ventilated work situations. For accidental release or non-ventilated situations, or release into confined space, where the concentration may be above the PEL use a NIOSH approved respirator.

**ADDITIONAL RECOMMENDATIONS:**
Where contact with liquid is likely, such as in a spill or leak, impervious boots and clothing should be worn.

**EXPOSURE LIMITS**
OSHA permissible concentration of mineral oil mist in air is 5 mg/m3.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPEARANCE</td>
<td>Clear amber liquid</td>
</tr>
<tr>
<td>ODOR</td>
<td>Petroleum odor</td>
</tr>
<tr>
<td>ODOR THRESHOLD</td>
<td>Not determined</td>
</tr>
<tr>
<td>PH</td>
<td>Neutral</td>
</tr>
<tr>
<td>MELTING/FREEZING POINT</td>
<td>-12°C (10.4°F)</td>
</tr>
<tr>
<td>BOILING POINT</td>
<td>&gt;500°F</td>
</tr>
<tr>
<td>FLASH POINT: COC METHOD</td>
<td>148°C (298.4°F)</td>
</tr>
<tr>
<td>EVAPORATION RATE</td>
<td>Negligible</td>
</tr>
<tr>
<td>FLAMMABILITY</td>
<td>Not applicable</td>
</tr>
<tr>
<td>LEL/UEL:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>VAPOR PRESSURE</td>
<td>&lt;0.013 kPa (&lt;1 mmHg) at 25°C</td>
</tr>
<tr>
<td>VAPOR DENSITY</td>
<td>&gt;1.0 (air=1)</td>
</tr>
<tr>
<td>RELATIVE DENSITY</td>
<td>0.86 @ 15.6 °C</td>
</tr>
<tr>
<td>SOLUBILITY</td>
<td>Insoluble in water</td>
</tr>
<tr>
<td>PARTITION COEFFICIENT</td>
<td>&gt;6</td>
</tr>
<tr>
<td>n-Octanol/water</td>
<td>Not determined</td>
</tr>
<tr>
<td>AUTO IGNITION TEMPERATURE</td>
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<tr>
<td>DECOMPOSITION TEMPERATURE</td>
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</tr>
<tr>
<td>VISCOSITY</td>
<td>Not Determined</td>
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### 10. STABILITY AND REACTIVITY

**STABILITY:** STABLE

**HAZARDOUS POLYMERIZATION:** NONE
SAFETY DATA SHEET

VPO

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizing agents such as chromic acid, hydrogen peroxide and bromine.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Upon combustion, CO₂ and CO are generated.

11. TOXICOLOGICAL INFORMATION

INHALATION AND SKIN ABSORPTION HEALTH RISKS: No known significant effects or hazards. OSHA permissible concentration of mineral oil mist in air is 5 mg/m³.

SKIN AND EYE CONTACT: Prolonged contact may cause minor skin and eye irritation.

SYMPTOMS OF EXPOSURE: N/A

INGESTION: Aspiration hazard if swallowed. Can enter lungs and cause damage.

ACUTE AND CHRONIC HEALTH HAZARDS: N/A

CARCINOGENICITY: NTP IARC MONOGRAPHS OSHA REGULATED
NO NO NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N/A

12. ECOLOGICAL INFORMATION

No known significant or critical effects

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of in accordance with Federal, State, and Local regulations.

14. TRANSPORTATION INFORMATION

US DOT ID NUMBER: None
US DOT PROPER SHIPPING NAME: None
US DOT HAZARD CLASS: None
US DOT PACKING GROUP: None

15. REGULATORY INFORMATION
The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

**Federal Regulatory Status**

**Notification Status**
- EINECS: All components listed or polymer exempt.
- TSCA: All components listed.
- DSL: All components listed.

**SARA Hazard Categories (311/312)**
No SARA 311/312 Hazards.

**State Regulatory Status**
- California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)
  This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

### 16. OTHER INFORMATION

<table>
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<tr>
<th>HMIS:</th>
<th>H</th>
<th>F</th>
<th>R</th>
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<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>0</td>
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