Material Safety Data Sheet

Trade Name: Premium (High) Vacuum Pump Oil (13201, 13203, 13204)  
Synonyms: Lubricating Oil  
CAS No.: 64741-88-4  
(Refer to Section 1)  
Date: 12/01/98  
Phone: (For Info.) (419) 485-5561  
(Chemtrec Emergency) (800) 424-9300

Material Hazard Evaluation

Health: Non-hazardous (OHCS).  
Precautionary Statement: None.

HMIS Rating: Health 0, Flammability 1, Reactivity 0

1.0 Generic Composition/Components

Components  CAS #  %  
Refined Petroleum Oil(s)  64741-88-4  100

Hazard Data:  
Oral LD50 (rat): > 15g/kg  
Eye: Practically Non-Irritating  
Skin: Practically Non-Irritating  
Thin LC50/4H(rat): > 5.000 mg/m^3

2.0 Physical Data

Physical Hazard Classification (per 29 CFR Part 1910.1200)

<table>
<thead>
<tr>
<th>No</th>
<th>Combustible</th>
<th>No</th>
<th>Flammable</th>
<th>No</th>
<th>Organic Peroxide</th>
<th>No</th>
<th>Oxidizer</th>
<th>No</th>
<th>Pyrophoric</th>
<th>Yes</th>
<th>Stable</th>
</tr>
</thead>
</table>

Boiling Point, 760 mmHg, °C (°F): ~373 (~703)  
Specific Gravity (60/60°F, H2O = 1): 0.87  
Vapor Density (Air - 1): > 1  
% Volatiles by Volume: Negligible  
Melting Point, °C (°F): NA

Vapor Pressure, mmHg (25°C): ~4 x 10^5  
Solubility in H2O, % by weight: Negligible  
Evaporation Rate (Butyl Acetate = 1): < 1  
pH of Undiluted Product: NA  
Appearance and Odor: Faint yellow/amber liquid, bland odor

3.0 Fire and Explosion Data

Flash Point, COC, °C (°F): 224 (435)  
Flash Point, PMC, °C (°F): 218 (424)  
Fire Point, COC, °C (°F): 252 (485)  
NFPA Rating: Health 0, Flammability 1, Reactivity 0

Flammable Limits (% by volume in air): Lower: NA, Upper: NA  
Extinguishing Media: CO2, dry chemical, foam, water fog  
Special Fire Fighting Procedure: None  
Unusual Fire or Explosion Hazard: Water may cause frothing

4.0 Reactivity Data

Stability: Stable  
Conditions Contributing to Instability: None  
Incompatibility: None

Hazardous Decomposition Products (thermal, unless otherwise specified): Strong Oxidants, Strong acids, and caustics, CO2, CO

1 and 2 Hazard Rating: least - 0; slight - 1; moderate - 2; high - 3; extreme - 4
Robinair assignment based on our evaluation per NFPA and NPCA Guidelines.

NA - Not Applicable  
ND - No Data  
NE - Not Established
5.0 Spill or Leak Procedures

Procedures if Material is Spilled:
- Remove sources of heat or ignition, provide adequate ventilation, contain leak.
- Small Spills: Absorb with suitable material such as rags, straw, or sand.
- Large spills: Contain spill in earthen dikes for later recovery.
- Report spills as required to appropriate authorities.

Waste Disposal:
- It is the responsibility of the user to determine if the material is a hazardous waste at the time of disposal.
- Check before disposing to be sure you are in compliance with all applicable laws and regulations.
- Chemtrec/RCRA Emergency Hotline Number: 1-800-424-9346

Protective Measures During Repair and Maintenance of Contaminated Equipment:
- Refer to Section VII - Special Protection Information.
- Avoid prolonged contact with used oil.
- Wash exposed skin thoroughly with soap and water.

6.0 Health Hazard Data

Health Hazard Classification
(per 29 CFR Part 1910.1200)

<table>
<thead>
<tr>
<th>Carcinogen</th>
<th>Corrosive</th>
<th>Mutagen</th>
<th>Teratogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Animal Carcinogen</td>
<td>No</td>
<td>Irritant</td>
<td>Highly Toxic</td>
</tr>
<tr>
<td>Suspect Carcinogen</td>
<td>No</td>
<td>Sensitizer</td>
<td>No</td>
</tr>
</tbody>
</table>

Product listed as Carcinogen or Potential Carcinogen by:
NTP No IARC No OSHA No Other No

Toxicity Summary: Practically non-toxic
Major Route(s) of Entry: Inhalation of incidental mists or vapors

Acute Exposure Symptoms

Inhalation
Low risk at ambient temperatures. In enclosed spaces or when hot, vapors may reach concentrations sufficient to cause drowsiness, dizziness, headache, nausea, or lung irritation. Mists above TLV may cause chemical pneumonitis.

Dermal Contact:
Transient, slight irritation.

Eye Contact:
Practically non-irritant.

Ingestion:
Low toxicity. Very large amounts may cause generalized depression, headache, drowsiness, nausea, vomiting or diarrhea. Small doses may produce irritation and diarrhea.

Chronic Exposure
Prolonged and/or frequent contact may cause drying, cracking (dermatitis) or folliculitis. Repeated excessive exposure to mists or fumes may induce pulmonary irritation or chronic bronchitis.

Other Special Effects
None expected.

Medical Conditions Aggravated by Exposure
None

First Aid and Emergency Procedures for Acute Effect

Inhalation:
Remove to fresh air. Respiratory support, if necessary. Seek medical aid.

Dermal:
Wash with soap and water. Do not wear heavily contaminated clothing before laundering.

Eyes:
Flush with large volumes of water. Seek physician if any complications arise.

Ingestion:
Do not induce vomiting. Seek medical aid.

Injection:
Subcutaneous injection is a medical emergency. Seek medical aid immediately.

Notes to Physician:
Following ingestion at a viscosity of around 200 SUS (100° F), there may be a minimal risk of aspiration into the lungs. For quantities above a few drops, careful cuffed tube lavage may still be considered. Aspirated material may cause chemical pneumonitis or lipoid pneumonia. Subcutaneous or intramuscular injection requires prompt surgical debridement. If not familiar with technique, seek skilled advice.
7.0 Special Protection Information

Ventilation Requirements:
Use in well ventilated area. In confined space, mechanical ventilation may be required to keep levels of certain components below mandated standards as evaluated by designated personnel.

Permitted Threshold Air Concentrations

<table>
<thead>
<tr>
<th>Component</th>
<th>TLV-TWA</th>
<th>TLV-STEL</th>
<th>TLV-Ceiling</th>
<th>OSHA-PEL</th>
<th>OSHA-STEL</th>
<th>OSHA-Ceiling</th>
<th>OSHA-Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral Oil Mist</td>
<td>5 mg/m³</td>
<td>10 mg/m³</td>
<td>ND</td>
<td>5 mg/m³</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
</tr>
</tbody>
</table>

Specific Personal Protective Equipment:

Respiratory
Normally none required. If high vapor or mist concentration expected, use respirator approved for organic vapors and mists.

Eyes:
Safety goggles, or chemical splash goggles if splashing is anticipated.

Dermal:
Oil imperious gloves if frequent or prolonged contact is expected.

Other Clothing or Equipment:
Wear body-covering work clothes to avoid prolonged or repeated exposure. Launder soiled work clothes before reuse.

8.0 Transportation and Special Precautions

Storage:
Do not apply high heat or flame to container. Keep separate from strong oxidizing agents.

Caution:
Empty containers may contain product residue which could include flammable or explosive vapors.

Consult appropriate Federal, State and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.

9.0 Environmental Data

Product Name: Premium Vacuum Pump Oil
(13201, 13203, 13204)

SARA TITLE III
Section 313 - Toxic Chemicals
This product does not contain toxic chemicals of Section 313 of Title III of Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.
Components CAS # %
None

Section 302(A) - Extremely Hazardous Substance
(RQ = Reportable Quantity)
(TPQ = Threshold Planning Quantity)
This product does not contain Extremely Hazardous Substances of Section 302(A)
Component CAS # % RQ lbs. TPQ lbs.
None

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Section 102 Hazardous Substances
Component CAS # %
Petroleum and petroleum fractions are excluded from the list of CERCLA hazardous substances by Section 101(14) of CERCLA.

DOT Information
Proper Shipping Name: Petroleum Lubricating Oil
Hazard Class: Non-Hazardous
Hazard Identification Number: None assigned
Placard: None

Section 311 - Hazard Categories
Yes Not Applicable
No Fire Hazard
No Acute (Immediate Health Hazard)
No Sudden Release of Pressure Hazard
No Chronic (Delayed Health Hazard)
No Reactive Hazard

Clean Water Act
Under Section 311 (b) (4) of the Clean Water Act, discharges of crude oil and petroleum products in any kind or form to surface waters must be immediately reported to the National Response Center: 800-424-8802.

New Jersey Worker & Community Right-To-Know Act
Petroleum Oil
10.0 Labeling

NOTE:

This product has been determined not to be a physical or a health hazard as defined by the OSHA Hazard Communication Standard.

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Steve Moore
Name

Safety and Environmental Administrator
Title

Signature
Date